# Byron Shire Flying-fox Camp Management Plan

2024 - 2029

## **Roost Detail**



Flying-foxes at Mullumbimby Showground 2023 (J. Wickers)









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### **Acknowledgement**

Byron Shire Council acknowledges Traditional Aboriginal Custodians and recognises the continuing connection to lands, waters and country. We recognise and respect the Bundjalung of Byron Bay - Arakwal and the Widjabul Wia-bal Peoples' native title rights and interests within the Shire. Byron Shire Council also acknowledges the Tweed Byron, Jali and Ngulingah Local Aboriginal Land Councils under the Aboriginal Land Rights Act NSW 1983.

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#### 1. Introduction

Two flying-fox species occur continuously in the Byron Shire, although the camps they occupy vary through time:

- Grey-headed Flying-fox (Pteropus poliocephalus) (GHFF)
- Black Flying-fox ((*Pteropus alecto*) (BFF)

The Little Red Flying-fox *Pteropus scapulatus* also occurs occasionally in the LGA.

The term "camp" has traditionally been applied to the area in which flying-fox congregate during the daytime. There can be an association with anthropomorphism in this term, and as such many ecologists and natural resource managers are now using the term "roost' in place of camp. The current Plan seeks to connect the historical and emerging vernacular, using both terms when appropriate.

There are 20 known Flying-fox roost sites (where they rest during the day) in Byron Shire. Of these, eight are in urban locations and 12 in rural locations. It's understood that the east coast of Australia has been Flying-fox habitat for more than 25 million years (Hall *et al.*, 2000). Council records indicate presence of Flying-foxes as far back as 1954 (EcoPro, 2006).

This Roost Detail document is a supplement to the Byron Shire Flying-fox Management Plan 2023. It provides detailed information on each of the known roosts, including:

- Site description
- Roost history
- Ecological values
- Sensitive Sites within x meters
- Habitat restoration Sites within v meters

The maximum historic extent of roosting animals for each camp is mapped as well as the extent (if Flying-foxes present) in August 2023. The maximum historic extent is the combined extent of all recorded footprints prior to August 2023.

Whilst the transmission risk of a virus from Flying-foxes to humans is extremely low, some sensitive sites close to camps have been identified, with the intent to increase communication through the provision of accurate information. Equine centres and showgrounds have been identified to manage the risk of Hendra virus transmission spillover. At childcare centres and schools, children may inadvertently handle bats.

Data has been sourced from:

National Flying-fox Monitoring Program (NFFMP). Surveys of Flying-fox populations commenced in November 2012 and involved quarterly population estimates of all known Grey-headed and Spectacled Flying-fox camp sites. The program was coordinated by CSIRO and the federal and state governments and was supported by Byron Shire Council. The monitoring methods developed by Westcott et al. (2011) involve direct counting of Flying-foxes at camps of less than 1000 individuals. As camp size increases (>1000 individuals) Westcott et al. (2011) recommend distance sampling to count Flying-foxes (Westcott et al.)

2013). The NFFMP ceased in 2022.

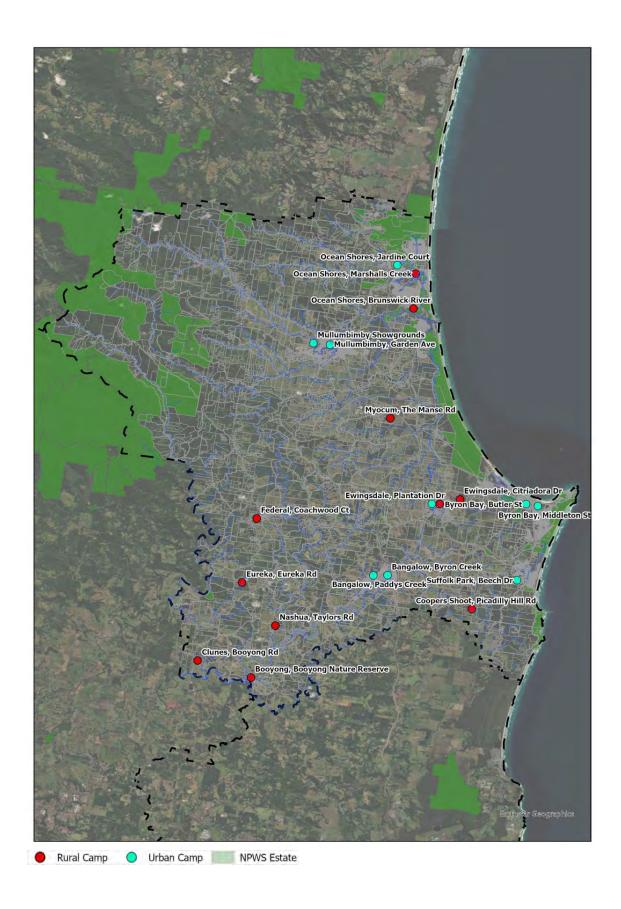
- Byron Shire Council staff local knowledge and quarterly surveys of urban camps using the Westcott et al. method conducted since the end of the NFFMP to the present. Rural camps are monitored using the Westcott et al. method when resources are available or when the roost management plan is reviewed.
- The results of Flying-fox surveys completed by EarthScapes Consulting and ReconEco using the Westcott et al. method in August 2023.
- Byron Shire High Environmental Value (HEV) 2023 spatial data (NSW Department of Planning and Environment). Table 1 lists the criteria used to derive the HEV layer.
- NSW BioNet database (www.bionet.nsw.gov.au). A search of threatened flora and fauna species within 1km of each Flying-fox camp from the NSW DPE BioNet Atlas database was completed in August 2023 (refer to Appendix A).
- The Atlas of Living Australia (ALA) habitat restoration sites on the Habitat Restoration HUB.

Desktop searches of sensitive sites (schools, aged care facilities, child care centres and showgrounds, equine training, piggeries care and resting centres) in close proximity (within 300m) to known Flying-fox camps.

Table 1 High Environmental Value criteria (Biodiversity and Conservation Division, Department of Planning and Environment)

Criterion
1.1 Biodiversity Values Map
2.1 Over-cleared vegetation types
2.2 Vegetation in over-cleared landscapes (Mitchell landscapes)
2.3 Threatened Ecological Communities
2.4 100m buffer on Coastal Wetlands and Littoral Rainforest areas as per the Coastal Management SEPP 2018
3.1 Key habitat for threatened species Key breeding habitats with known breeding occurrence.
Core Koala Habitat
Habitat for known populations of species-credit species
Key habitats for migratory species
4.1 Nationally important wetlands
4.2 Vulnerable Estuaries and ICOLLs
5.1 Karst landscapes
5.2 Sites of geological significance included in State Heritage Register or Heritage Inventory

Figure 1 Flying-fox roosts in Byron Shire.



#### 2. Known Roosts

Table 2 provides a summary of the twenty Flying-fox camps in Byron Shire.

Referral guidelines for management actions in GHFF Camps (DoE 2015) define a nationally important Grey-headed Flying-fox camp as one that has either:

- Contained ≥10,000 Grey-headed Flying-fox in more than one year in the last 10 years, or
- been occupied by more than 2,500 Grey-headed Flying-fox permanently or seasonally every year for the last 10 years.

There are no nationally important camps under this definition in Byron Shire.

The NSW Department of Planning and Environment website<sup>1</sup> describes camp occupation as mix of permanent, occasional, seasonal and single-recording. Roosts that have not been occupied for 10 years may be considered abandoned. Definitions comprise:

Permanent - generally occupied continuously throughout the year, Even after most of the animals have moved elsewhere, a few animals will stay.

Occasional - camps occupied in multiple years, but not continuously.

Seasonal - Flying-foxes may establish roosts in a particular season to take advantage of increased flowering and fruiting of trees in the surrounding area.

Single-recording - only a single recording across multiple years of a camp being surveyed.

Abandoned camps have not been occupied for an extended period of time. David Milledge of Landmark Ecological Services describes two examples of abandoned camps. One off McGettigans Lane, Ewingsdale (a small roost of 30-40 GHFF in March 1985) and a roost of GHFF and BFF on Billinudgel Creek in Billinudgel Nature Reserve (active with several hundred March 1983; deserted in November 1985; 50+15 April 1988 and then increased the next day to 4-5,000, abandoned in July 1988).

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<sup>&</sup>lt;sup>1</sup> <u>Flying-foxes | NSW Environment and Heritage</u>

	Bangalow, Byron Creek	Paddy's Creek	Booyong	Butler	Middleton	Clunes	Coopers Shoot	Eureka	Citriadora	Plantation	Simpson Creek	Federal	Mullumbim by	Mullumbim by	Myocum	Nashua	Brunswick River	Jardine Ct	Marshalls Creek	Beech
Camp first recorded	2019	Jan 2010	1973	July 2003	Sept 2012	< 2013	< 1998	< 2013	<1987	2023	2017	2017	Sept 2010	N/A	1987	2022	<1998	2023	<1998	Nov 2019
Occupation (permanent , seasonal, occasional)	Perm	Occ	Осс	Осс	Perm	Occ	Occ	Осс	Осс	Occ	Unkno wn	Осс	Perm	Осс	Aband oned	Осс	Осс	Осс	Осс	Perm
Species present	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF	GHFF & BFF	Unkn	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF & BFF	GHFF	Unkn	GHFF & BFF	Unkn	GHFF & BFF	GHFF & BFF
Max. no. of flying-fox ever recorded	2,128	2,805	15,50 0	3,000	8,000	3,960	5,900	Unkn	1300	100	1,633	244	10,35 9	859	Unkn	Unkn	32,10 0	Unkn	6,375	1350
Date max. no. of flying-fox ever recorded	Feb 2019	Feb 2018	Nov 2014	May 2016	May 2017	May 2017	Unkn	Unkn	May 2018	Aug 2023	Aug 2017	Nov 2017	May 2017	Aug 2023	Unkn	Unkn	Nov 2013	Unkn	May 2015	Nov 2019
Proportion of max. no.	44% GHFF , 56% BFF	91% GHFF , 9% BFF	80% GHFF , 20% BFF	100% GHFF	56% GHFF , 44% BFF	59% GHFF , 41% BFF	Unkn	Unkn	60% GHFF , 40% BFF	Unkn	34% GHFF , 64% BFF	100% GHFF	80% GHFF , 20% BFF	62% GHFF , 38% BFF	Unkn	Unkn	22% GHFF , 78% BFF	Unkn	6% GHFF , 94% BFF	70% GHFF , 30% BFF
Max. no. of GHFF (date)	957 (Feb 2019)	2,549 (Feb 2018)	200 (Nov 2014)	3,000 (May 2016)	1,955 (May 2018)	2,336 (May 2017)	Unkn	Unkn	780 (May 2018)	100	683 (Nov 2017)	244 (Nov 2017)	8,279 (May 2017)	530 (Aug 2023)	Unkn	Unkn	36 (Nov 2013)	Unkn	2,000 (Aug 2016)	950 (Nov 2019)
Max. no. of BFF (date)	1171 (Feb 2019)	946 BFF (Feb 2013)	50 (Nov 2014)	550 (July 2011)	1,495 (May 2017)	1,624 (May 2017)	Unkn	Unkn	520 (May 2018)	Aug 2023	1,071 (Aug 2017)	20 (May 2018)	2,445 (May 2013)	329 (Aug 2023)	Unkn	Unkn	124 (Nov 2013)	Unkn	6,000 (May 2015)	400 (Nov 2019))

Comments	Permanent since 2019	Flying-foxes are generally absent in winter.	Not recorded between Feb 2009 and Nov 2014, then once only	Flying-foxes are g generally absent in winter.	Between May 2016 and November 2016 only Grey- headed Flving-foxes were	Last recorded occ 2018	Last recorded occ < 2012	Last recorded occ 2017	Last recorded occ 2018	Occupied since 2023	Last recorded occ 2018	Last recorded occ 2018	Numbers decrease and move to the eastern area of the	May be part of Mullumbimby camp/	Last recorded occ 1990		Last recorded occ 2013.	Only recorded in mid 2023.	BFF primary species present.	Permanently occupied.
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GHFF: Grey-headed Flying-fox, BFF: Black Flying-fox

#### 2.1 Bangalow, Byron Creek

#### **Site Description**

The Byron Creek roost site is located to the east of Bangalow township (Figure 2). It is located across:

- Byron Creek, which is a Crown Waterway, managed by Department of Planning and Environment - Crown Lands, in which Bundjalung of Byron Bay Arakwal hold Native Title rights and interests
- the Bangalow Showground Crown Land, which is managed by Council as Crown Land Manager
- Bangalow Sportsground, which is Council owned and managed
- Council road reserves.

The Bangalow sports ground and bowling club is located to the east of the site and the Bangalow showground to the west. A walking path follows the perimeter of the sports grounds adjacent to Byron Creek. Low density residential land is in close proximity to the roost. The site is owned and managed by Byron Shire Council.

The historic roost extent area is 0.56 Ha. The current roost extent is 0.37 Ha.

The land is zoned a mix of Deferred Matter, RE1 - Public Recreation and RU2 - Rural Landscape in the Byron Shire 2014 Local Environmental Plan (LEP).

### **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site only in February 2019. Byron Shire Council commenced monitoring the site in 2022. The occupancy is described as irregular with the most recent recording of occupancy of this site in November 2023.

#### **Ecological Values**

The western roost vegetation community is dominated by Camphor Laurel 51-80% (Figure 3), however the eastern side has been targeted by local landcare restoration and it's in maintenance level. The site is mapped on the NSW Biodiversity Values (BV) Map as biodiverse riparian land.

Appendix A lists threatened species recorded in or within 1km of the roost site

#### **Sensitive Sites**

Byron Creek roost site is located in an urban area and is in close proximity to a number of sensitive sites (Figure 4):

Bangalow showground - roost site is located on the showground.

Bangalow public school - 185 m from roost site.

Bangalow Feros Aged Care - 219m from roost site.

Mirabelle Early Learning Centre - 442m from roost site.

Harmony Early Learning Centre - 266m from roost site.

#### **Restoration Sites**

A number of restoration projects have been undertaken on Byron Creek south of the site (Figure 5).
2014 - 2016 - Koala habitat
2019 - 2021 - Grey-headed Flying-fox habitat
2022 - current - Riparian restoration

Figure 2 Bangalow, Byron Creek Roost Location



Figure 3 Ecological Values - Bangalow, Byron Creek Roost Location

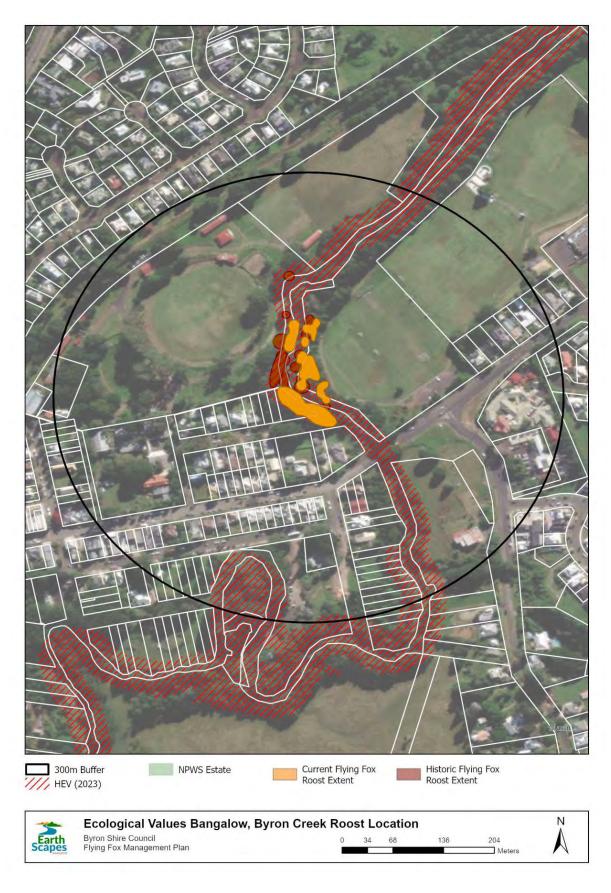


Figure 4 Sensitive Sites - Bangalow, Byron Creek Roost Location

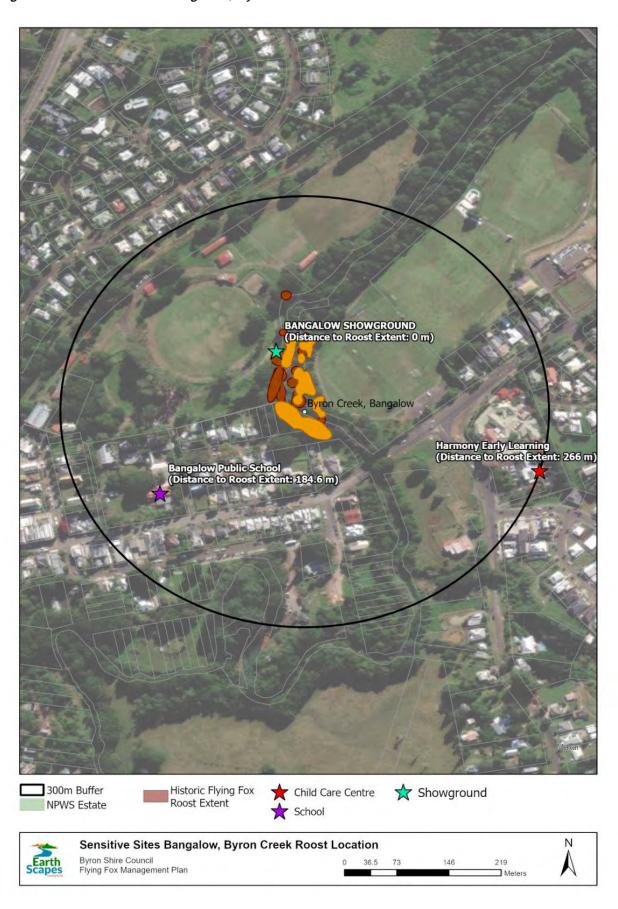
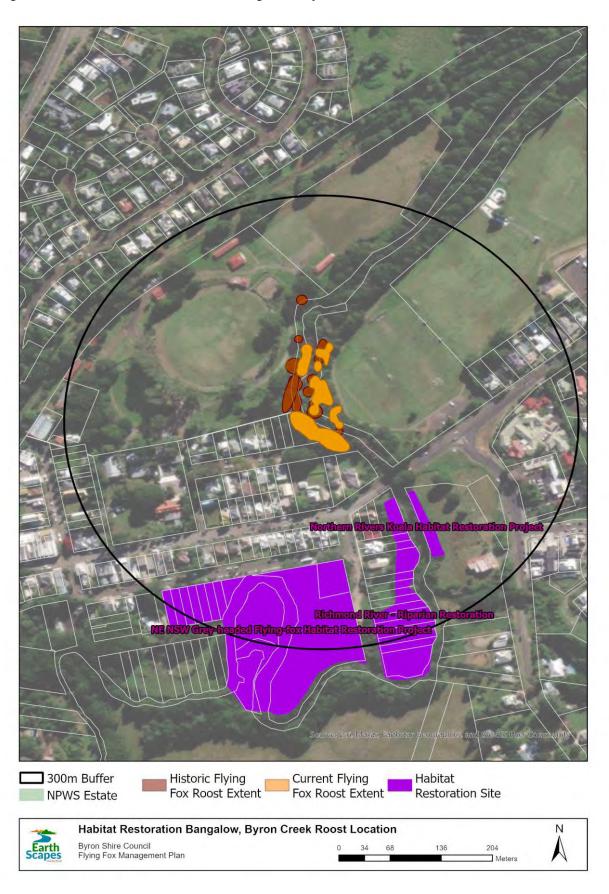


Figure 5 Habitat Restoration Sites - Bangalow, Byron Creek Roost Location



#### 2.2 Bangalow, Paddys Creek

### Site Description

The Byron Creek roost site is located in a residential area of Bangalow township on Paddys Creek; a tributary of Byron Creek (Figure 6). Low density residential land backs onto the camp along Keith Street, Colin Street, Burrawan Place, Elkhorn Place and Palm Tree Crescent. The site is owned and managed by Byron Shire Council.

