

Byron Shire flying-fox Camp Management Plan 2024 – 2029 Roost Plan



**BYRON
SHIRE
COUNCIL**

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 y 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 Flying-fox Management Plan 2024 - 2029 Roost Detail

- 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.

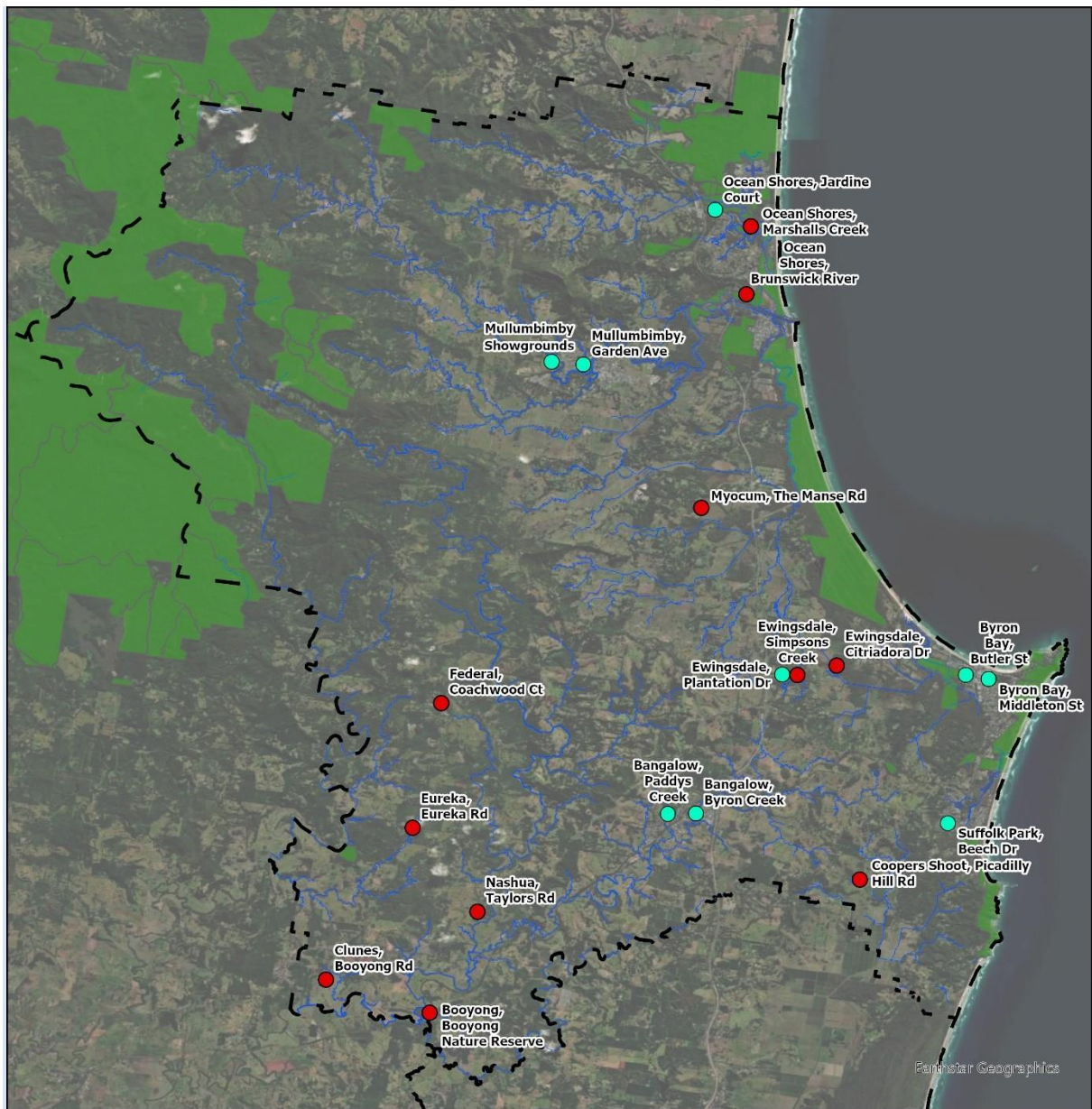
Desktop searches of sensitive sites (schools, aged care facilities, childcare centres and showgrounds, equine training, piggeries care and resting centres) in close proximity (within 300m) to known flying-fox camps.

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

Criterion
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 $\geq 10,000$ 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 website¹ 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).

Figures 2 and 3 illustrate changes in flying-fox camp occupancy over time.