The historic roost extent area is 2.08 Ha.

The camp is zoned RE1 - Public Recreation in the Byron Shire and the surrounding land is zoned R2 - Low Density Residential in the 2014 Local Environmental Plan (LEP).

### **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site from November 2012, although it is noted that Flying-foxes were present at the camp from 2007. The NFFMP categorises the occupancy as seasonal. Byron Shire Council commenced monitoring the site in February 2012. There has been seasonal occupation of the site since 2012, however there were no Flying-foxes present during the August 2023 surveys. The Byron Shire Flying-fox Camp Management Plan 2018 - 2023 notes that Flying-foxes are generally absent in winter from this camp.

#### **Ecological Values**

The roost vegetation community is Camphor Laurel 51-80% and follows a permanent watercourse (Figure 7).

The site is not mapped on the NSW Biodiversity Values (BV) Map. The vegetation at the camp is mapped as HEV vegetation (sourced from Byron Shire Council) that meet the criteria: Breeding Koalas.

The Byron Shire Flying-fox Camp Management Plan (CMP) 2018 - 2023 describes the canopy as dominated by Camphor Laurel (*Cinnamomum camphora*) and rainforest trees such as Bangalow Palm, Bleeding Heart (*Homalanthus populifolius*) and Black Bean (*Castanospermum australe*). Surveys by Geolink in 2017 and 2019 noted the core area of this community constitutes Lowland Rainforest in NSW North Coast and Sydney Basin Bioregions EEC, listed under the BC Act. The Vegetation Management Plan Paddys Creek Flying-fox Camp (GeoLink 2019) describes a single Coolamon (*Syzygium moorel*) planted near the Children's Centre. This species is listed as Vulnerable in NSW (*BC Act 2016*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

Paddys Creek roost site is located in an urban area and is in close proximity to a number of sensitive sites (Figure 8):

Mirabelle Early Learning Site - 442m from roost site.

Bangalow Community Children's Centre - 24m from roost site.

#### **Restoration Sites**

The original rainforest planting of Paddys Creek was undertaken in 1989 by local resident Edie Franks.

Between 2010 and 2012 Byron Shire treated ground and mid storey weeds, including Small-leaved Privet, (*Ligustrum sinense*), Green Cestrum (*Cestrum nocturnum*), Mickey Mouse Plant (*Ochna serrulata*), Giant Devil's Fig (*Solanum chrysotrichum*) and Cat's Claw (*Dolichandra unguis-cati*) (Bryon Shire Council 2012). Camphor Laurel (*Cinnamomum camphora*) stands were thinned. Additional work was undertaken by Council in 2015 to create a buffer adjacent to Burrawan Place and Palm Tree Crescent. The work involved lopping and removal of Camphor laurels and replanting of shrubs to the west of the camp.

GeoLINK was engaged by Byron Shire Council in 2019 to prepare a Vegetation Management Plan (VMP) for the Flying-fox camp. The VMP outlines management actions with a focus on removal/control of weeds in the midstorey and ground layer to provide opportunities for native regeneration. Byron Shire Council implemented the VMP recommendations, including Camphor laurel removal. Byron Shire Council, the local Landcare group and neighbours at Paddys Creek planted 600 trees across 0.1ha between June and November 2021.

Bangalow Land and Rivercare continue to be involved in restoration works at the Paddys Creek camp (Figure 9).

Figure 6 Bangalow, Paddy's Creek Roost Location

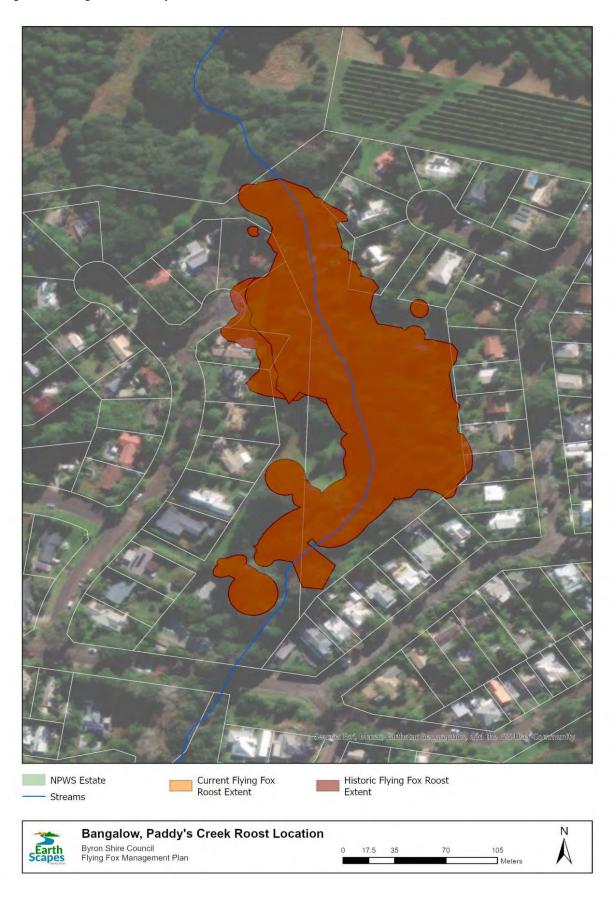


Figure 7 Ecological Values - Bangalow, Paddy's Creek Roost Location

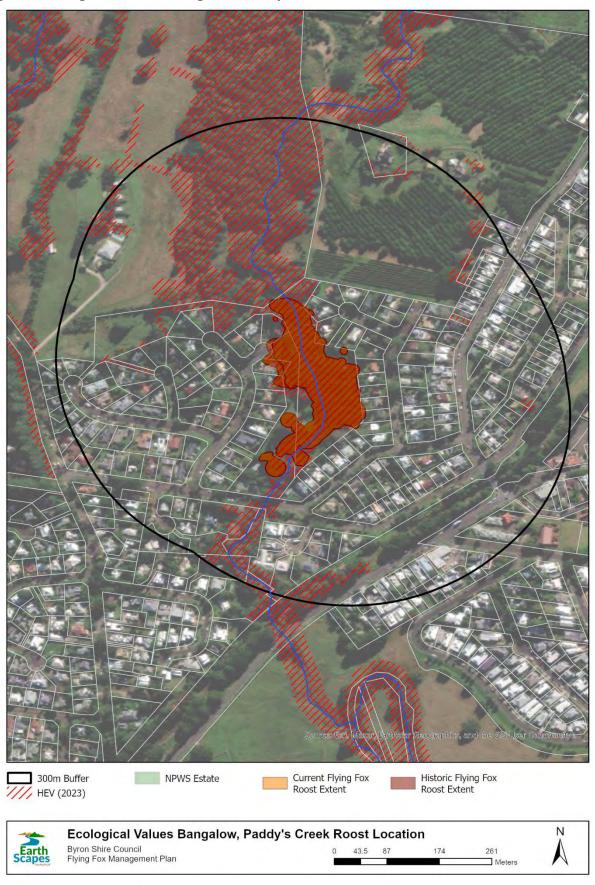


Figure 8 Sensitive Sites - Bangalow, Paddy's Creek Roost Location

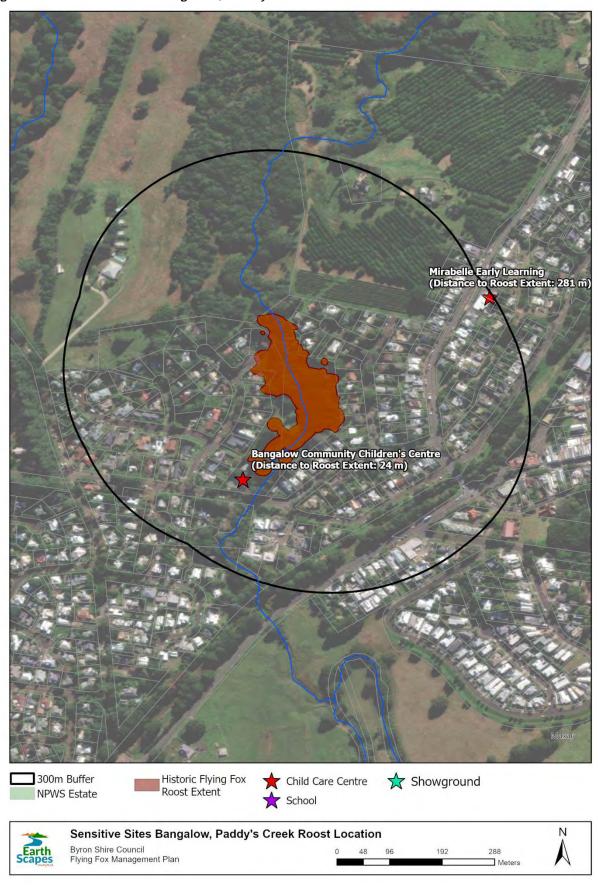
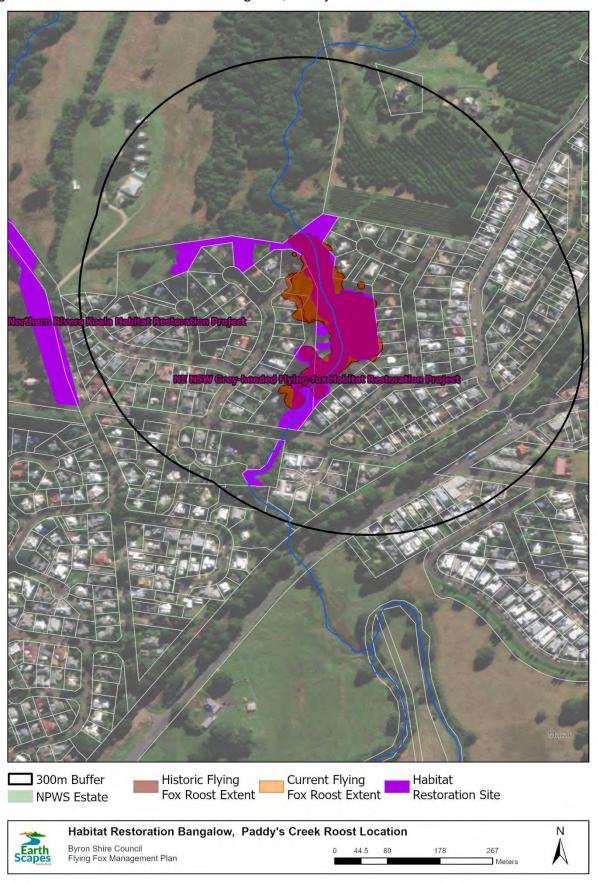


Figure 9 Habitat Restoration Sites - Bangalow, Paddy's Creek Roost Location



### 2.3 Booyong, Booyong Flora Reserve

### **Site Description**

The Booyong roost site is located 18 Km north-east of Lismore (Figure 10). The site is owned by Department of Planning and Environment - Crown Land who have appointed the Booyong Reserve Trust to manage the area.

The Wilsons River and Cudgerie Gully are water systems adjacent to the site. The site is opposite Booyong Recreation Reserve and Sportsfields.

The historic roost extent area is 7.54 Ha.

The land is zoned Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP).

#### **Roost History**

The National Flying-fox Monitoring Program (NFFMP) only recorded Flying-foxes at this site in November 2014 and notes the roost has been abandoned since 2014. David Milledge of Landmark Ecological Services recorded hundreds of GHFF and BFF in May 1981; 15,000 on 4 March 1988, 2,000 on 17 April 1988; 200+ on 31 May 1988; and 400+ on 1 July 1988.

#### **Ecological Values**

The flora reserve is a remnant of the Big Scrub rainforests (Figure 11).

The Big Scrub Rainforest Conservancy (https://www.bigscrubrainforest.org/the-booyong-reserve-story/) describe the remnant as an example of the white booyong sub-alliance including white booyong, pepperberry, myrtle ebony, black bean, white beech, koda, black apple and small-leaved fig. The riparian zone contains sandpaper fig, rough-leaved elm, yellow pear-fruit, whalebone tree as well as endangered plants including red lilly pilly, thorny pea and brush sauropus. Booyong Reserve also contains a wide variety of vines, palms, epiphytes, ferns and other ground covers. It supports the largest known population of the endangered herb isoglossa (*Isoglossa eranthemoides*) in any rainforest reserve. The reserve also supports a range of rainforest-dependent birds including the Regent Bowerbird, Green Catbird.

White-bellied sea eagles are known to take Flying-foxes from the rainforest canopy.

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)
Over-cleared vegetation types
Hollow-dependent Fauna Habitat
Threatened Ecological Community (BC Act: Lowland Rainforest on Floodplain)

The site is mapped on the NSW Biodiversity Values (BV) Map as Identified Rainforest.

The site visit by Byron Shire Council, EarthScapes Consulting and ReconEco in August 2023 noted the presence of threatened species (refer to Appendix A for details) and very good vegetation condition.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

Booyong roost site is located in a rural area with no sensitive sites in close proximity (Figure 12).

#### **Restoration Sites**

Big Scrub Landcare have been working on restoration projects at the Booyong Reserve for over 20 years and completed over 40 projects (Figure 12).

The focus of regenerative activities has been weed control, particularly woody weeds such as lantana, camphor laurel and privet.

Figure 10 Booyong, Booyong Nature Reserve Roost Location

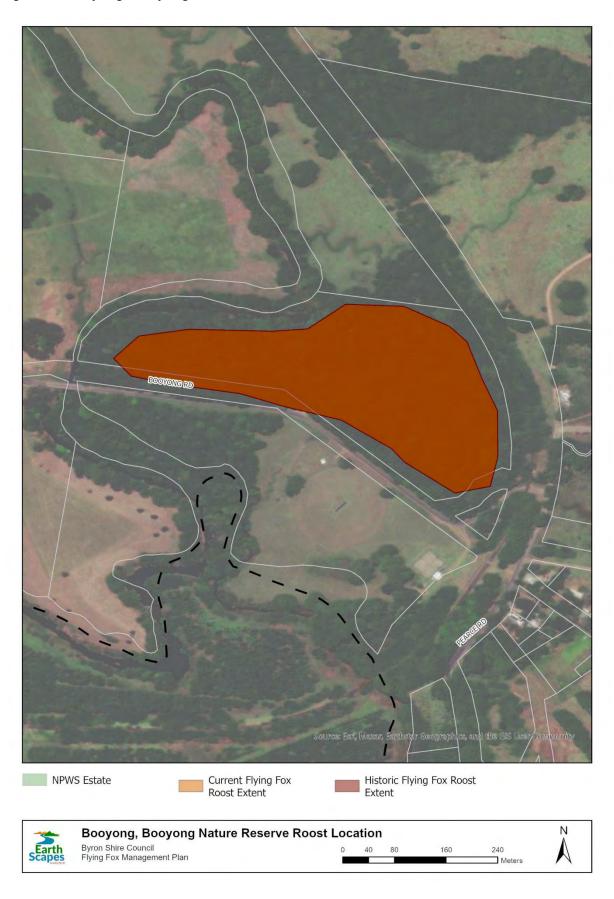


Figure 11 Ecological Values - Booyong, Booyong Nature Reserve Roost Location



Figure 12 Restoration sites - Booyong, Booyong Nature Reserve Roost Location



#### 2.4 Byron Bay, Butler St

### Site Description

The Butler Street roost site is located on the western edge of Byron Bay township (Figure 13). The site is in two parts. The northern area is located:

- 1. Mostly on Crown Reserve R1003023 which is owned by Department of Planning and Environment Crown Lands and managed by Council as the appointed Crown Land Manager. The gazetted purpose of Reserve R1003023 is conservation.
- 2. Partly on Crown Reserve 88993 which is owned by Department of Planning and Environment - Crown Land and managed by Council as the appointed Crown land Manager. Arakwal People hold Native Title rights and interests in part of Reserve R88993. The gazette purpose of Reserve R88993 is Public Recreation. The Butler Street Byron Bay Reserve 88993 Public Recreation Plan of Management (Stratcorp 2002) applies to this reserve.
- 3. a small area on Council road reserve.

The southern area is located on Crown Reserve R1002871 which is owned by Department of Planning and Environment - Crown Lands who have appointed the Cumbebin Wetland Sanctuary Trust to manage it on their behalf.

Low and medium density housing surrounds the site, Immediately to the west is the Cumbebin Nature Reserve, which is subject to an Indigenous Land Use Agreement (ILUA) with the Bundjalung of Byron Bay (Arakwal) People. The Nature Reserve is jointly managed by NPWS and Arakwal People through a management committee.

The historic roost extent area is 2.3 Ha.

The camp is zoned Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP) and the surrounding land is RE1 - Public Recreation.

#### **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site intermittently between November 2012 and May 2017. The Program notes that Flying-foxes were present at the camp from 2008, although the Byron Shire Flying-fox Camp Management Plan refers to presence of Flying-foxes at least 20 years prior. Byron Shire Council commenced monitoring the site in July 2008. Although no Flying-foxes have been recorded in the quarterly surveys since May 2017, Council received verbal reports from community members indicating random occupancy. In November 2023 1 single individual was found in the roost.

### **Ecological Values**

The vegetation community at this camp is mature Paperbark and Swamp Oak. The 2018 - 2023 CMP describes the vegetation as low dense mixed forest of eucalypts and paperbarks with minimal shrub cover and dense graminoid groundcover. The boggy ground is heavily clothed in leaf litter, interspersed with patches of sedges and ferns, temporary pools of water and bare ground. Canopy cover includes Swamp Mahogany (*Eucalyptus robusta*), Broadleaved Paperbark (*Melaleuca quinquenervia*) and Swamp Oak (*Casuarina glauca*). EarthScapes (2020) describe a small area with strong Littoral /subtropical rainforest elements adjacent the northern drainage line.

The north area of the site is mapped on the NSW Biodiversity Values (BV) Map as Coastal Management Act - Wetlands. The southern area of the site is not mapped on the NSW Biodiversity Values (BV) Map.

The roost site contains a range of high environmental values (Figure 14):

Vegetation in over-cleared landscapes (Mitchell landscapes)

Threatened Ecological Community (BC Act: Swamp Sclerophyll Forest on Coastal Floodplains and Swamp Oak Floodplain Forest, EPBC Act: Coastal Swamp Sclerophyll Forest)

Coastal Wetland Resilience and Hazards 2021 SEPP.

EarthScapes (2020) note that this camp is potential habitat for the Critically Endangered Mitchell's Rainforest Snail.

The Butler Street Reserve Site Action Plan (EarthScapes, 2020) describes the northern roost site as threatened by serious weed invasion, rubbish dumping and canopy damage from previous Flying-fox occupancy.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

The Butler Street roost site is located on the fringe of an urban area and is in close proximity to a sensitive sites (Figure 15):

Byron Aged Care - 81.3m from roost site.

#### **Restoration Sites**

The southern part of the camp is managed by the Cumbebin Wetland Trust. The Trust have undertaken restoration works in the past, however the site now contains a number of weeds (including creeping Syngonium - Syngonium podophyllum) which are not being managed.

The northern part of the camp has been reported as having a medium infestation of weeds and high amounts of rubbish and debris.

The Butler Street Reserve Site Action Plan (EarthScapes, 2020) applies to the northern area of the site managed by BSC and outlines weed management strategies for controlling the weeds in the northern roost site. Weeds include Broad-leaved Paspalum and Singapore Daisy, Passionfruit and Madeira Vine, Camphor Laurel (*Cinnamomum camphora*), Lantana, Barnyard Grass, Morning Glory, Cocos and Alexander Palms. The Site Action Plan recommendations were implemented by Council as part of the Byron Bay bypass project.