¹ [Flying-foxes | NSW Environment and Heritage](#)

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Table 2 Camp History Details

	Camp first recorded	Occupation (permanent, seasonal, occasional)	Species typically present	Max. no. of flying-fox recorded	Date max. no. of flying-fox recorded	Proportion of max. no.	Max. no. of GHFF (date)	Max. no. of BFF (date)	Comments
Bangalow, Byron Creek	2019	Seas	GHFF & BFF	2,128	Feb-19	44% GHFF, 56% BFF	957 (Feb 2019)	1171 (Feb 2019)	Seasonal since 2019
Bangalow, Paddys Creek	Jan-2010	Seas	GHFF & BFF	2,805	Feb-18	91% GHFF, 9% BFF	N/A	N/A	Flying-foxes are generally absent in winter.
Booyong, Booyong Flora Reserve	1973	Occ	GHFF & BFF	15,500	Unknown	80% GHFF, 20% BFF	200 (Nov 2014)	50 (Nov 2014)	Not recorded between Feb 2009 and Nov 2014, then once only since 2014
Byron Bay, Butler St	Jul-2003	Occ	GHFF & BFF	3,000	May-16	100% GHFF	3000 (May 2016)	550 (July 2011)	Last occupancy recorded in November 2023 (just 1 individual)
Byron Bay, Middleton St	Sept 2012	Perm	GHFF & BFF	8,000	May-17	56% GHFF, 44% BFF	1955 (May 2018)	1495 (May 2017)	Between May 2016 and November 2016 only Grey-headed Flying-foxes were observed.

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Clunes, Booyong Rd	< 2013	Unkown	GHFF & BFF	3,960	May-17	59% GHFF, 41% BFF	2,336 (May 2017)	1,624 (May 2017)	Last recorded occ 2018
Coopers Shoot, Picadilly Hill Rd	< 1998	Occ	GHFF & BFF	5,900	N/A	N/A	N/A	N/A	Last recorded occ < 2012
Eureka, Eureka Rd	< 2013	Occ	GHFF	N/A	N/A	N/A	N/A	N/A	Last recorded occ 2017
Ewingsdale, Citriadora Drive	<1987	Occ	GHFF & BFF	1300	May-18	60% GHFF, 40% BFF	780 (May 2018)	520 (May 2018)	Last recorded occ 2018
Ewingsdale, Plantation Drive	2023	Occ	N/A	100	Aug-23	N/A	100	Aug-23	Occupied since 2023
Ewingsdale, Simpson Creek	2017	Unkown	GHFF & BFF	1,633	Aug-17	34% GHFF, 64% BFF	683 (Nov 2017)	1,071 (Aug 2017)	Last recorded occ 2018
Federal, Coachwood Ct	2017	Occ	GHFF & BFF	244	Nov-17	100% GHFF	244 (Nov 2017)	20 (May 2018)	Last recorded occ 2018
Mullumbimby, Garden Ave	Sept 2010	Seas	GHFF & BFF	10,359	May-17	80% GHFF, 20% BFF	8,279 (May 2017)	2445 (May 2013)	Numbers decrease and move to the eastern area of the camp along the Brunswick River in winter.

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Mullumbimby Showground	N/A	Occ	GHFF & BFF	859	Aug-23	62% GHFF, 38% BFF	530 (Aug 2023)	329 (Aug 2023)	May be part of Mullumbimby camp/
Myocum, The Manse Rd	1987	Abandoned	GHFF	N/A	N/A	N/A	N/A	N/A	Last recorded occ 1990
Nashua, Taylors Rd and Lismore Rd	2022	Occ	N/A	N/A	N/A	N/A	N/A	N/A	
Ocean Shores, Brunswick River	<1998	Occ	GHFF & BFF	32,100	Nov-13	22% GHFF, 78%BFF	36 (Nov 2013)	124 (Nov 2013)	Last recorded occ 2013.
Ocean Shores, Jardine Ct	2023	Occ	N/A	N/A	N/A	N/A	N/A	N/A	Only recorded in mid 2023.
Ocean Shores, Marshalls Creek	<1998	Occ	GHFF & BFF	6,375	May-15	6% GHFF, 94% BFF	2,000 (Aug 2016)	6,000 (May 2015)	BFF primary species present.

GHFF: Grey-headed flying-fox, BFF: Black flying-fox

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Figure 2 Byron Shire flying-fox occupancy in main urban camps (roosts)

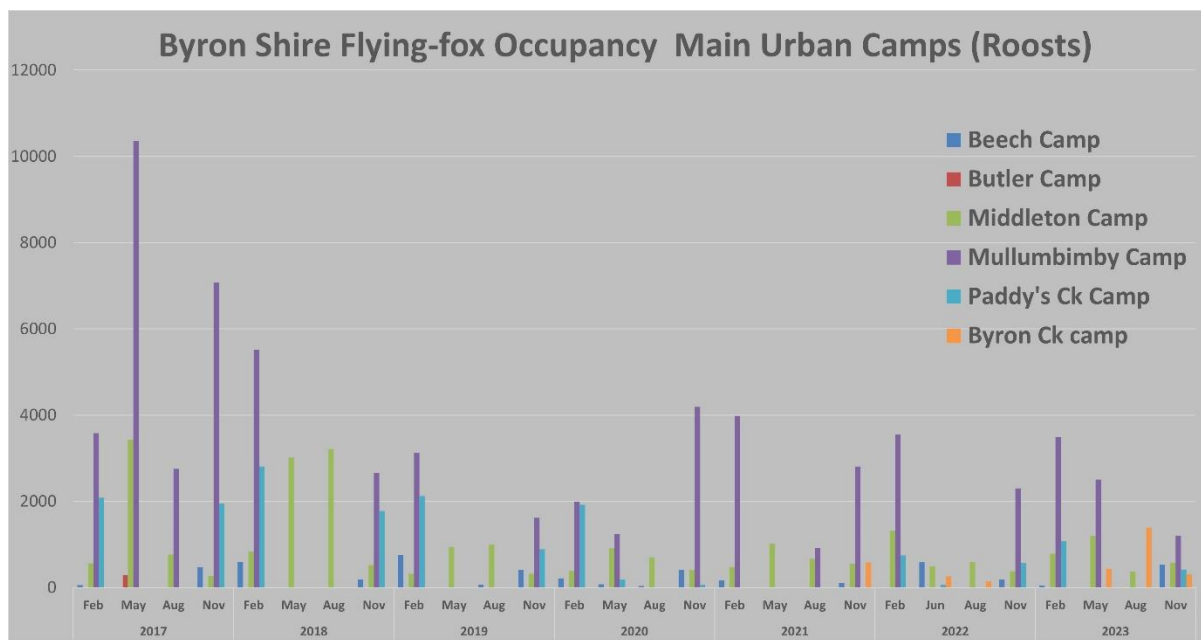
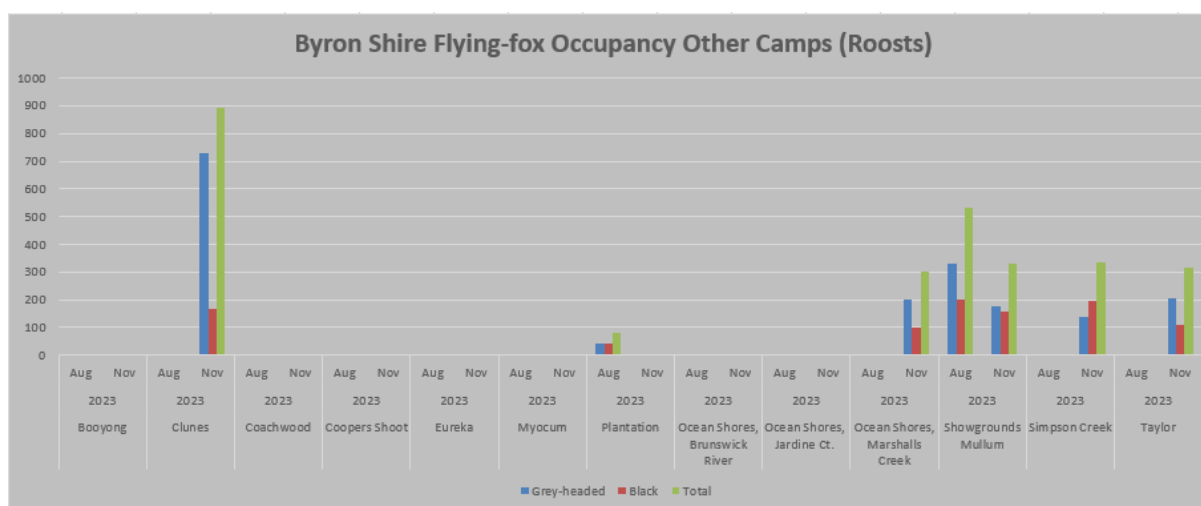


Figure 3 Byron Shire flying-fox occupancy in other camps (roosts)



2.1 Bangalow, Byron Creek

Site Description

The Byron Creek roost site is located to the east of Bangalow township (Figure 4). 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 5), 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 6):

Bangalow showground – roost site is located on the showground.