Figure 13 Byron Bay, Butler Street Roost Location



Figure 14 Ecological Values - Byron Bay, Butler Street Roost Location



Figure 15 Sensitive Sites - Byron Bay, Butler Street Roost Location



#### 2.5 Byron Bay, Middleton St

#### Site Description

The Middleton Street roost site is located in the centre of Byron Bay township (Figure 16). The camp is located:

- 1. Mostly on Crown Reserve R755695 which is owned and directly managed by Department of Planning and Environment Crown Lands. There is an undetermined Claim by the NSW Aboriginal Land Council over this reserve.
- 2. Partly over Council road reserves, being a small part of Middleton Street and a small area of Council road reserve that joins Tennyson and Middleton Streets.

Low and medium density housing and businesses surround the site. Jarjumirr Park and Byron Bay Court House are located immediately to the north, and nearby are the Byron Youth Activities Centre (YAC) and Sandhills Early Childhoood Centre, both of which are accessed from Gilmore Crescent.

The 2018 - 2023 CMP notes that the public road corridor has been managed by adjoining residences, however this is incorrect, the road remains a public road. The ongoing management of the road reserve to the south of the camp is in the interest of effective camp management.

The historic roost extent area is 1.21 Ha. The current roost extent area is 0.08 Ha.

The camp is zoned Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP) and the surrounding land is RE1 - Public Recreation.

#### **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site since February 2016. The camp is classified as permanent with Flying-foxes recorded in all seasons. Byron Shire Council commenced monitoring the site in 2012 and most recently recorded Flying-foxes in November 2023..

### **Ecological Values**

The 2018 - 2023 CMP describes the vegetation as mostly Coastal Swamp Forest made up of low dense mixed forest of Swamp Oak (*Casuarina glauca*) and Broad-leaved Paperbark. Common Reed (*Phragmites australis*) dominates the understorey.

The site is not mapped on the NSW Biodiversity Values (BV) Map.

The roost site contains a range of high environmental values (Figure 17): Vegetation in over-cleared landscapes (Mitchell landscapes) Coastal Wetland Resilience and Hazards 2021 SEPP Byron Shire Koala Plan of Management

The floristic composition of the roost site conforms with the Threatened Ecological Community (BC Act: Swamp Sclerophyll Forest on Coastal Floodplains and Swamp Oak Floodplain Forest, EPBC Act: Coastal Swamp Sclerophyll Forest), however the remnant is highly disturbed.

The Vegetation Management Plan for Middleton Flying-fox Camp (Geolink, 2019) noted a single Stinking Laurel (*Cryptocarya foetida*) occurs in the west of the site near Middleton Street. This species has a Conservation Status of Vulnerable in NSW.

The 2019 VMP describes numerous weed species, including Camphor Laurel (*Cinnamomum camphor*a), Cockscomb Coral Tree (*Erythrina crista galli*),
Cocos Palm (*Syagrus romanzoffiana*), Giant Bird-of-Paradise (*Strelitzia nicolai*), Murraya (*Murraya paniculata*), Winter Senna (*Senna pendula var. glabrata*), Guinea Grass (*Megathyrsus maxima*) and Singapore Daisy (*Sphagneticola trilobata*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

The Middleton Street roost site is located in the centre of an urban area and is in close proximity to a number of sensitive sites (Figure 18):

Sandhills Early Childhood Centre - 66.5m from roost site.

Byron Bay Public School - 317m from roost site.

Byron Youth Activity Centre - 68.5m from roost site.

Byron Bay Feros Village Aged Care - 320m from roost site.

Byron Bay Preschool - 353.7m from roost site.

#### **Restoration Sites**

Some minor weed removal works were undertaken by Council on the eastern side of the camp as part of the Jarjumirr Park project. No restoration works have been undertaken within the main camp footprint (Figure 19) as the land is currently managed directly by Department of Planning and Environment - Crown Lands and the outstanding Native Title claim over the land needs to be finalised before management actions take place in this area. This Flying-fox Management Plan can be updated once Crown Lands has finished the claim process.

Figure 16 Byron Bay, Middleton Street Roost Location

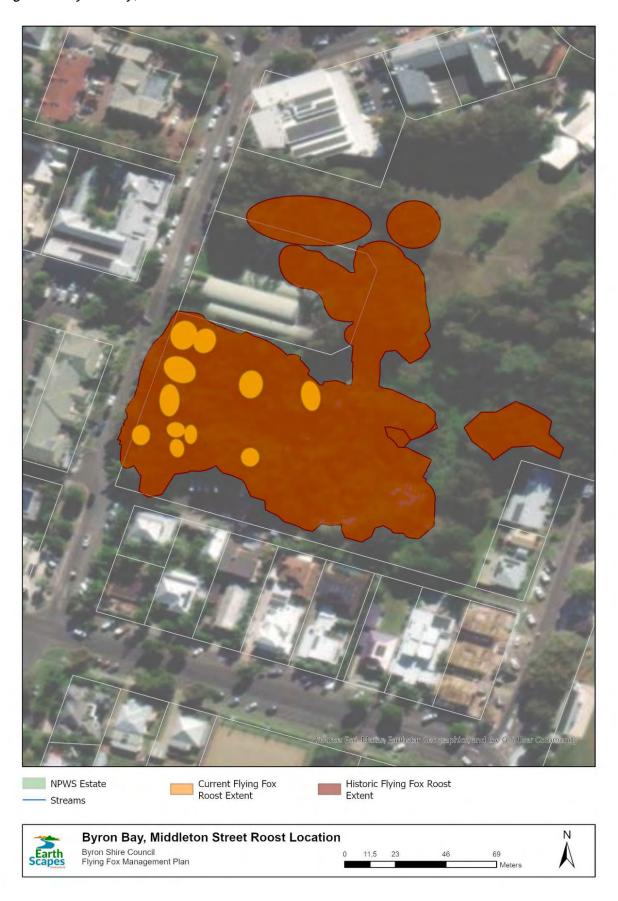


Figure 17 Ecological Values - Byron Bay, Middleton Street Roost Location

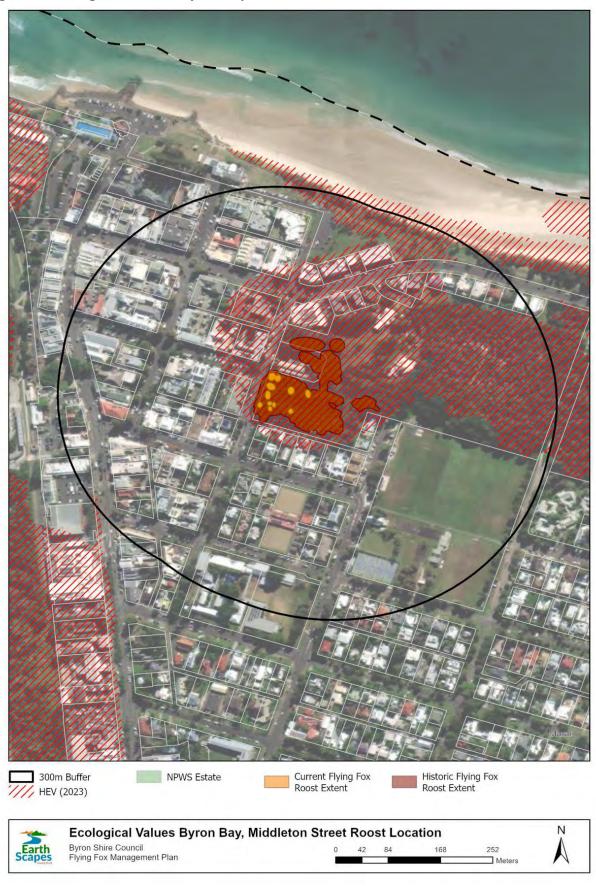
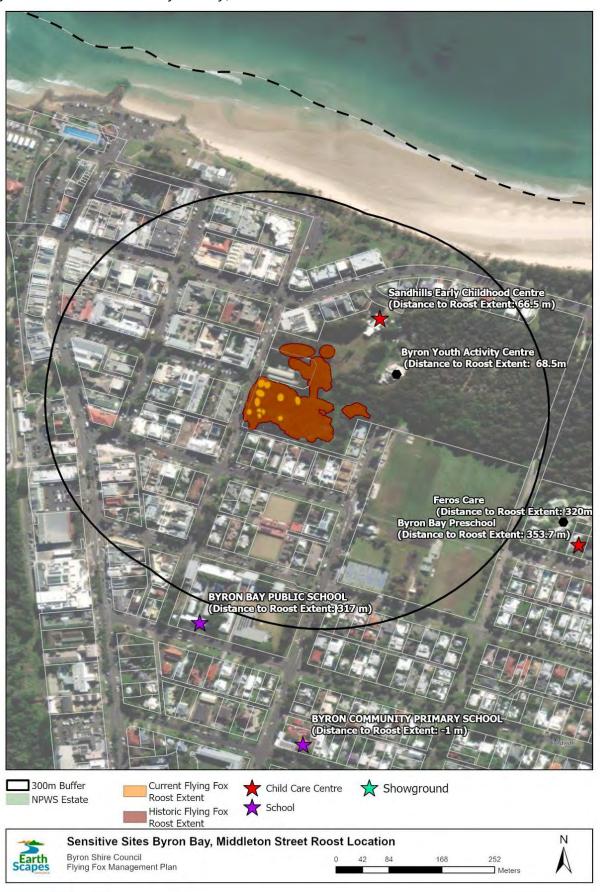


Figure 18 Sensitive Sites - Byron Bay, Middleton Street Roost Location



# 2.6 Clunes, Booyong Rd

# **Site Description**

The Booyong Road roost site is located southeast of Clunes (Figure 19). There is an unnamed first and second order stream to Wilsons River to the west of the site.

The site is rural and privately owned.

The historic roost extent area is 0.38 Ha.

The land is zoned RU1 Primary Production in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site between February 2017 and May 2018. NFFMP note that the camp was formed in 2014. 673 Flying-foxes were present during the November 2023 surveys.

# **Ecological Values**

The roost vegetation community is a cabinet timber plantation (Hoop Pine, Queensland Maple, Kauri Pine, White Beech) which is planned to be thinned and possibly harvested within 3 years (Figure 20). All permits are already in place.

The site is in a rural environment which has been largely cleared and fragmented and contains no understory species.

The roost is mapped as high environmental value vegetation although there are small patches of vegetation in over-cleared landscapes (Mitchell landscapes) within 200m of the roost

The site visit by EarthScapes Consulting, Byron Shire Council and ReconEco in August 2023 noted absence of midstory and ground cover vegetation and the presence of cattle.

Appendix A lists threatened species recorded in or within 1km of the roost site.

## **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

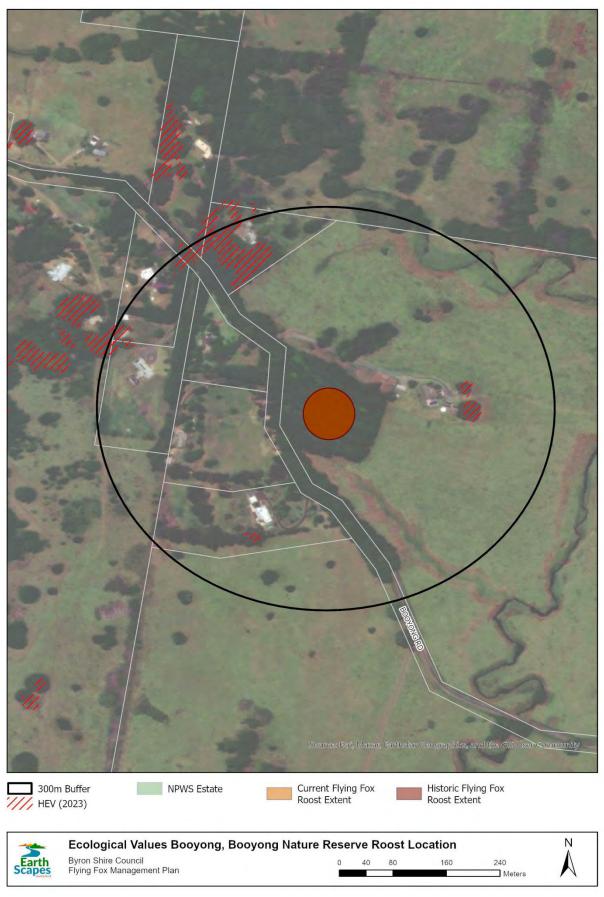
#### **Restoration Sites**

There are no restoration sites within 500m of the roost. The site has been part of spillover research project (Griffith University) and the property owner has been working with government agencies to mitigate industry impacts.

Figure 19 Clunes, Booyong Road Roost Location



Figure 20 Ecological values Clunes, Booyong Road Roost Location



# 2.7 Coopers Shoot, Picadilly Hill Rd

# Site Description

The Coopers Shoot roost site is located Between Waterhouse Drive, Piccadilly Hill Road, Broken head Road and Midgen Flat Road at Coopers Shoot, south-west of Byron Bay (Figure 21). Midgen Creek is south of the site.

The site is rural and privately owned.

The historic roost extent area is 0.67 Ha.

The land is zoned C2 Environmental Conservation in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) have no records of Flying-foxes at this site and categorises the occupancy as abandoned. The NFFMP describes the camp as abandoned before 2012, however the current property owner has advised Council that Flying-foxes have been present during spring/summer in 2020, 2021 and 2022. David Milledge of Landmark Ecological Services recorded 6 July 2007, 2,000 flying-foxes in July 2007 (GHFF: BFF ratio was approximately 3:1). No Flying-foxes were recorded during the 2023 surveys.

# **Ecological Values**

The roost vegetation community is Bangalow Palm-Rainforest (Figure 22), although some flying-foxes were roosting in Broad-leaved Paperbarks in July 2007

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)
Over-cleared vegetation types
Threatened Ecological Community (BC Act: Lowland Rainforest on Floodplain).

The site visit by EarthScapes Consulting and ReconEco in August 2023 noted the vegetation is in moderate condition, with some Cherry Guava (*Psidium cattleyanum*) and Camphor Laurel (*Cinnamomum camphora*) weed species present.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

#### **Restoration Sites**

Bangalow Koalas, World Wildlife Fund (WWF) undertook koala restoration works south of the site between 2020 and 2023 (Figure 23). Planting was also completed by the owner in the higher slopes in the north-west of the property. The property owner is working with neighboring properties to create a wildlife corridor.

Figure 21 Coopers Shoot, Picadilly Hill Rd Roost Location



Figure 22 Ecological Values - Coopers Shoot, Picadilly Hill Rd Roost Location

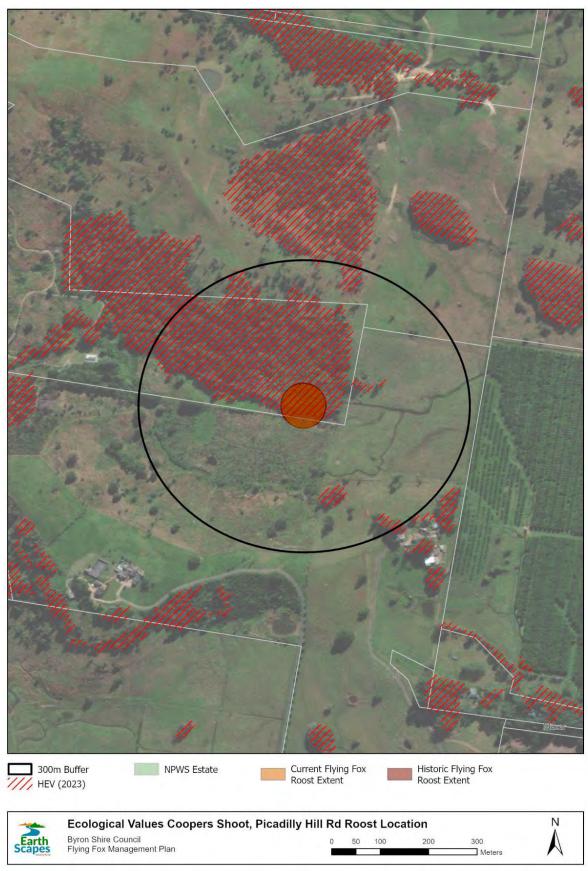
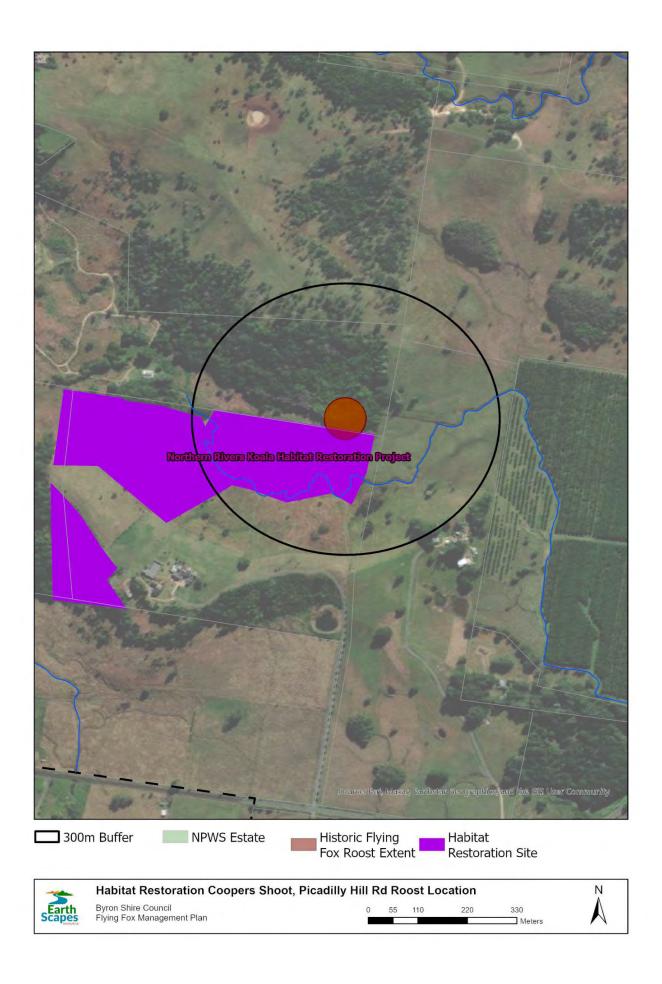


Figure 23 Habitat Restoration Sites - Coopers Shoot, Picadilly Hill Rd Roost Location



## 2.8 Eureka, Eureka Rd

# **Site Description**

The Eureka roost site is located south east of Eureka Public School at Coopers Shoot, west of Bangalow (Figure 24). Little Bennys Creek runs north to south through the roost.

The site is rural and privately owned. It is part of an established macadamia farm.

The historic roost extent area is 0.46 Ha.

The land is zoned RU1 Rural Landscape in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) have no records of Flying-foxes at this site. NFFMP note there is anecdotal evidence that the camp was occupied around 2013. No Flying-foxes were observed during the 2023 surveys.

# **Ecological Values**

The roost vegetation community is Rainforest+10-50% Camphor Laurel (Figure 25).

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)

Over-cleared vegetation types

Hollow-dependent Fauna Habitat

Threatened Ecological Community (BC Act: Lowland Rainforest, EPBC: Lowland rainforest of Subtropical Australia )

The site is mapped on the NSW Biodiversity Values (BV) Map as biodiverse riparian land.

The site visit by EarthScapes Consulting and ReconEco in August 2023 noted the vegetation is disturbed but includes occasional natives; Guoia (*Guioa semiglauca*), Cockspur thorn (*Maclura cochinchinensis*), Sweet pittosporum (*Pittosporum undulatum*), Native Raspberry (*Rubus rosafolius*). Weeds include *Camphor laurel* (*Cinnamomum camphora*), Large-leafed privet (*Ligustrum lucidum*) and *Lantana camara*.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

Eureka public school is located 403m from the roost (Figure 26).

#### **Restoration Sites**

There are no restoration sites within 500m of the roost.

Figure 24 Eureka, Eureka Rd Roost Location



Figure 25 Ecological Values - Eureka, Eureka Rd Roost Location

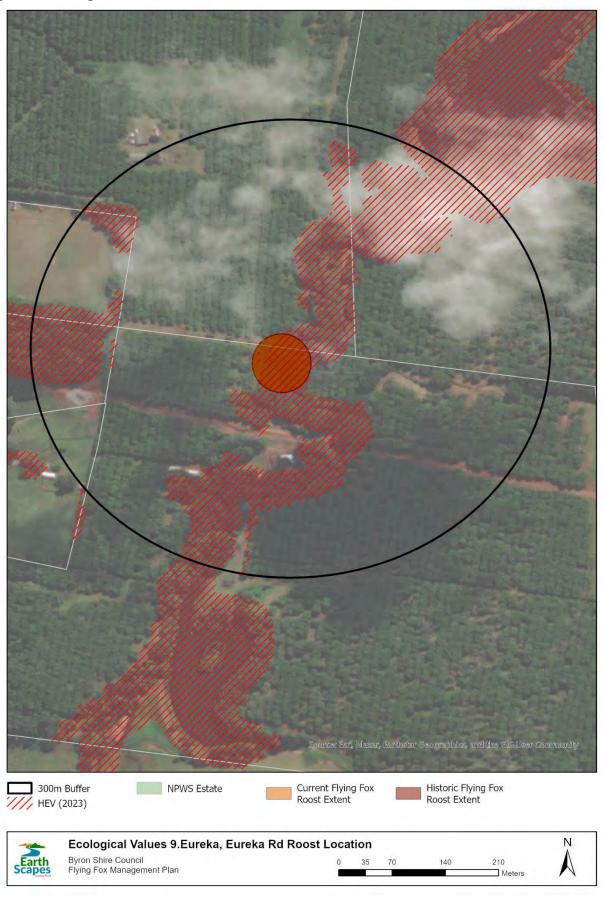
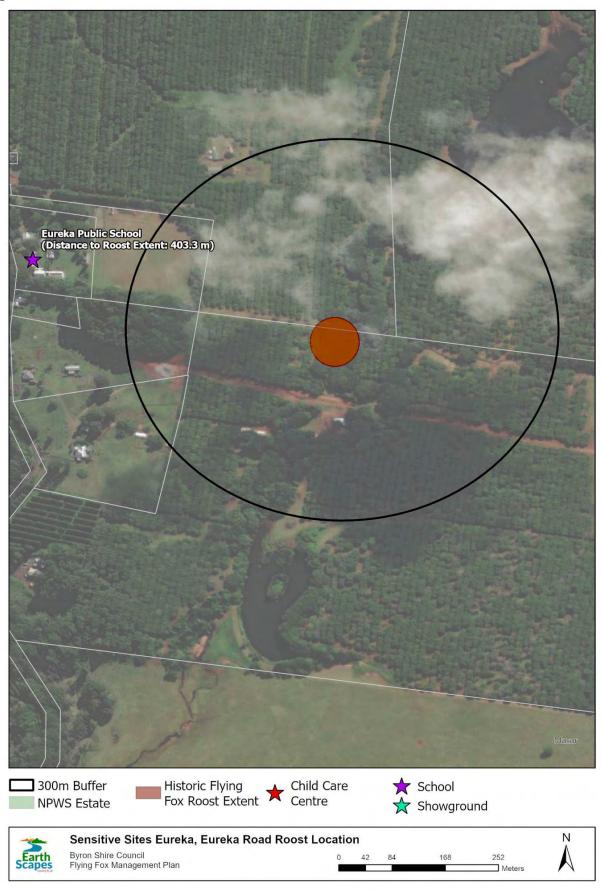


Figure 26 Sensitive Sites - Eureka, Eureka Rd Roost Location



## 2.9 Ewingsdale, Citriadora Drive

# Site Description

The Citriadora Drive roost site is located at Ewingsdale, west of Byron Bay on Ewingsdale Road (Figure 27). The site is in a rural area between Byron Bay and Ewingsdale. The site is privately owned.

The historic roost extent area is 0.45 Ha.

The land is zoned C2 Environmental Conservation in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site in May 2018 and categorises the occupancy as abandoned. The camp was not surveyed in 2023 as access was not granted by the private landholder.

# **Ecological Values**

The roost vegetation community is Paperbark (Figure 28).

The site is located in an area which has been largely cleared and fragmented.

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)
Over-cleared vegetation types
Habitat for Mitchell's Rainforest Snail
Coastal Wetland Resilience and Hazards 2021 SEPP
Threatened Ecological Community (BC Act: Swamp Sclerophyll Forest on Coastal Floodplains, EPBC Act: Coastal Swamp Sclerophyll Forest).

The site is mapped on the NSW Biodiversity Values (BV) Map as Coastal Management Act - Wetlands.

Appendix A lists threatened species recorded in or within 1km of the roost site.

# **Sensitive Sites**

The Cavanbah Centre is a recreational centre located 477.1m from the roost (Figure 29).

# **Restoration Sites**

There are no restoration sites within 500m of the roost.

Figure 27 Ewingsdale - Citriadora Dr Roost Location

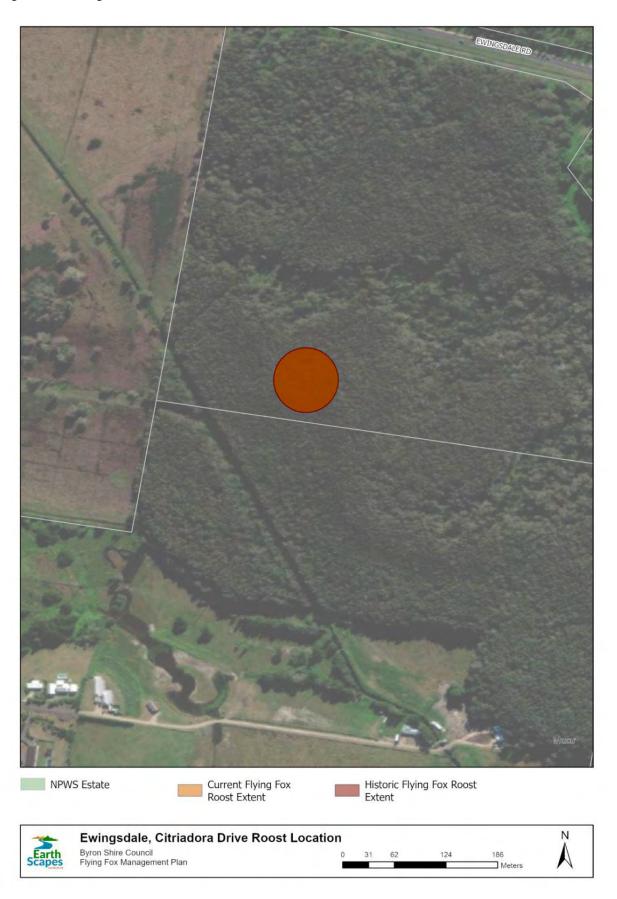


Figure 28 Ecological Values - Ewingsdale - Citriadora Dr Roost Location

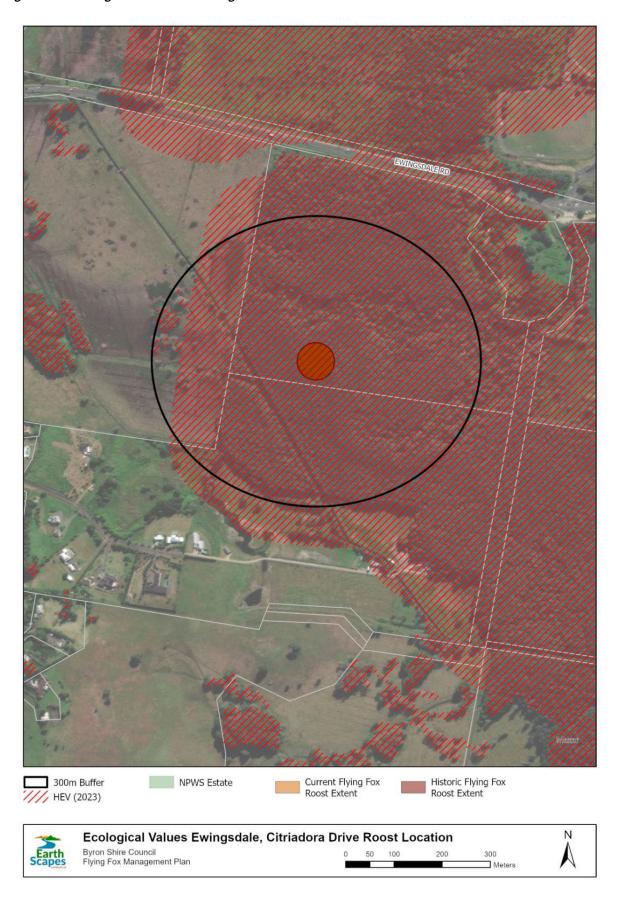
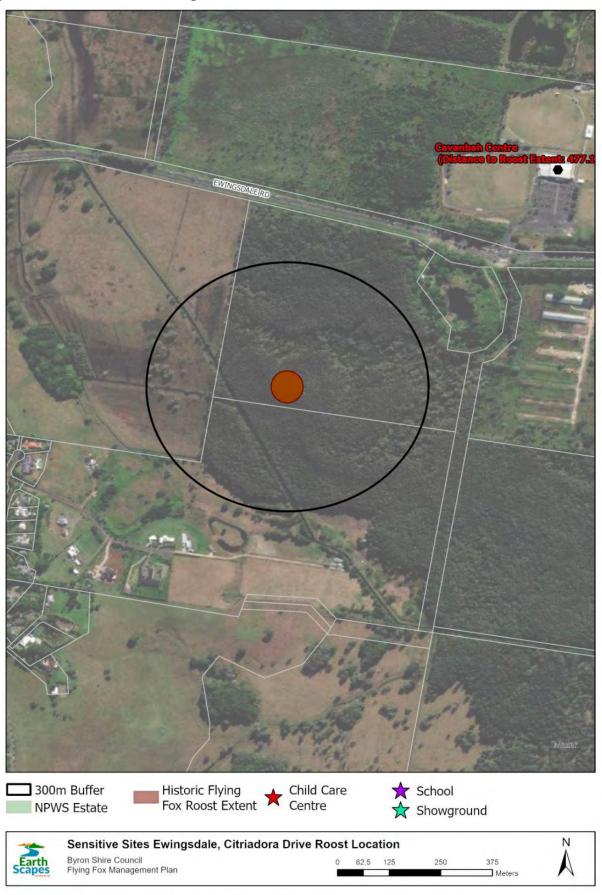


Figure 29 Sensitive Sites - Ewingsdale - Citriadora Dr Roost Location



# 2.10 Ewingsdale, Plantation Drive

# Site Description

The Plantation Drive roost site is located at Ewingsdale, west of Byron Bay between Avocado Crescent and Plantation Drive (Figure 30). The Flying-fox camp is an abandoned plant nursery. Figure 30 map shows different historic and current roost extent and the change in the roost location.

The historic roost extent area is 0.02 Ha.

The land is zoned R5 Large Lot Residential in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) has no records at this site. The survey conducted in August 2023 for Byron Shire Council recorded 100 Flying-foxes.

# **Ecological Values**

The roost vegetation community is dominated by escaped midstorey exotics including *Dracaena* spp (Figure 31). Mature *Ficus benjamina* are used by Flying-foxes. The site visit by EarthScapes Consulting and ReconEco in August 2023 noted a high level of weed disturbance and abandoned rubbish from past commercial activity. Weeds species: Giant Devils Fig (*Solanum chrysotrichum*), Silverleaf Desmodium (*Desmodium uncinatum*), Camphor Laurel (*Cinnamomum camphora*) and exotic nursery escapees.

The site is an urban environment which has been largely cleared and fragmented.

The location does not include high environmental value vegetation although there are small patches of koala habitat within 100m of the roost.

Appendix A lists threatened species recorded in or within 1km of the roost site.

## **Sensitive Sites**

The Plantation Drive roost is not near to any sensitive sites.

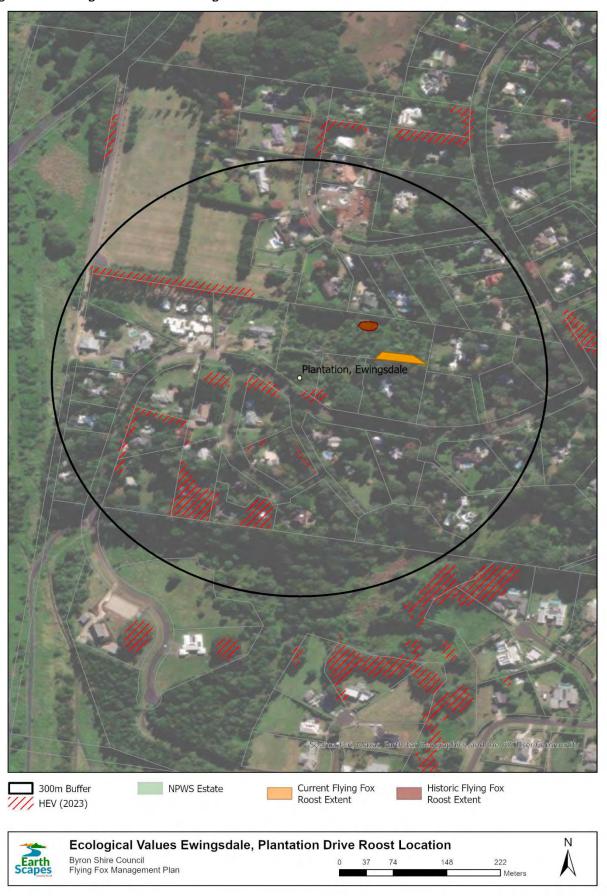
#### **Restoration Sites**

The Plantation Drive roost is not in close proximity to any restoration sites.

Figure 30 Ewingsdale - Plantation Dr Roost Location



Figure 31 Ecological Values - Ewingsdale - Plantation Dr Roost Location



# 2.11 Ewingsdale, Simpson Creek

# Site Description

The Simpson Creek roost site is located at Ewingsdale, west of Byron Bay between Tasha Close and Angus Place (Figure 32). The site is in a residential area at the headwaters of Simpson Creek. The site is located on:

- 1. land that is owned and managed by Byron Shire Council. Plan of Management for Community Land Categorised as Natural Area applies to the land (#DM599743).
- 2. on private land.

The historic roost extent area is 0.34 Ha.

The land is zoned R5 Large Lot Residential in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site between August 2017 and February 2018. There is limited data on occupation of this site although neighboring community members have reported intermittent sightings of Flying-foxes since 2009. 330 Flying-foxes ( 210 GHFF and 120 BHFF) were recorded during the November 2023 surveys.

# **Ecological Values**

The roost vegetation community is Planted Rainforest (Figure 33). The species present within the immediate riparian area include rainforest species. Outside of the riparian area and mapped roost site, vegetation consists of maintained/mown grassed areas behind houses and planted eucalypts including Tallowwood and Blackbutt.

The site is an urban environment which has been largely cleared and fragmented. It is not mapped on the NSW Biodiversity Values (BV) Map.

The location does not include high environmental value vegetation although there are small patches of koala habitat within 100m of the roost.

The site visit by EarthScapes Consulting and ReconEco in August 2023 recorded high levels of midstorey weeds (*Ligustrum lucidum, Cestrum nocturnum*, Coffee arabica, *Ochna serrulata* and *Cinnamomum camphora*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

## **Sensitive Sites**

The Simpson Creek roost is an urban area (Figure 34). Byron Bay hospital is located 371.1m from the roost

#### **Restoration Sites**

Restoration activities at the mapped roost site do not appear to be active. The nearest habitat restoration site is 643m to the north at "The Farm" (Figure 35). This project was

undertaken by Brunswick Valley Landcare between 2016 and 2017 to restore Flying-fox habitat.

Figure 32 Ewingsdale, Simpsons Creek Roost Location



Figure 33 Ecological Values - Ewingsdale, Simpsons Creek Roost Location

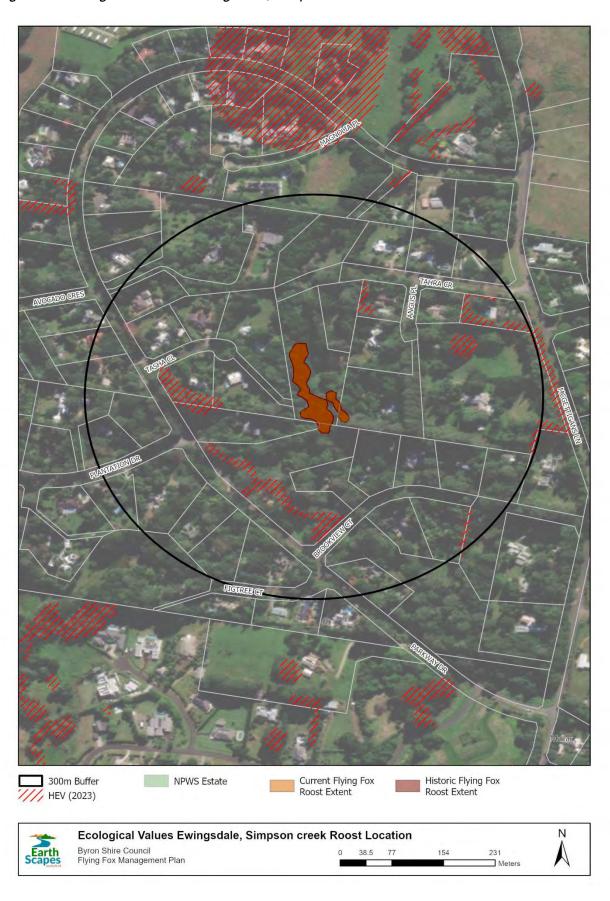


Figure 34 Sensitive Sites - Ewingsdale, Simpsons Creek Roost Location

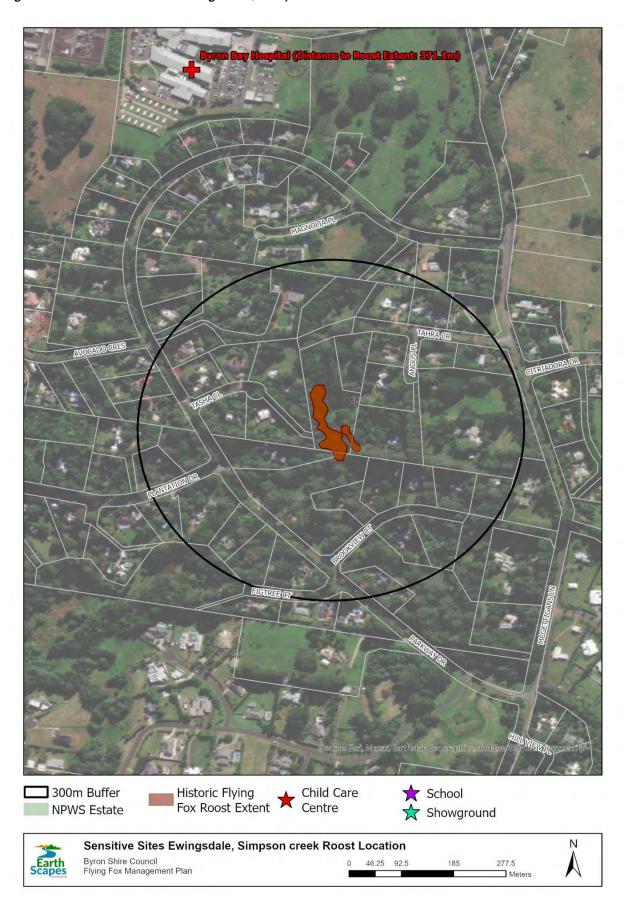
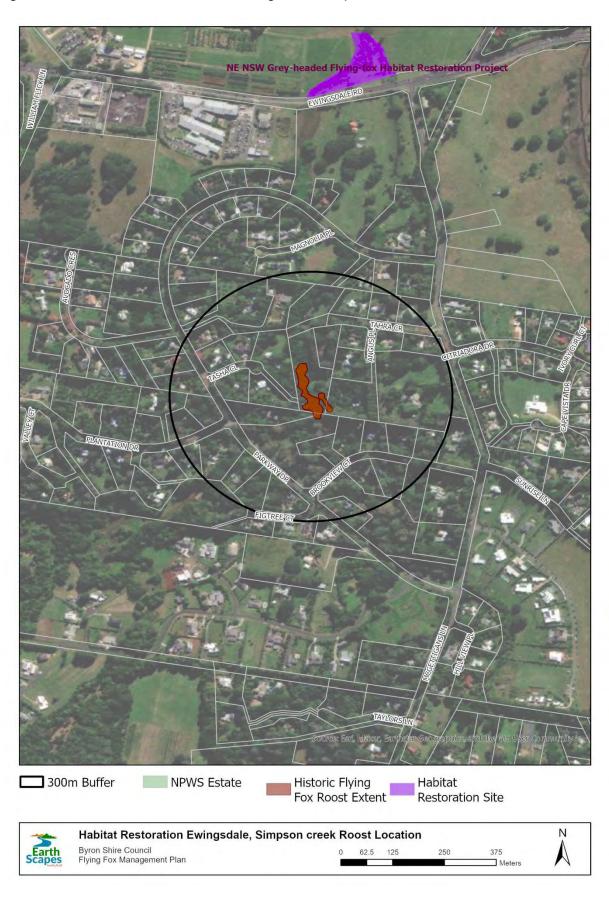


Figure 35 Habitat Restoration sites - Ewingsdale, Simpsons Creek Roost Location



## 2.12 Federal, Coachwood Ct

# **Site Description**

The Coachwood Court roost site is located at Federal, South-west of Coachwood Crescent (Figure 36). The site is in a residential area at the headwaters of Stony Creek. The site is located on:

- 1. Privately owned land;
- 2. Land owned and managed by Byron Shire Council for stormwater and drainage management. This area is covered by the Plan of Management for Community Land Categorised as General Community Use Drainage Reserve (#DM573386).