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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 7).

2014 - 2016 - Koala habitat

2019 - 2021 - Grey-headed flying-fox habitat

2022 - current - Riparian restoration

Figure 4 Bangalow, Byron Creek Roost Location



Figure 5 Ecological Values - Bangalow, Byron Creek Roost Location



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 300m Buffer
- Wildlife Corridor
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate

Ecological Values Bangalow, Byron Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

0 35 70 140 210
Meters

Figure 6 Sensitive Sites - Bangalow, Byron Creek Roost Location

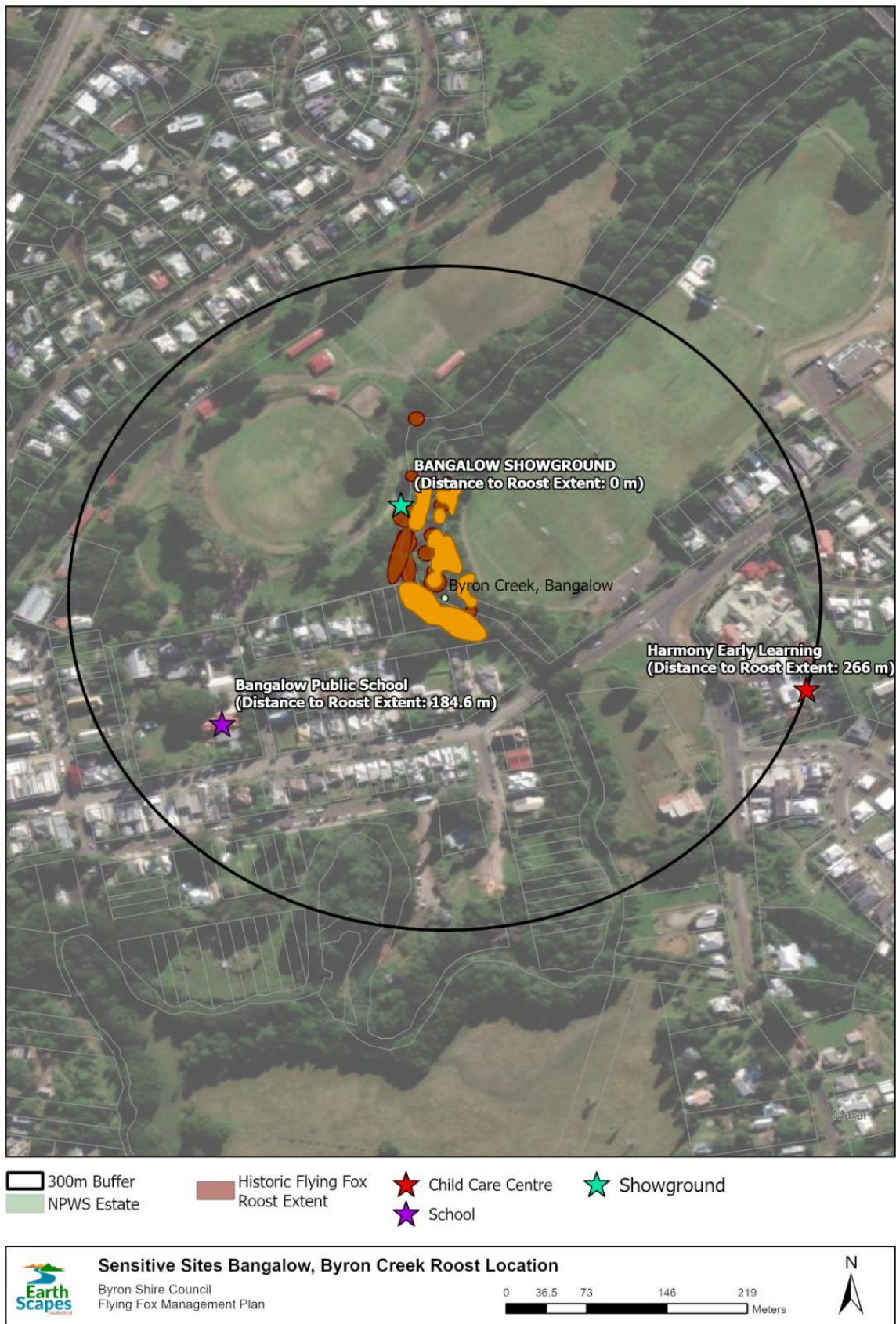