The historic roost extent area is 0.31 Ha.

The land is zoned a mix of Deferred Matter, R5 Large Lot Residential, RU5 Village in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site between November 2017 and May 2018 and categorises the occupancy as irregular. Flying-foxes were absent during the 2023 assessment.

# **Ecological Values**

The roost vegetation community is regenerating Rainforest (Figure 37).

The site is on the edge of Federal village and the landscape is fragmented.

Whilst the site is disturbed and regenerating, within 200m of the Coachwood Court site there are patches of HEV vegetation that meet the criteria:

Over-cleared vegetation types

Threatened Ecological Community (BC Act: Lowland Rainforest)

Nearby to the south of the site is land mapped on the NSW Biodiversity Values (BV) Map as biodiverse riparian land.

The site visit by Byron Shire Council, EarthScapes Consulting and ReconEco in August 2023 recorded Rainforest species: Cudgerie (*Flindersia schottiana*), Bleeding heart (*Homalanthus populifolius*), Guoia (*Guioa semiglauca*), Bangalow palm (*Archontopoenix cunninghamiana*), Sandpaper Fig (*Ficus coronata*), *Macaranga tanarius* and some semi-mature planted Blue Quandongs (*Elaeocarpus grandis*). *Camphor laurel* (*Cinnamomum camphora*) and understorey weeds such as *Cestrum parqui* are present at the camp.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

#### **Restoration Sites**

There has been some restoration work at the site including active management of mature Camphor laurel trees, weed control and infill planting. There has also been restoration

activities 460m to the south-east of the site (Figure 38). This project was undertaken between 2008 and 2010 to restore Flying-fox habitat along Stony Creek.

Figure 36 Federal, Coachwood Ct Roost Location



Figure 37 Ecological Values - Federal, Coachwood Ct Roost Location

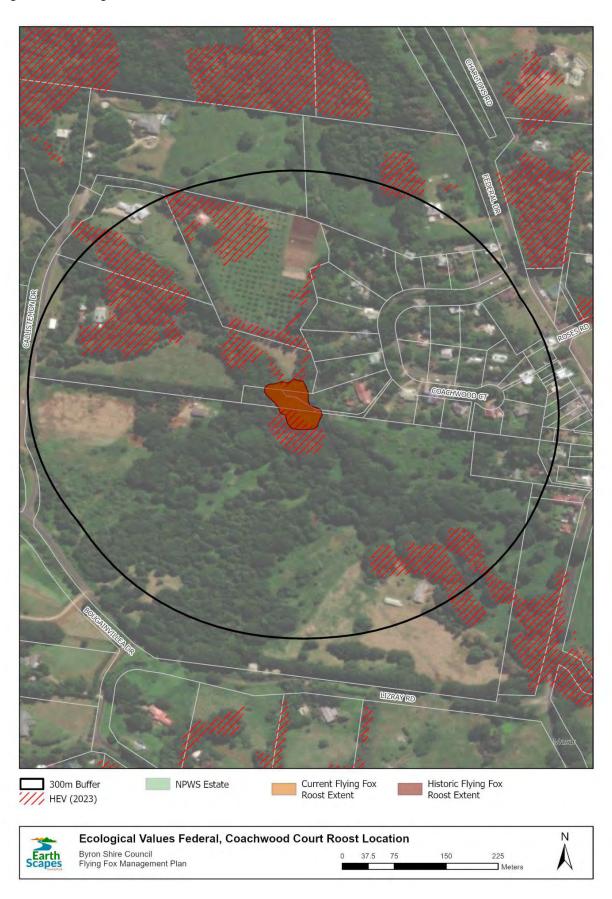
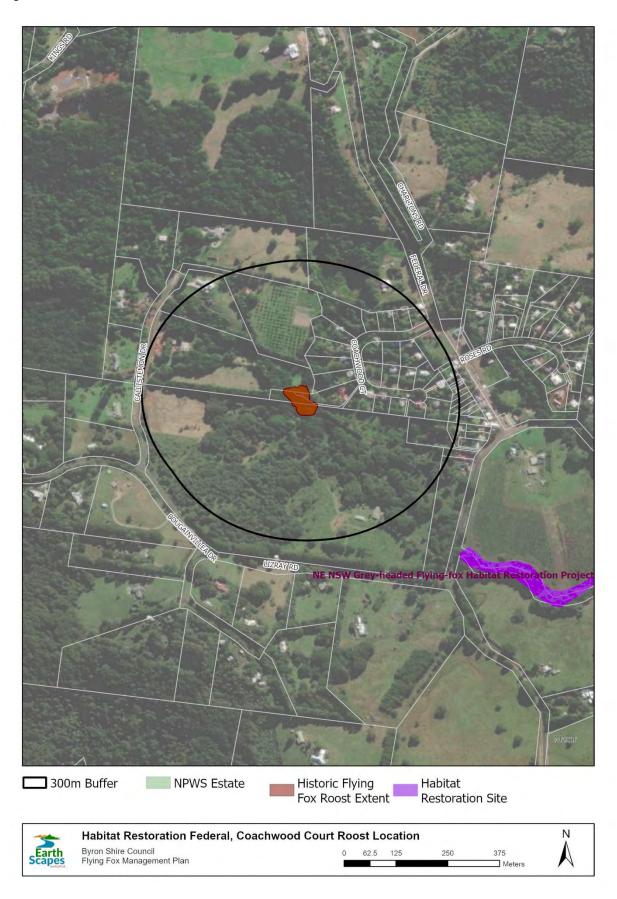


Figure 38 Habitat Restoration Sites - Federal, Coachwood Ct Roost Location



# 2.13 Mullumbimby, Garden Ave

# Site Description

The Garden Avenue roost site in the Mullumbimby township is in a residential area (Figure 39). The camp borders the Brunswick River, Chinbible Creek and Yogabera Creek and has previously included Pine Avenue Sports fields and Rotary Rainforest Park.

The camp is located on:

- 1. Crown Waterway that is owned and managed by Department of Planning and Environment Crown Lands. Arakwal People have Native Title rights and interests over the waterway.
- Crown Reserve R85663 which is owned by Department of Planning and Environment

   Crown Lands and managed by Council as the appointed Crown Land Manager. This
   reserve is gazetted purpose of Public Recreation and is known as Pine Avenue
   Sports fields.
- Land owned and managed by Council. This area is Community Land and Plan of Management for Community Land Categorised as a Natural Area (#DM599743) applies to it.
- 4. Council road reserves.
- 5. Privately owned land.

The historic roost extent area is 9.2 Ha.

The camp is a mix of zoning including W1 - Natural Waterways, C2 - Environmental Conservation, C3 - Conservation Management, RE1 - Public Recreation, R2 - Low Density Residential, R5 - Large Lot Residential, RU2 - Rural Landscape and Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site from November 2012 and categorises the occupancy as permanent. The camp is identified as seasonal, with no Flying-foxes observed during the August 2023 survey. Byron Shire Council commenced monitoring the site in 2010. 841 Flying-foxes were observed in the November 2023 survey by Byron Shire Council (1204 GHFF and 363 BHFF).

## **Ecological Values**

The VMP (Geolink, 2019) for the Mullumbimby roost describes the riparian vegetation as dominated by Camphor Laurel (*Cinnamomum camphora*) with fringing Mangrove forest dominated by Grey Mangrove. A small area of swamp forest dominated by Swamp Oak (*Casuarina glauca*) is present south of Chinbible Creek near the end of Garden Avenue.

Part of the camp area is land mapped on the NSW Biodiversity Values (BV) Map as Coastal Management Act - Wetland.

The roost site contains a range of high environmental values (Figure 40):

Vegetation in over-cleared landscapes (Mitchell landscapes)

Threatened Ecological Community (BC Act: Lowland rainforest on Floodplain and Swamp Sclerophyll Forest on Coastal Floodplains, Swamp Oak Floodplain Forest and Freshwater Wetlands on Coastal Floodplains, EPBC Act: Coastal Swamp Sclerophyll Forest)
Coastal Wetland Resilience and Hazards 2021 SEPP

The Vegetation Management Plan Mullumbimby Flying-fox Camp (Geolink, 2019) lists three threatened flora species at the site:

- ◆ Coolamon (*Syzygium moorei*).
- ◆ Marblewood (Acacia bakeri).
- Sweet Myrtle (Gossia fragrantissima).

The VMP refers to multiple weed species at the camp; Camphor Laurel (*Cinnamomum camphora*), Large-leaved Privet (*Ligustrum lucidum*), Umbrella Tree (*Schefflera actinophylla*), Coral Tree (*Erythrina x sykesii*), Lantana (*Lantana camara*), Ochna (*Ochna serrulata*), Winter Senna (*Senna pendula var. glabrata*), Guinea Grass (*Megathyrsus maxima*) and Broad-leaved Paspalum (*Paspalum mandiocanum*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

The Garden Avenue roost site is located in the centre of an urban area and is in close proximity to a sensitive sites (Figure 41):
St John's Primary School - 142.1m from roost site.
Mullumbimby High School - 369.5m from roost site.
Coolamon Aged Villa - 557.8m from roost site.
Mullumbimby Showground - 597.9m from roost site.

## **Restoration Sites**

Restoration activities have taken place at multiple sites along the Brunswick River in Mullumbimby (Figure 42). Additional work is planned by Council on the western side of the river.

Figure 39 Mullumbimby, Garden Ave Roost Site

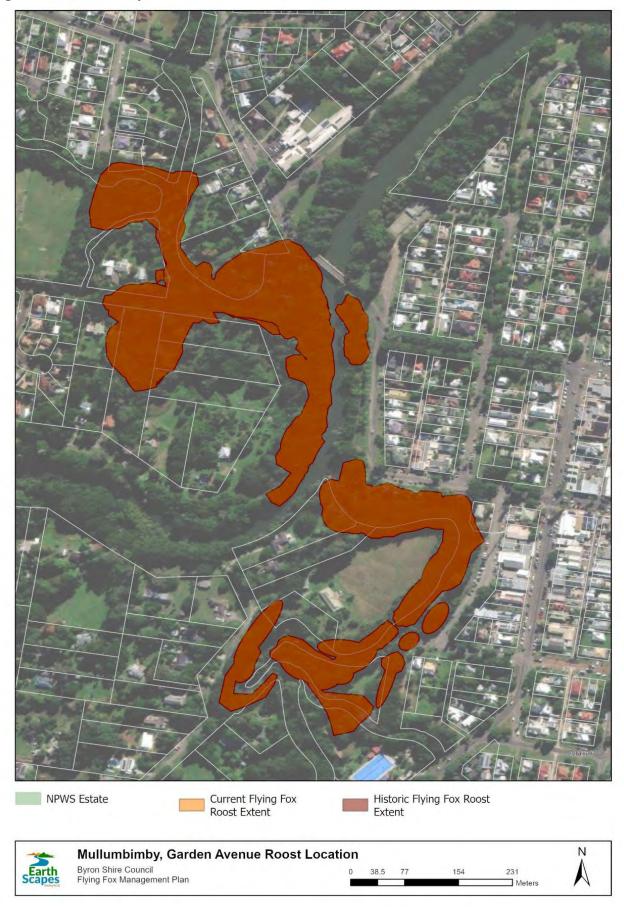


Figure 40 Ecological Values - Mullumbimby, Garden Ave Roost Site

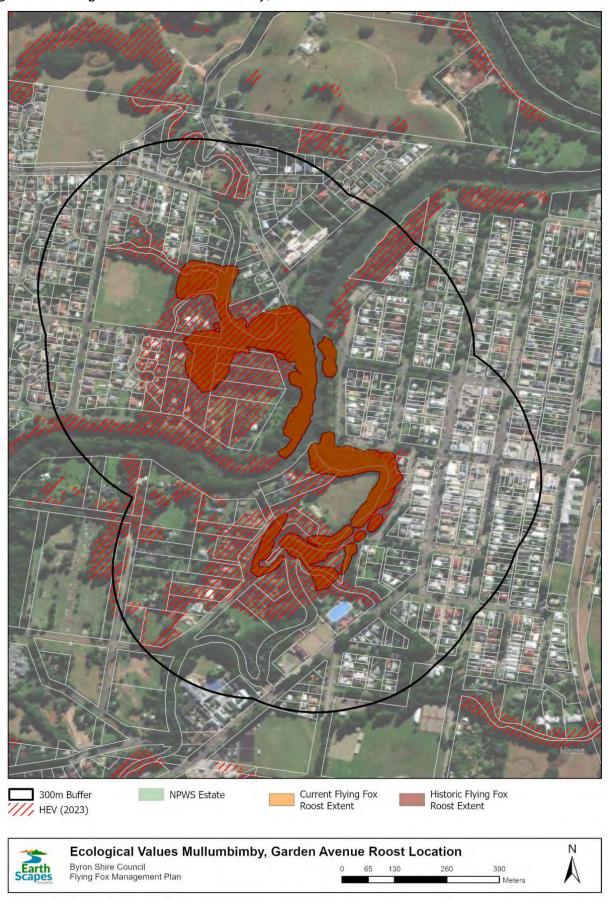


Figure 41 Sensitive Sites - Mullumbimby, Garden Ave Roost Site

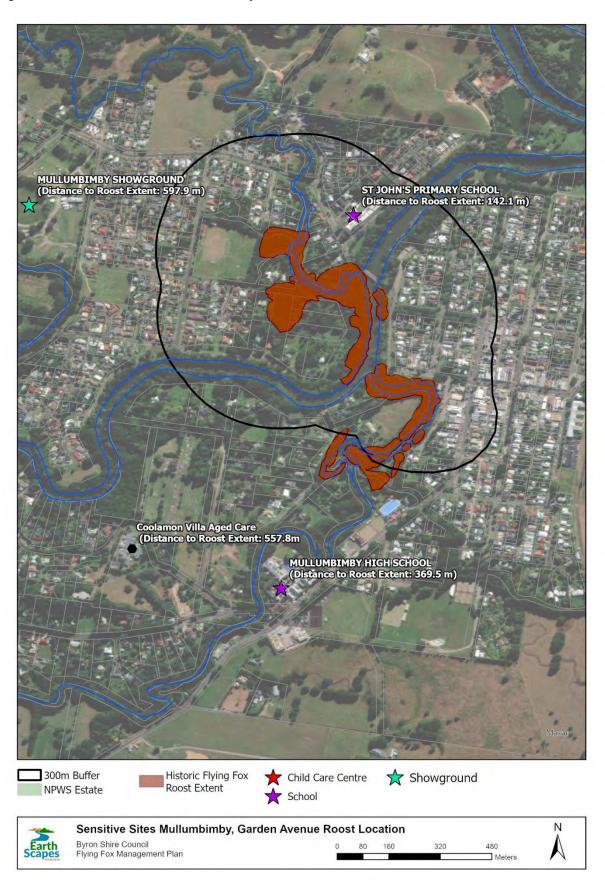
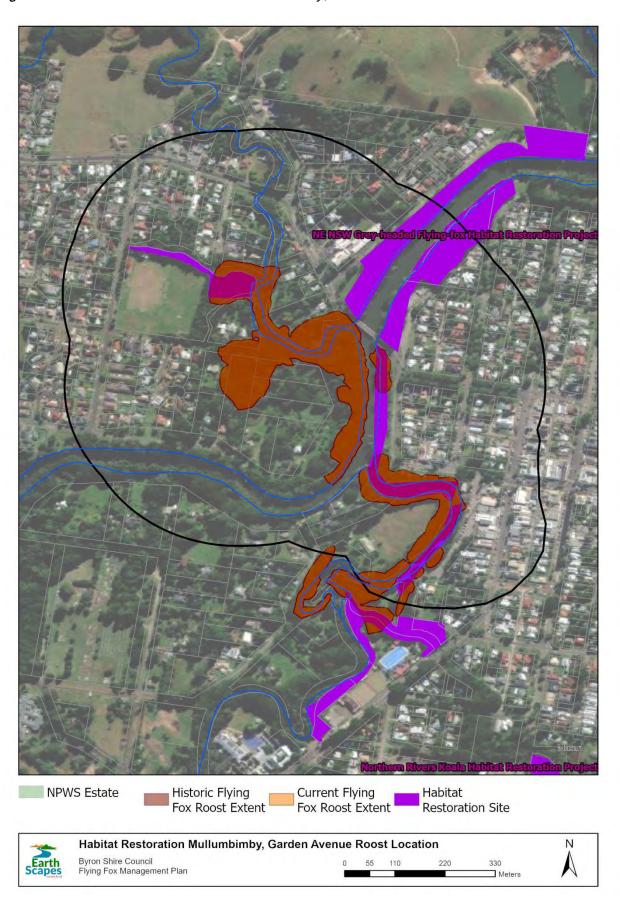


Figure 42 Habitat Restoration Sites - Mullumbimby, Garden Ave Roost Site



# 2.14 Mullumbimby Showground

# Site Description

The roost site is located at Mullumbimby Showground on the western edge of Mullumbimby (Figure 43). The roost is on the east and west side of the Brunswick River.

The site is located on:

- 1. Crown Waterway that is owned and managed by Department of Planning and Environment Crown Lands. Arakwal People have Native Title rights and interests over the waterway.
- 2. Crown Reserve R540009 which is owned by Department of Planning and Environment Crown Lands and managed by Council as the appointed Crown Land Manager. This reserve is gazetted purpose of Showground.
- 3. Privately owned land.

The current roost extent area is 0.29 Ha.

The land is zoned a mix of C2 Environmental Conservation, RU2 - Rural Landscape, W1 - Natural Waterways and Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

Occupation of the roost was first recorded in early 2023. The site has not been surveyed as part of the National Flying-fox Monitoring Program (NFFMP). In November 2023 330 Flying-foxes were at the site; 163 GHFF and 167 BFF.

### **Ecological Values**

The vegetation is riparian rainforest that has been undergoing restoration in recent years (Figure 44).

The site is an urban environment which has been largely cleared and fragmented. The area is not mapped on the NSW Biodiversity Values (BV) Map.

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)
Threatened Ecological Community (BC Act: Lowland Rainforest on Floodplain)

The site visit by EarthScapes Consulting and ReconEco in August 2023 observed a range of rainforest species adjacent to the Showgrounds including Blue Quandong (*Elaeocarpus grandis*), Hoop pine (*Araucaria cunninghamii*), Foam bark (*Jagera pseudorhus*) and *Lomandra hystrix*. Threatened flora species recorded during the site visit include Davidson's Plum (*Davidsonia jerseyana*), Macadamia Nut (*Macadamia tetraphylla*), Brush sauropus (*Phyllanthus microcladus*) and Marblewood (*Acacia bakeri*). This site contains known threatened flora species.

Weed species present at the site include mature Camphor aurel (*Cinnamomum camphora*), Creeping inch (*Callisia repens*), Night-blooming jasmine (*Cestrum nocturnum*), *Senna pendula*, Paddy's lucerne (*Sida rhombifolia*) and other exotic herbaceous species.

Appendix A lists threatened species recorded in or within 1km of the roost site.

# **Sensitive Sites**

The roost is located at Mullumbimby Showgrounds. The showground ring is 218m from the roost (Figure 45).

# **Restoration Sites**

Byron Shire Council and Brunswick Valley Landcare have been involved in riparian restoration adjacent to the site since 2015. Restoration work was funded by the Save our Species Program to restore habitat at riparian sites to the west and east of the roost (Figure 46).



Figure 43 Mullumbimby Showground Roost Location

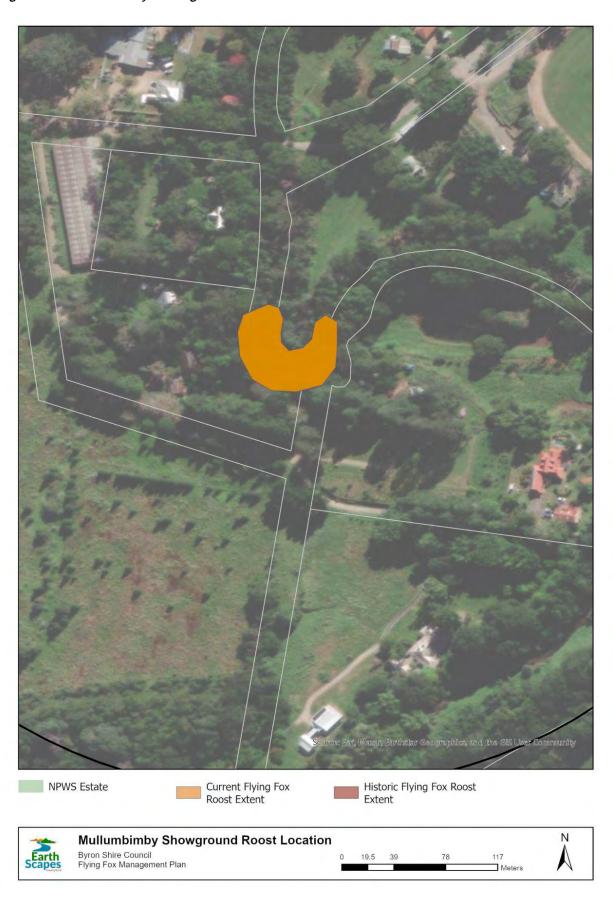


Figure 44 Ecological Values - Mullumbimby Showground Roost Location

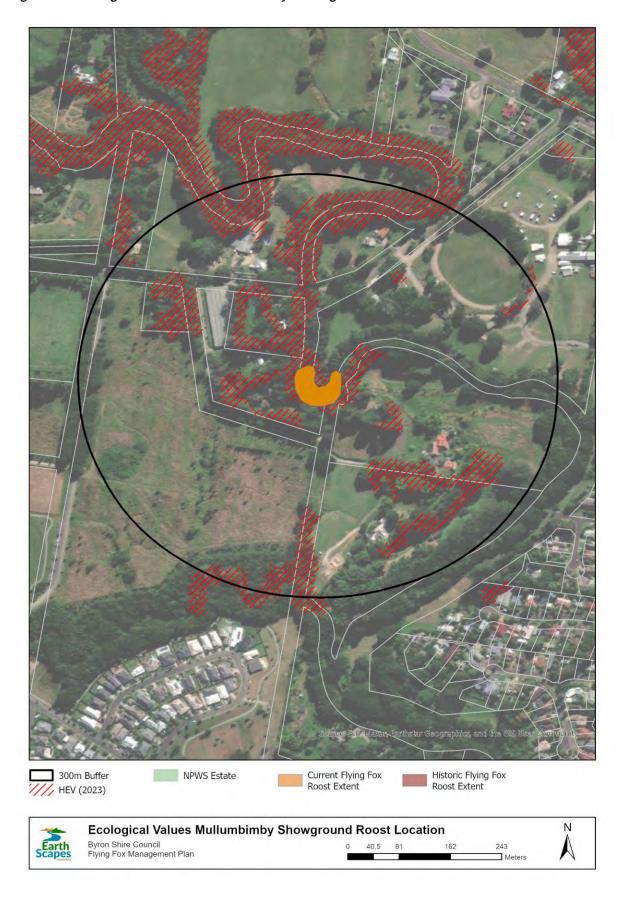


Figure 45 Sensitive Sites - Mullumbimby Showground Roost Location

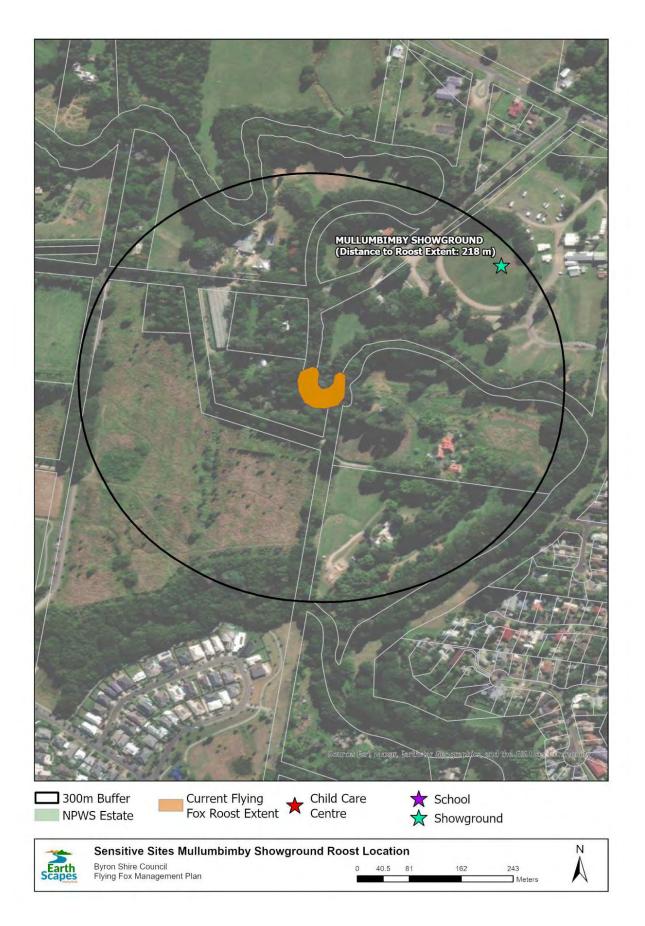
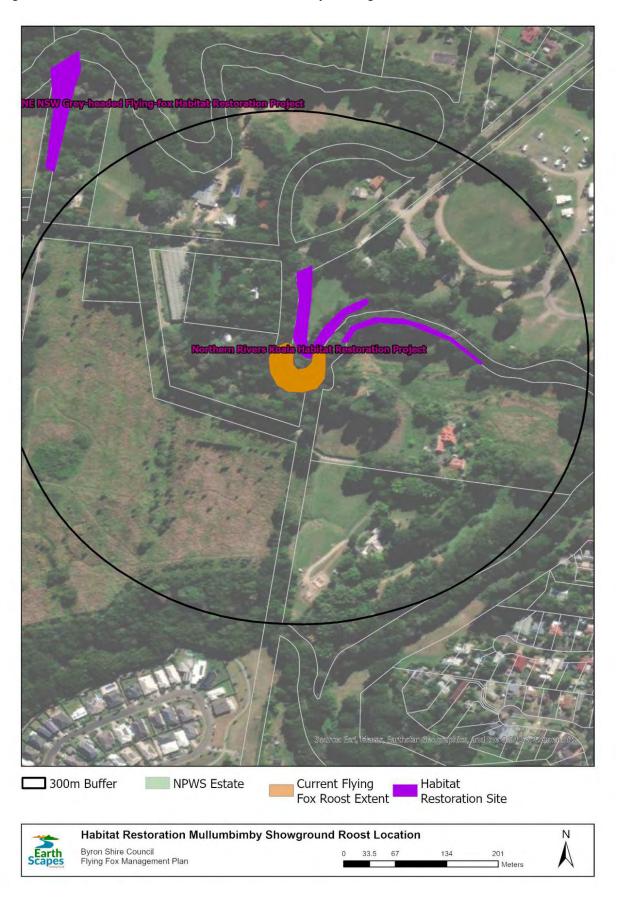


Figure 46 Habitat Restoration Sites - Mullumbimby Showground Roost Location



### 2.15 Myocum, The Manse Rd

# Site Description

The Myocum roost site is located on Manse Road, Myocum south-east of Mullumbimby (Figure 47). The site is rural, privately owned and current land use is both residential and agricultural with cattle within cleared paddock areas. The currently unused railway line is located on the eastern boundary of the property.

The historic roost extent area is 4.4 Ha.

The land is zoned C2 Environmental Conservation in the Byron Shire 2014 Local Environmental Plan (LEP). The surrounding zoning is RU2 - Rural Landscape.

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) has no records of Flying-foxes at this site and categorises the occupancy as abandoned. NFFMP note that there is anecdotal evidence that the camp was occupied around 2012.

# **Ecological Values**

The roost vegetation community is Paperbark+Rainforest (Figure 48). Byron Shire vegetation mapping notes the canopy is 81 - 100% and the landscape condition is old growth.

The site is in a rural environment which has been largely cleared and fragmented.

The site is mapped on the NSW Biodiversity Values (BV) Map as Rainforest.

The roost site contains a range of high environmental values:

Vegetation in over-cleared landscapes (Mitchell landscapes)
Hollow-dependent Fauna Habitat
Threatened Ecological Community (BC Act:Swamp Sclerophyll Forest on Coastal
Floodplains, EPBC: Coastal Swamp Sclerophyll Forest)

The site visit by EarthScapes Consulting and ReconEco in August 2023 recorded that the remnant was in good condition with the occasional Camphor laurel (*Cinnamomum camphora*) and narrow-leaf privet (*Ligustrum sinense*) along disturbed edges of the patch. Key native species included *Melaleuca quinquenervia*, *Lophostemon Sauveolons*, *Archontophoenix cunninghamiana*, *Ficus watkinsianas* and scattered under storey of *Gahnia* and *Alocasia brisbanensis*.

Appendix A lists threatened species recorded in or within 1km of the roost site.

### **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

## **Restoration Sites**

Byron Shire Council undertook koala restoration works 183m to the north of the site between 2014 and 2016 and 368m to the south between 2013 and 2016 (Figure 49).

Byron Shire Council and the private landholder have been joint funding Koala-focused restoration works on this property from 2022-2023. Works include active Camphor management and weed control maintenance at the southern extent of the roost site and planting of Koala habitat within the drain immediately to the south of the mapped roost site. Works also include cattle exclusion fencing of the remnant and planting zones.

Figure 47 Myocum, The Manse Rd Roost Location



Figure 48 Ecological Values - Myocum, The Manse Rd Roost Location

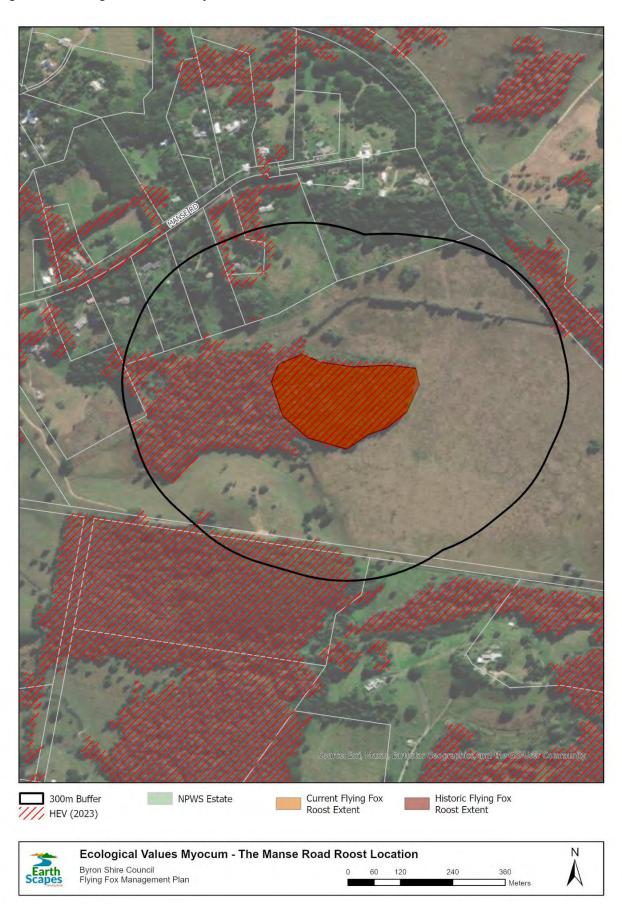
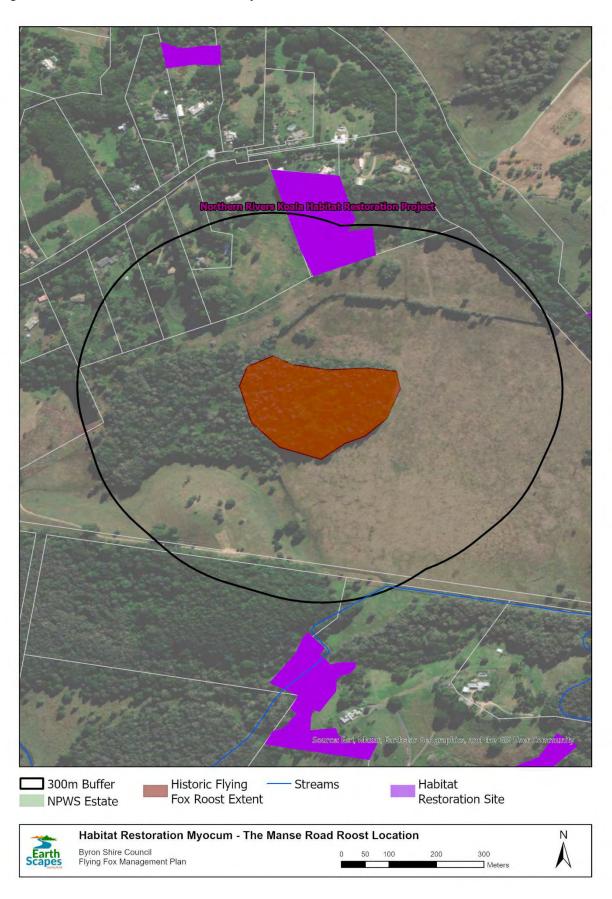


Figure 49 Habitat Restoration Sites - Myocum, The Manse Rd Roost Location



# 2.16 Nashua, Taylors Rd and Lismore Rd

# Site Description

The Nashua roost site is located on the corner of Taylors Road and Lismore Road at Nashua, south-west of Bangalow (Figure 50). The site is located in the Lismore Road regional road reserve, owned by Council and managed by Transport NSW.

The historic roost extent area is 0.16 Ha.

The land is zoned RU1 Rural Landscape in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) have no records of Flying-foxes at this site. Flying-foxes were first recorded at the site in 2022 by Byron Shire Council. No Flying-foxes were observed during the August 2023 survey however 375 (255 GHFF and 120 BHFFs) were observed during the November 2023.

# **Ecological Values**

The roost vegetation community is advanced regrowth rainforest plantings (Figure 51). The area is not mapped on the NSW Biodiversity Values (BV) Map.

The roost site is mapped as high environmental value because the vegetation is a Threatened Ecological Community (BC Act: Lowland Rainforest).

The site visit by EarthScapes Consulting and ReconEco in August 2023 recorded plantings of Blue Fig (*Elaeocarpus grandis*), Hoop Pine (*Araucaria cunninghamii*), Plum Pine (*Podocarpus elatus*) and regenerating Red Kamala (*Mallotus philippensis*) and *Guoia (Guioa semiglauca*). Several planted threatened species Scrub Turpentine (*Rhodamnia rubescens*) were recorded on the subject site and were in poor condition due to myrtle rust. The site is in generally good condition however the weeds Trad (*Tradescantia fluminensis*), Madeira vine (*Anredera cordifolia*), Small-leaved privet (*Ligustrum sinense*), *Lantana camara* were present in the understorey predominantly in the western part of the camp.

Appendix A lists threatened species recorded in or within 1km of the roost site.

# **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

#### **Restoration Sites**

There are no restoration sites within 500m of the roost.

Figure 50 Nashua, Taylors Rd Roost Location



Figure 51 Ecological Values - Nashua, Taylors Rd Roost Location



#### 2.17 Ocean Shores, Brunswick River

# Site Description

The Ocean Shores roost site is located in Brunswick Heads Nature Reserve in Ocean Shores (Figure 52). The site is adjacent to a residential area in the south of Ocean Shores. The site is owned and managed by the NSW National Parks and Wildlife Service.

The historic roost extent area is 10.4 Ha.

The Nature Reserve is zoned C1 - National Parks and Nature Reserves. The surrounding area is a mix of W1 - Natural Waterways (Brunswick River) and the adjacent urban area R3 - Medium Density Residential in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site in November 2013 and categorises the occupancy as abandoned. No Flying-foxes were present in the August 2023 surveys undertaken by EarthScapes Consulting and ReconEco.

# **Ecological Values**

The roost vegetation community is mapped in the NSW State Vegetation Type Map (SVTM) as Far North Bangalow Palm Swamp Forest (PCT ID 3004) and Far North Lowland Subtropical Rainforest (PCT ID 3011) (Figure 53).

Brunswick Heads Nature Reserve was gazetted in 1979. The vegetation is in very good condition.

The site is mapped on the NSW Biodiversity Values (BV) Map as Rainforest, Coastal Management Act-Wetlands land.

The Brunswick River to the east and south of the roost is mapped as Key migratory habitat and Coastal Wetland Resilience and Hazards 2021 SEPP in the Byron HEV mapping.

The urban area to the north of the site falls within the 100m buffer of Littoral Rainforest Resilience and Hazards 2021 SEPP mapping.

The site visit by EarthScapes Consulting and ReconEco in August 2023 described the vegetation as in very good condition with few weeds present. Key species recorded included Stinking Laurel (*Cryptocarya foetida*), Hoop Pine (*Araucaria cunninghamii*), Brush Box (*Lophostomen confertus*), Flooded Gum (*Eucalyptus grandis*), Bangalow Palm (*Archontophoenix cunninghamiana*), Prickly Alyxia (*Alyxia ruscifolia*), Hairy Psychotria (*Psychotria loniceroides*), Broad-leafed paperbark (*Melaleuca Quinquenervia*), Sally Wattle (*Acacia melanoxylon*), *Lomandra* longifolia and Pink Euodia (*Melicope elleryana*). The reserve contains many threatened flora species, many at the southern limit of distribution and some species with very few records elsewhere.

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

There are two childcare centres in close proximity to the roost (Figure 54): Ocean Shores Early Learning Centre - 110.3m from roost. Kool Bean Academy - 271.1m from roost.

# **Restoration Sites**

There is a habitat restoration site 580m to the south-west of the site (Figure 55). This project was undertaken between 2016 to 2022 to restore Flying-fox habitat along the Brunswick River. Rainforest restoration has been undertaken at Yallakool Reserve 410m to the north of the site since 2008.

Figure 52 Ocean Shores, Brunswick River Roost Location



Figure 53 Ecological Values - Ocean Shores, Brunswick River Roost Location

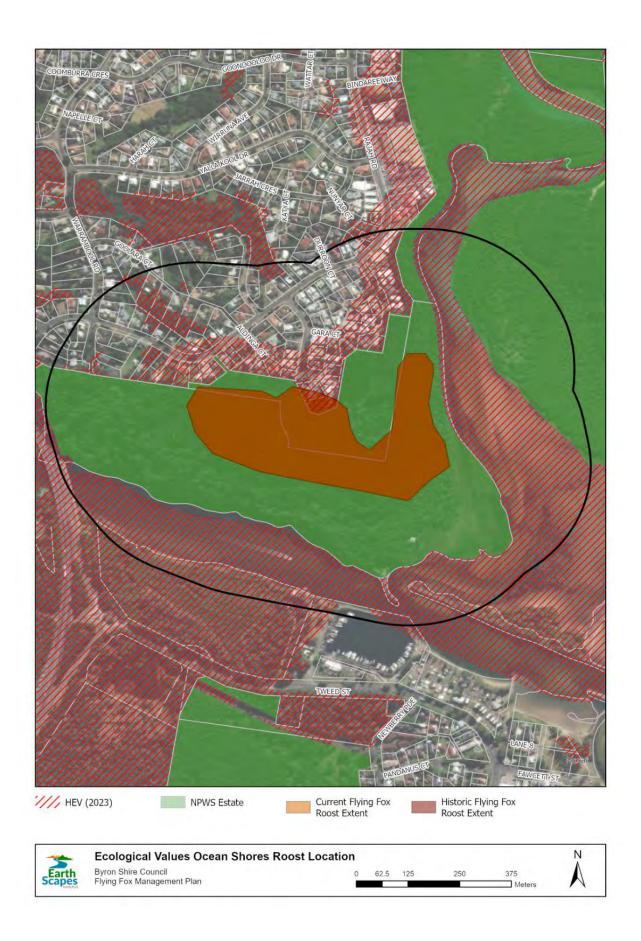


Figure 54 Sensitive Sites - Ocean Shores, Brunswick River Roost Location

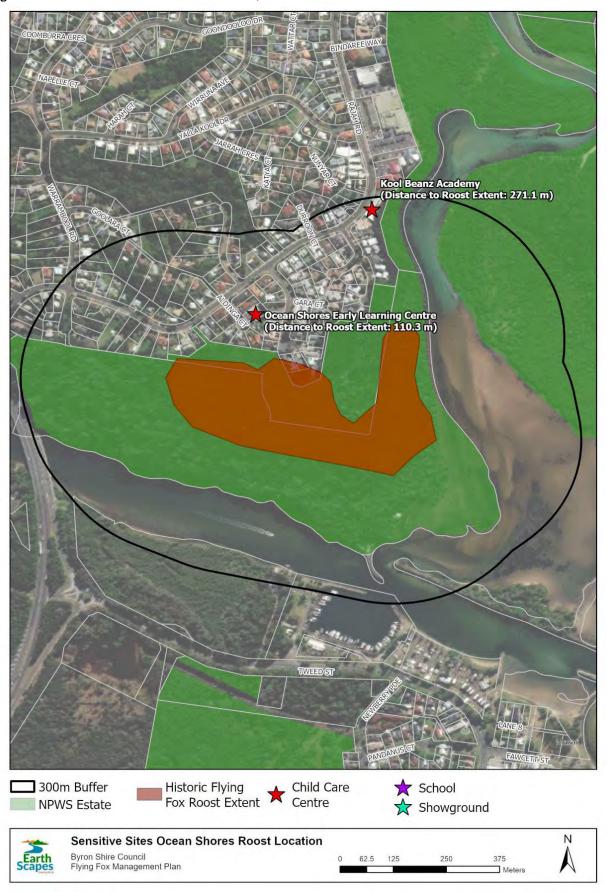
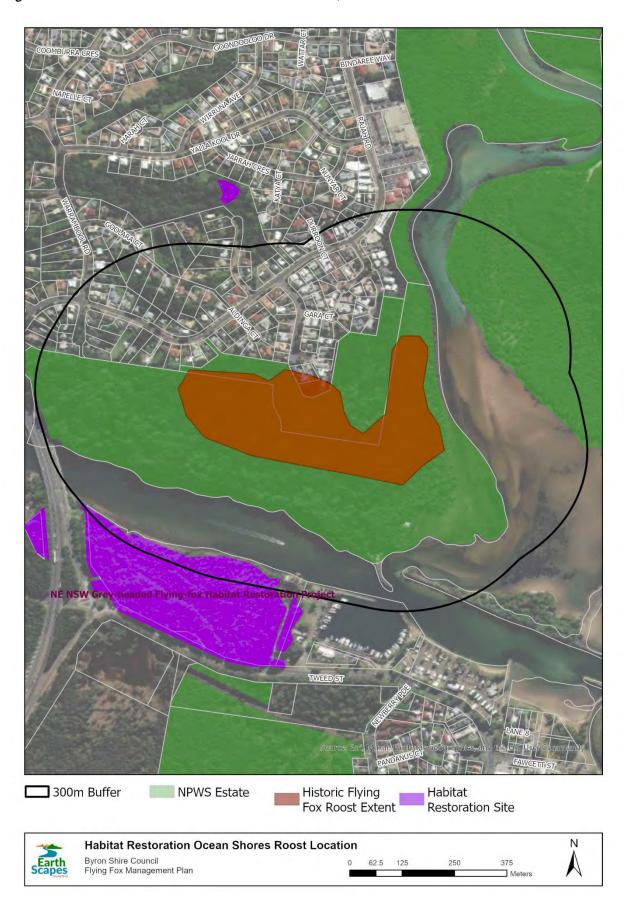


Figure 55 Habitat Restoration Sites - Ocean Shores, Brunswick River Roost Location



# 2.18 Ocean Shores, Jardine Ct

# Site Description

The Ocean Shores roost site is located in a residential area at the southern end of Jardine Court in Ocean Shores (Figure 56). Marshalls Creek Nature Reserve is located to the east and north of the site and Ocean Shores golf course is located 310m to the east. The site is a stormwater and drainage reserve and is owned and managed by Byron Shire Council.

The historic roost extent area is 0.07 Ha.

The site is zoned R2 - Low Density Residential in the Byron Shire 2014 Local Environmental Plan (LEP). The bushland to the south of the roost is zoned C2 - Environmental Conservation.

## **Roost History**

The National Flying-fox Monitoring Program (NFFMP) has not recorded Flying-foxes at this site. Flying-foxes were first reported at the site by Byron Shire Council in 2023 but were not present at the site when surveyed by EarthScapes Consulting and ReconEco in August 2023.

# **Ecological Values**

The roost vegetation community is mapped as Blackbutt+Brush Box, Ironbark, Pink Bloodwood in the Byron Shire vegetation mapping (Figure 57).

The site is not mapped on the NSW Biodiversity Values (BV) Map on in the high environmental values mapping.

The site visit by EarthScapes Consulting and ReconEco in August 2023 described the site as a narrow urban drainage line, with highly disturbed vegetation. Key species recorded were Broad-leafed paperbark (*Melaleuca Quinquenervia*), Brush Box (*Lophostomen confertus*), Tallowwood (*Eucalyptus microcorys*), Swamp Oak (*Casuarina glauca*), Bangalow Palm (*Archontophoenix cunninghamiana*), Cunjevoi (*Alocasia brisbanensis*) and Cabbage Palm (*Livistona australis*). There are numerous garden escapee weeds; Singapore daisy (*Sphagneticola trilobata*), Giant Devils Fig (*Solanum chrysotrichum*), Common morning-glory (*Ipomoea purpurea*), Balloon vine (*Cardiospermum grandiflorum*), Cadaghi (*Corymbia torelliana*) and Monstera (*Monstera deliciosa*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

#### **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

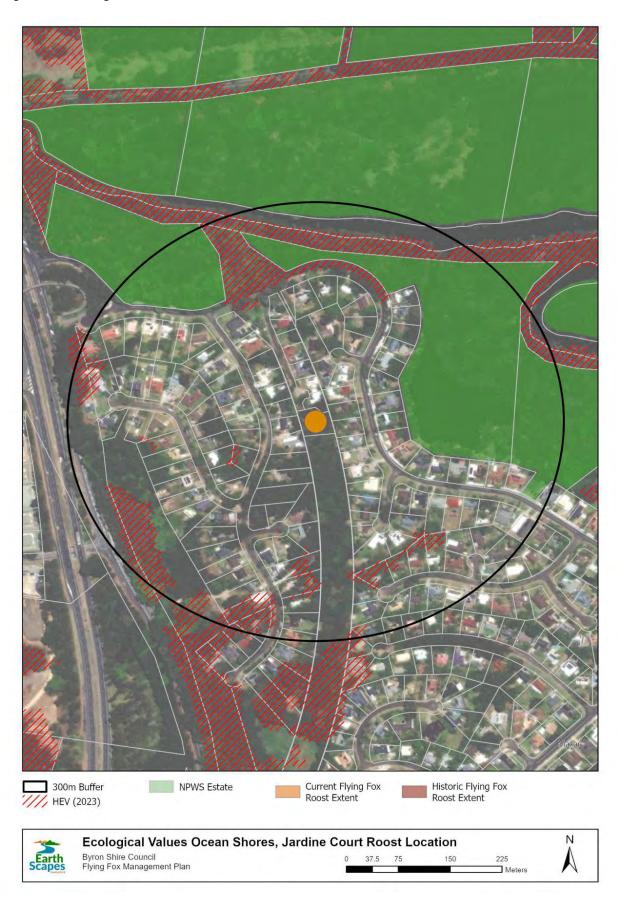
#### **Restoration Sites**

There are no restoration sites in close proximity to the roost.

Figure 56 Ocean Shores, Jardine Ct Roost Location



Figure 57 Ecological Values - Ocean Shores, Jardine Ct Roost Location



#### 2.19 Ocean Shores, Marshalls Creek

# Site Description

The Ocean Shores roost site is located in Marshalls Creek Nature Reserve in Ocean Shores (Figure 58). Ocean Shores golf course is located to the west of the roost and a residential area at Casons Road to the north-east of the roost. The site is owned and managed by the NSW National Parks and Wildlife Service.

The historic roost extent area is 4.8 Ha.

The Nature Reserve is zoned C1 - National Parks and Nature Reserves. The surrounding area is a mix of R2 - Low Density Residential (north-east), W1 - Natural Waterways (Marshalls Creek) and RE2 - Private Recreation (Ocean Shores Golf course) in the Byron Shire 2014 Local Environmental Plan (LEP).

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site between August 2013 and August 2016 and categorises the occupancy as irregular. There is limited data on occupation of this site. The NFFMP notes the roost was formed prior to 2012. In November 2023 300 Flying-foxes were present in the area but in a new footprint ( 200 GHFF and 100 BFF).

## **Ecological Values**

The roost vegetation community is mapped in the NSW State Vegetation Type Map (SVTM) as Far North Swamp Oak-Tuckeroo Swamp Fringe Forest (PCT ID 4034) (Figure 59).

Marshalls Creek Nature Reserve was gazetted in 1999. The vegetation is in very good condition.

The site is mapped on the NSW Biodiversity Values (BV) Map as Coastal Management Act-Wetlands land.

The Brunswick River adjacent to the Nature Reserve is mapped as Coastal Wetland Resilience and Hazards 2021 SEPP in the Byron HEV mapping.

The vegetation to the north-east of the roost contains a range of high environmental values: Over-cleared vegetation types

Mitchell's Landscapes

Threatened Ecological Community (BC Act: Subtropical Coastal Floodplain Forest, PBC Act: Subtropical Coastal Floodplain)

BSC Koala Plan of Management

The site visit undertaken by EarthScapes Consulting in 2023 described the vegetation at the roost site as good condition sclerophyll forest dominated by Pink Bloodwood (*Corymbia intermedia*) adjacent to old growth Broad-leaved Paperbark (*Melaleuca quinquenerva*) and Swamp Oak (*Casuarina glauca*) in the southern part of the site. Weed species present at the site include Coral Berry (*Ardisia crenata*) and Winter Senna (*Senna pendula*).

Appendix A lists threatened species recorded in or within 1km of the roost site.

# **Sensitive Sites**

There are no sensitive sites in close proximity to the roost.

# **Restoration Sites**

There is a habitat restoration site 110m to the east of the site. This project was undertaken between 2018 to 2019 to restore Flying-fox habitat along Marshalls Creek (Figure 60).

Figure 58 Ocean Shores, Marshalls Creek Roost Location



Figure 59 Ecological Values - Ocean Shores, Marshalls Creek Roost Location

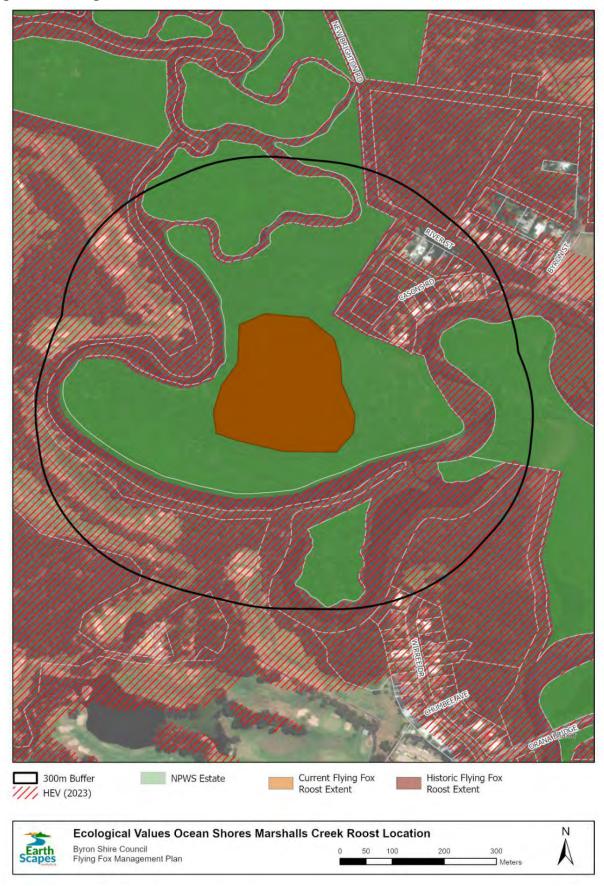


Figure 60 Habitat Restoration Sites - Ocean Shores, Marshalls Creek Roost Location



#### 2.20 Suffolk Park, Beech Dr

# Site Description

The Beech Drive roost site is located in the western part of Suffolk Park, between Bottlebrush Crescent and Beech Drive (Figure 61). There is a small unnamed watercourse towards the southern end of the site. The camp is in a residential subdivision known as Baywood Chase, with houses adjoining the site.

The site is owned and managed by the Byron Shire Council. The Plan of Management for Community Land Categorised as Natural Area applies to the land (#DM499743).

The historic roost extent area is 0.97 Ha.

The roost is zoned Deferred Matter in the Byron Shire 2014 Local Environmental Plan (LEP). The surrounding area to the west and south is zoned R2 - Low Density Residential.

# **Roost History**

The National Flying-fox Monitoring Program (NFFMP) recorded Flying-foxes at this site between November 2012 and categorises the occupancy as seasonal. Byron Shire Council commenced monitoring the site in June 2010 together with the NSW National Parks and Wildlife Service. Records from Byron Shire Council notes the roost was formed in June 2010. 535 Flying-foxes were observed in the November 2023 survey by Byron Shire Council (449 GHFF and 86 BHFF).

# **Ecological Values**

The roost vegetation community is mapped as Paperpark forest (Figure 62).

The 2018 - 2023 CMP describes the roost as low dense mixed forest of eucalypts and paperbarks with minimal shrub cover and dense graminoid groundcover. The Beech Drive Vegetation Management Plan reports the following species present at the site:

The canopy is dominated by Broad-leaved Paperbark (*Melaleuca quinquenervia*), Pink Euodia (*Melicope elleryana*), and Bangalow Palm (*Archontophoenix cunninghamiana*).

Mid storey species are Blueberry Ash (*Elaeocarpus reticulatus*), Umbrella Cheese Tree (*Glochidion sumatranum*), Brown Kurrajong (*Commersonia bartramia*), Brown Bollygum (*Litsea australis*) and Lilly Pilly species (*Syzigium oleosum and S. luehmannii*).

A ferny understory exists throughout the site with species of Bat's Wing Fern (*Histiopteris incisa*), Common Ground Fern (*Calochlaena dubia*), Swamp Water Fern (*Blechnum indicum*), Pouched Coral Fern (*Gleichenia decarpa*) King Fern (*Todea barbara*) and Climbing Maidenhair Fern (*Lygodium microphyllum*).

Site surveys in 2016 and 2023 observed the vegetation to be in very good condition with low levels of weeds. Weeds are present on the urban fringe to the south and west and include garden escapees such as Mother-in-laws Tongue (*Sanservia trifasciata*), Balsam (*Impatiens walleriana*), Prayer Plant (*Stromanthe sanguinea*), Taro (*Colocasia* esculenta), Costas (*Costus barbatus*), Mother of Millions (*Bryophyllum delagoense*), Madeira Vine (*Anredera cordifolia*), White Passionfruit (*Passiflora subpeltata*), White Butterfly (*Syngonium podophyllum*) and Umbrella Tree (*Schefflera actinophylla*).

The site is not mapped on the NSW Biodiversity Values (BV) Map.

The vegetation is mapped by Byron Shire Council as a threatened Ecological Community (BC Act: Swamp Sclerophyll Forest on Coastal Floodplains, EPBC Act: Swamp Sclerophyll Forest on Coastal Floodplains).

Appendix A lists threatened species recorded in or within 1km of the roost site.

### **Sensitive Sites**

There are two child care centres in close proximity to the roost (Figure 63): Byron Bay Preschool - 120m from roost. RSL LifeCare - 349.3m from roost.

## **Restoration Sites**

Council staff have undertaken habitat restoration works throughout the camp site in recent years (Figure 64).



Figure 61 Suffolk Park, Beech Dr Roost Location

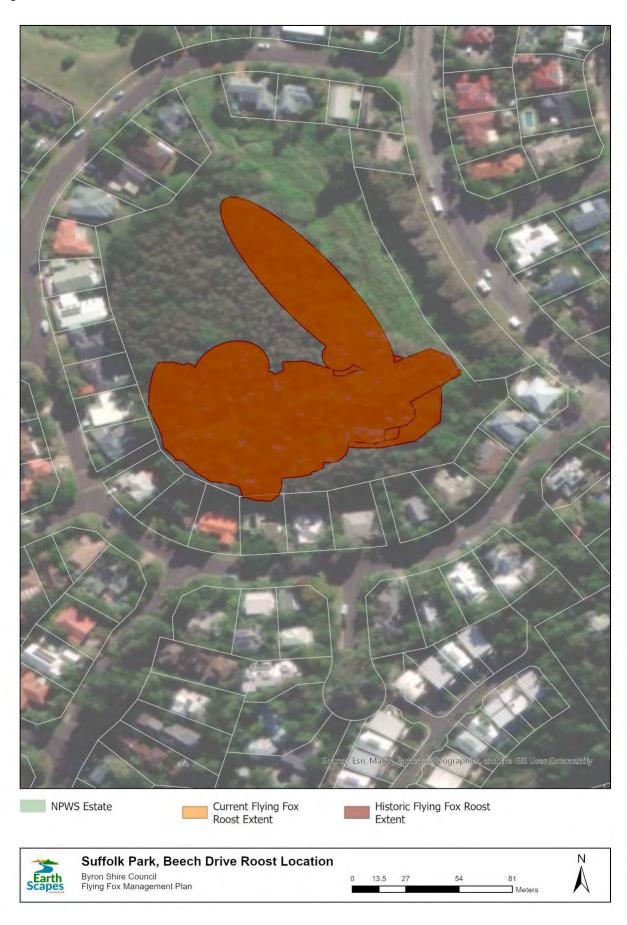


Figure 62 Ecological Values - Suffolk Park, Beech Dr Roost Location



Figure 63 Sensitive Sites - Suffolk Park, Beech Dr Roost Location

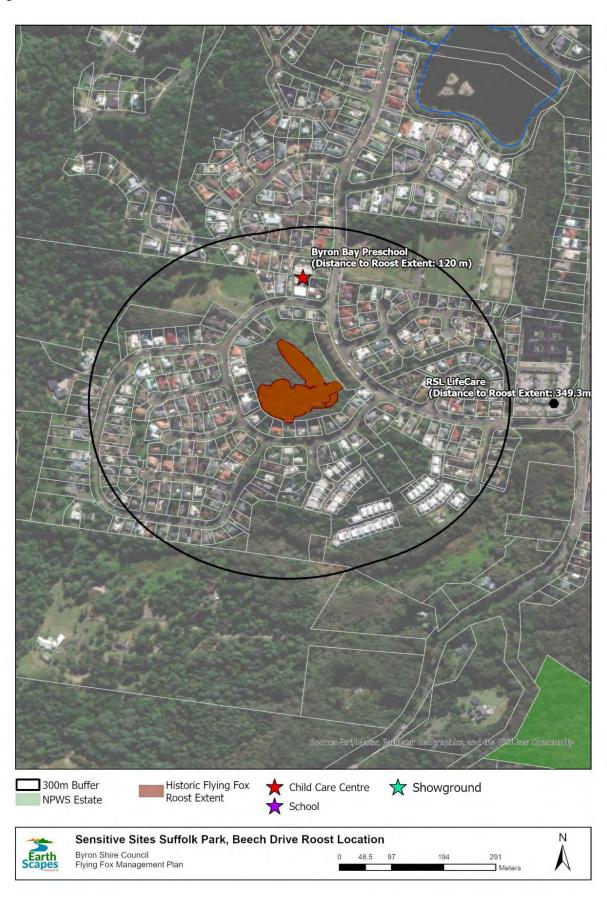


Figure 64 Restoration Sites - Suffolk Park, Beech Dr Roost Location



## References

Bryon Shire Council. (2012), Tweed and Byron Bush Futures Project: Bangalow Final Report.

Bryon Shire Council Flying-fox Camp Management Plan 2018 - 2023

DoE (2015), Referral guideline for management actions in grey-headed and spectacled flying-fox camps, Australian Government Department of the Environment, Canberra, viewed 12 January 2016, www.environment.gov.au/system/files/resources/6d4f8ebc-f6a0-49e6-a6b6-82e9c8d55768/files/referral-guideline-flying-fox-camps.pdf.

EarthScapes Consulting (2020). Butler Street Reserve Action Plan.

EcoPro (2006). Sandhills Estate Ecological Assessment.

Geolink (2019) Vegetation Management Plan Middleton Flying-fox Camp

Geolink (2019) Vegetation Management Plan Mullumbimby Flying-fox Camp

Geolink (2019) Vegetation Management Plan Paddys Creek Flying-fox Camp

Hall, LS and Richards, GC. 2000. Flying-foxes, Fruit and Blossom Bats of Australia. 135 pp. Uni of NSW Press, Sydney

Westcott, D. A., McKeown, A., Murphy, H. T. and Fletcher, C. August 2011. A monitoring method for the Grey-headed Flying-fox, *Pteropus poliocephalus* 

Westcott, D. A., McKeown, A. (2013). Flying-fox survey manual. CSIRO Ecosystem Sciences

## **Appendix A - Threatened Species**

Results of Threatened species search within 1 km of each Flying-fox camp from NSW BioNet Database (https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet).

Note: only records recorded < 20 years were included in the results. Note that threatened species recorded during Earthscapes/Reconeco 2023 surveys/assessments and surveys for other roost site management plans but not included in the BioNet database search results have also been included in Appendix A.

## **NSW Status**

This code identifies the Legal Status of the species within NSW under the Biodiversity Conservation Act 2016 No. 63 (BC Act 2016), the Fisheries Management Act 1994 No. 38 (FM Act 1994) and the Sensitive Species Data Policy (SSDP).

Code	Description	Definition under the BC Act 2016 No. 63, the FM Act 1994 No. 38, or the SSDP.
Р	Protected	Refers to species listed in Schedules 5 and 6 of the BC Act 2016.
V	Vulnerable	Refers to fauna and flora species that are likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate (Schedule 1, part 3, BC Act 2016).
E1	Endangered	Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 2, BC Act 2016).
E2	Endangered Population	Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a critical level, or its habitat has been so drastically reduced, that it is in immediate danger of extinction and it is not a population of a species already listed in Schedule 1, and: (a) it is disjunct and at or near the limit of its geographic range, or (b) it is or is likely to be genetically distinct, or (c) it is otherwise of significant conservation value (Schedule 1, part 2, BC Act 2016).
E4A	Critically Endangered Species	Refers to a species that is eligible to be listed as a critically endangered species if, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations (Schedule 1, part 1, BC Act 2016)

2	Category 2 sensitive species	Refers to species for which Atlas sightings' coordinates will be supplied denatured to public web applications and denatured to licensed clients. Such species are classed as highly sensitive, and provision of precise locations would subject the species to high risk from threats such as disturbance and collection.
3	Category 3 sensitive species	Refers to species for which sightings' coordinates will be supplied denatured to public web applications but supplied 'as-held' to licensed clients. Current denaturing specifications are set out in Appendix 2. Such species are classed as of medium sensitivity, and provision of precise locations would subject the species to medium risk from threats such as collection/deliberate damage.
		Data are supplied under the conditions of a written data agreement, usually a Data Licence Agreement

## Commonwealth Status

This code identifies the Legal Status of the species under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act), and Migratory Bird agreements (JAMBA, CAMBA and ROKAMBA).

Code	Description	Definition under the EPBC Act 1999, and Migratory Birds agreement.
С	CAMBA	China-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
CD	Conservation Dependent	Refers to A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
CE	Critically Endangered	Refers to a native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
E	Endangered	Refers to a native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria (Subdivision A of Division 2 of Part 13, Commonwealth EPBC Act 1999).
J	JAMBA	Japan-Australia Migratory Bird Agreement:

Refers to species listed in the Bilateral Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).

Κ **ROKAMBA** Republic of Korea-Australia Migratory Bird Agreement:

V

Vulnerable

Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the Republic of Korea for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5,

Commonwealth EPBC Act 1999).

KTP Key Threatening Refers to a key process that threatens or may threaten the survival, abundance or evolutionary development of a native Process

species or ecological community (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).

Refers to a native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).

Flying-fox Camp	Nationally Important GHFF Roost		Flora				Fauna		
		Scientific Name	Common Name	NSW Statu s	Comm Status	Scientific Name	Common Name	NSW Statu s	Comm Status
		Arthraxon hispidus	Hairy Jointgrass	V	V	Nyctophilus bifax	Eastern Long-eared Bat	V,P	
		Floydia praealta	Ball Nut	V	V	Phascolarctos cinereus	Koala	E1,P	E
		Isoglossa eranthemoides	Isoglossa	E1	E	Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
Bangalow		Macadamia integrifolia	Macadamia Nut		V	Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
, Byron Creek	N	Macadamia tetraphylla	Rough-shelled Bush Nut	٧	V	Mixophyes iteratus	Giant Barred Frog	E	E
		Ochrosia moorei	Southern Ochrosia	E1	E				
		Rhodamnia rubescens	Scrub Turpentine	E4A	CE				
		Syzygium moorei	Durobby	V	V				
		Tinospora tinosporoides	Arrow-head Vine	V					

		Rhodamnia rubescens	Scrub Turpentine	E4A	CE	Nyctophilus bifax	Eastern Long-eared Bat	V,P	
Bangalow		Syzygium moorei	Durobby	٧	V	Phascolarctos cinereus	Koala	E1,P	E
, Paddys Creek	N					Pteropus poliocephalus	Grey-headed Flying- fox	V,P	٧
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
		Acalypha eremorum	Acalypha	E1		Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
Decuenc		Desmodium acanthocladum	Thorny Pea	V	V	Myotis macropus	Southern Myotis	V,P	
Booyong, Booyong		Floydia praealta	Ball Nut	V	V	Phascolarctos cinereus	Koala	E1,P	E
Nature Reserve	N	Isoglossa eranthemoides	Isoglossa	E1	E	Phyllodes imperialis southern subspecies	Southern Pink Underwing Moth	E1	Е
reserve		Phyllanthus microcladus	Brush Sauropus	E1		Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
		Tinospora tinosporoides	Arrow-head Vine	V		Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
		Cryptocarya foetida	Stinking Cryptocarya	V	V	Amaurornis moluccana	Pale-vented Bush-hen	V,P	
						Burhinus grallarius	Bush Stone-curlew	E1,P	
						Caretta caretta	Loggerhead Turtle	E1,P	Е
						Dasyurus maculatus	Spotted-tailed Quoll	V,P	E
						Esacus magnirostris	Beach Stone-curlew	E4A, P	
Byron						Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
Bay, Butler St	N					Nyctophilus bifax	Eastern Long-eared Bat	V,P	
						Pandion cristatus	Eastern Osprey	V,P,3	
						Phascolarctos cinereus	Koala	E1,P	Е
						Pseudomys gracilicaudatus	Eastern Chestnut Mouse	V,P	
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	

						Thersites mitchellae	Mitchell's Rainforest Snail	E1	CE
						Tyto novaehollandiae	Masked Owl	V,P,3	
		Allocasuarina defungens	Dwarf Heath Casuarina	E1	E	Amaurornis moluccana	Pale-vented Bush-hen	V,P	
		Allocasuarina thalassoscopica			E	Burhinus grallarius	Bush Stone-curlew	E1,P	
		Cryptocarya foetida	Stinking Cryptocarya	V	V	Crinia tinnula	Wallum Froglet	V,P	
						Dasyurus maculatus	Spotted-tailed Quoll	V,P	E
						Haematopus longirostris	Pied Oystercatcher	E1,P	
Byron						Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
bay, Middleton	N					Miniopterus australis	Little Bent-winged Bat	V,P	
St						Miniopterus orianae oceanensis	Large Bent-winged Bat	V,P	
						Myotis macropus	Southern Myotis	V,P	
						Pandion cristatus	Eastern Osprey	V,P,3	
						Phascolarctos cinereus	Koala	E1,P	Е
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Thersites mitchellae	Mitchell's Rainforest Snail	E1	CE
						Tyto tenebricosa	Sooty Owl	V,P,3	
Clunes, Booyong Rd	N					Phascolarctos cinereus	Koala	E1,P	E
0		Tinospora tinosporoides	Arrow-head Vine	V		Carterornis leucotis	White-eared Monarch	V,P	
Coopers Shoot,						Phascolarctos cinereus	Koala	E1,P	Е
Picadilly Hill Rd	N					Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
Tilli Tid						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
Eureka,		Floydia praealta	Ball Nut	V	V	Phascolarctos cinereus	Koala	E1,P	Е
Eureka Rd	N	Isoglossa eranthemoides	Isoglossa	E1	E	Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V

						Ptilinopus magnificus	Wompoo Fruit-Dove	V,P	
						Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
F						Miniopterus australis	Little Bent-winged Bat	V,P	
Ewingsda le,	N					Miniopterus orianae oceanensis	Large Bent-winged Bat	V,P	
Citriadora Drive						Myotis macropus	Southern Myotis	V,P	
Dilve						Phascolarctos cinereus	Koala	E1,P	Е
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
	N	Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Amaurornis moluccana	Pale-vented Bush-hen	V,P	
Ewingsda le,						Ephippiorhynchus asiaticus	Black-necked Stork	E1,P	
						Phascolarctos cinereus	Koala	E1,P	E
Plantatio n Drive						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Ptilinopus magnificus	Wompoo Fruit-Dove	V,P	
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
		Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Amaurornis moluccana	Pale-vented Bush-hen	V,P	
						Carterornis leucotis	White-eared Monarch	V,P	
Ewingsda						Ephippiorhynchus asiaticus	Black-necked Stork	E1,P	
le,	N					Miniopterus australis	Little Bent-winged Bat	V,P	
Simpson	IN					Phascolarctos cinereus	Koala	E1,P	E
creek						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Ptilinopus magnificus	Wompoo Fruit-Dove	V,P	
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
Federal, Coachwo	N					Nyctophilus bifax	Eastern Long-eared Bat	V,P	
od Court						Phascolarctos cinereus	Koala	E1,P	E

						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
		Acacia bakeri	Marblewood	V		Hirundapus caudacutus	White-throated Needletail	Р	V,C,J, K
		Floydia praealta	Ball Nut	V	V	Ixobrychus flavicollis	Black Bittern	V,P	
	N	Hicksbeachia pinnatifolia	Red Boppel Nut	V	V	Miniopterus australis	Little Bent-winged Bat	V,P	
		Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Myotis macropus	Southern Myotis	V,P	
Mullumbi mby, Garden Ave		Phyllanthus microcladus	Brush Sauropus	E1		Nyctophilus bifax	Eastern Long-eared Bat	V,P	
		Rhodamnia rubescens	Scrub Turpentine	E4A	CE	Pandion cristatus	Eastern Osprey	V,P,3	
		Rhodomyrtus psidioides	Native Guava	E4A	CE	Petaurus norfolcensis	Squirrel Glider	V,P	
		Syzygium moorei	Durobby	V	V	Phascolarctos cinereus	Koala	E1,P	E
		Gossia fragrantissima	Sweet Myrtle	E	E	Pseudomys novaehollandiae	New Holland Mouse	Р	V
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
						Ptilinopus magnificus	Wompoo Fruit-Dove	V,P	
						Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
						Ptilinopus superbus	Superb Fruit-Dove	V,P	
		Acacia bakeri	Marblewood	٧		Hirundapus caudacutus	White-throated Needletail	Р	V,C,J, K
Mullum		Hicksbeachia pinnatifolia	Red Boppel Nut	V	V	Davidsonia jerseyana	Davidson's Plum	Е	Е
showgrou nd	N	Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Ixobrychus flavicollis	Black Bittern	V,P	
IIU		Phyllanthus microcladus	Brush Sauropus	E1		Petaurus norfolcensis	Squirrel Glider	V,P	
		Rhodamnia rubescens	Scrub Turpentine	E4A	CE	Phascolarctos cinereus	Koala	E1,P	Е

		Rhodomyrtus psidioides	Native Guava	E4A	CE	Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
		Syzygium moorei	Durobby	V	V	Ptilinopus superbus	Superb Fruit-Dove	V,P	
						Tyto novaehollandiae	Masked Owl	V,P,3	
Myocum,		Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Phascolarctos cinereus	Koala	E1,P	E
The Manse	N	Syzygium hodgkinsoniae	Red Lilly Pilly	V	V				
Rd		Tinospora tinosporoides	Arrow-head Vine	V					
Nashua,	N	Desmodium acanthocladum	Thorny Pea	V	V	Phascolarctos cinereus	Koala	E1,P	E
Taylor Rd	IN	Rhodamnia rubescens	Scrub Turpentine	E4A	CE	Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
		Acacia bakeri	Marblewood	V		Amaurornis moluccana	Pale-vented Bush-hen	V,P	
		Acronychia littoralis	Scented Acronychia	E1	E	Ephippiorhynchus asiaticus	Black-necked Stork	E1,P	
		Archidendron hendersonii	White Lace Flower	V		Haematopus longirostris	Pied Oystercatcher	E1,P	
		Belvisia mucronata	Needle-leaf Fern	E1		Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
		Cryptocarya foetida	Stinking Cryptocarya	V	V	Miniopterus australis	Little Bent-winged Bat	V,P	
Ocean		Endiandra floydii	Crystal Creek Walnut	E1	E	Myotis macropus	Southern Myotis	V,P	
Shores, Brunswic	N	Endiandra hayesii	Rusty Rose Walnut	V	V	Numenius madagascariensis	Eastern Curlew	Р	CE,C, J,K
k River		Endiandra muelleri subsp. bracteata	Green-leaved Rose Walnut	E1		Pandion cristatus	Eastern Osprey	V,P,3	
		Grevillea hilliana	White Yiel Yiel	E1		Phascolarctos cinereus	Koala	E1,P	Е
		Harnieria hygrophiloides	Native Justicia	E1		Phyllodes imperialis southern subspecies	Southern Pink Underwing Moth	E1	E
		Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
		Marsdenia longiloba	Slender Marsdenia	E1	V	Sternula albifrons	Little Tern	E1,P	C,J,K
		Melicope vitiflora	Coast Euodia	E1					
		Randia moorei	Spiny Gardenia	E1	Е				

		Rhodamnia rubescens	Scrub Turpentine	E4A	CE				
		Senna acclinis	Rainforest Cassia	E1					
		Syzygium hodgkinsoniae	Red Lilly Pilly	V	V				
		Syzygium moorei	Durobby	V	V				
		Tinospora tinosporoides	Arrow-head Vine	V					
		Xylosma terrae- reginae	Queensland Xylosma	E1					
		Acronychia littoralis	Scented Acronychia	E1	E	Dasyurus maculatus	Spotted-tailed Quoll	V,P	E
Ocean Shores,		Macadamia tetraphylla	Rough-shelled Bush Nut	٧	V	Haliaeetus leucogaster	White-bellied Sea- Eagle	V,P	
Jardine	N	Syzygium moorei	Durobby	V	V	Pandion cristatus	Eastern Osprey	V,P,3	
Court						Phascolarctos cinereus	Koala	E1,P	E
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
		Acronychia littoralis	Scented Acronychia	E1	E	Caretta caretta	Loggerhead Turtle	E1,P	Е
		Archidendron hendersonii	White Lace Flower	V		Micronomus norfolkensis	Eastern Coastal Free- tailed Bat	V,P	
Ocean		Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Miniopterus australis	Little Bent-winged Bat	V,P	
Shores, Marshalls	N	Rhodomyrtus psidioides	Native Guava	E4A	CE	Miniopterus orianae oceanensis	Large Bent-winged Bat	V,P	
Creek		Syzygium moorei	Durobby	V	V	Myotis macropus	Southern Myotis	V,P	
						Phascolarctos cinereus	Koala	E1,P	E
						Potorous tridactylus	Long-nosed Potoroo	V,P	V
						Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
Cuffolk		Archidendron hendersonii	White Lace Flower	V		Amaurornis moluccana	Pale-vented Bush-hen	V,P	
Suffolk Park,	N	Cryptocarya foetida	Stinking Cryptocarya	V	V	Carterornis leucotis	White-eared Monarch	V,P	
Beech Dr		Endiandra floydii	Crystal Creek Walnut	E1	E	Hirundapus caudacutus	White-throated Needletail	Р	V,C,J, K

Endiandra hayesii	Rusty Rose Walnut	V	V	Miniopterus australis	Little Bent-winged Bat	V,P	
Endiandra muelleri subsp. bracteata	Green-leaved Rose Walnut	E1		Miniopterus orianae oceanensis	Large Bent-winged Bat	V,P	
Macadamia integrifolia	Macadamia Nut		V	Nyctophilus bifax	Eastern Long-eared Bat	V,P	
Macadamia tetraphylla	Rough-shelled Bush Nut	V	V	Pandion cristatus	Eastern Osprey	V,P,3	
Psilotum complanatum	Flat Fork Fern	E1,3		Petalura gigantea	Giant Dragonfly	E1	
Rhodamnia rubescens	Scrub Turpentine	E4A	CE	Petalura litorea	Coastal Petaltail	E1	
Syzygium moorei	Durobby	V	V	Phascolarctos cinereus	Koala	E1,P	Е
Tinospora tinosporoides	Arrow-head Vine	V		Podargus ocellatus	Marbled Frogmouth	V,P	
				Pteropus poliocephalus	Grey-headed Flying- fox	V,P	V
				Ptilinopus magnificus	Wompoo Fruit-Dove	V,P	
				Ptilinopus regina	Rose-crowned Fruit- Dove	V,P	
				Thersites mitchellae	Mitchell's Rainforest Snail	E1	CE