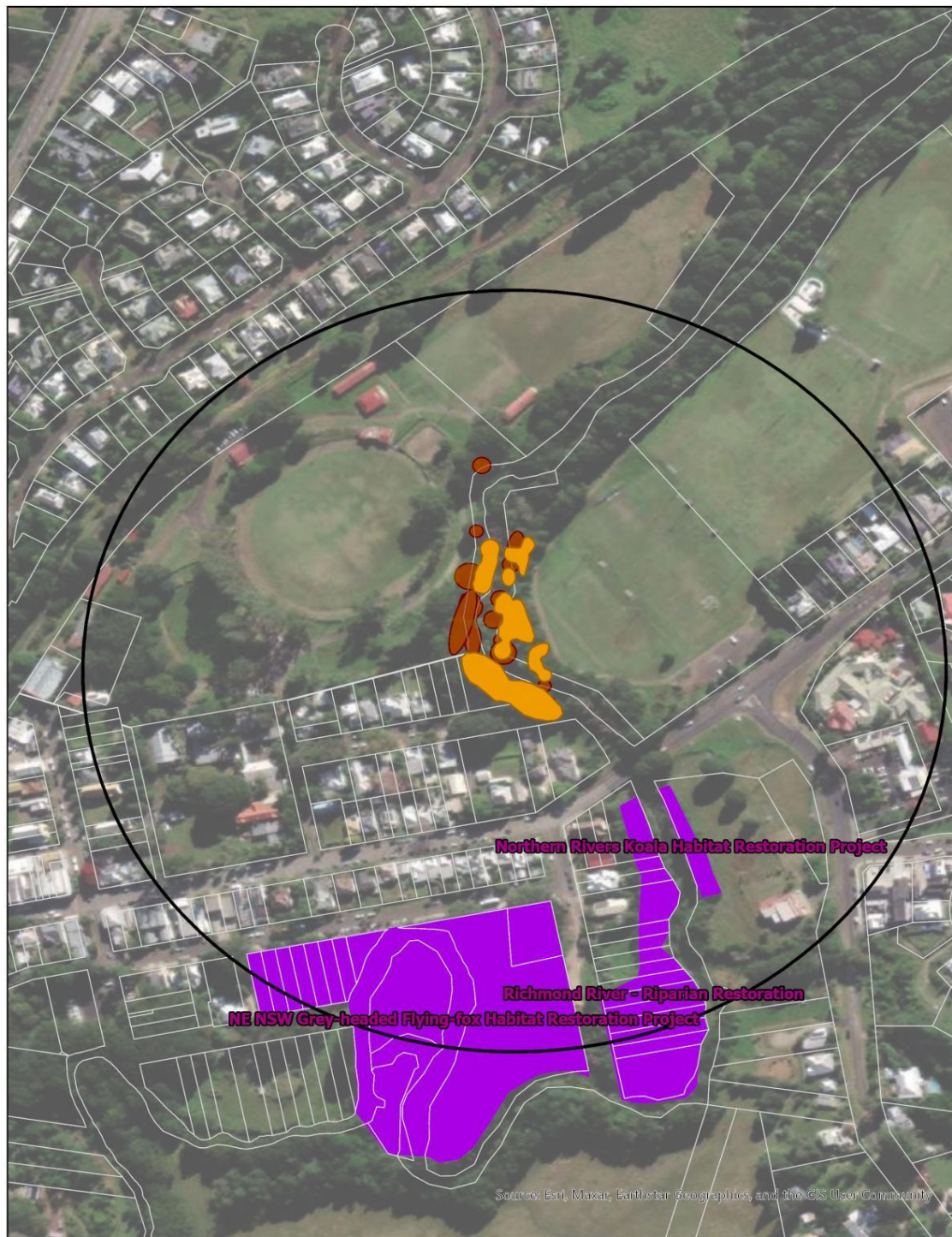


Figure 7 Habitat Restoration Sites - Bangalow, Byron Creek Roost Location



- 300m Buffer
- NPWS Estate
- Historic Flying Fox Roost Extent
- Current Flying Fox Roost Extent
- Habitat Restoration Site

Habitat Restoration Bangalow, Byron Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

N

0 34 68 136 204 Meters

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 8). 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 9).

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 moorei*) 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 10):

Mirabelle Early Learning Site - 442m from roost site.

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

Restoration Sites

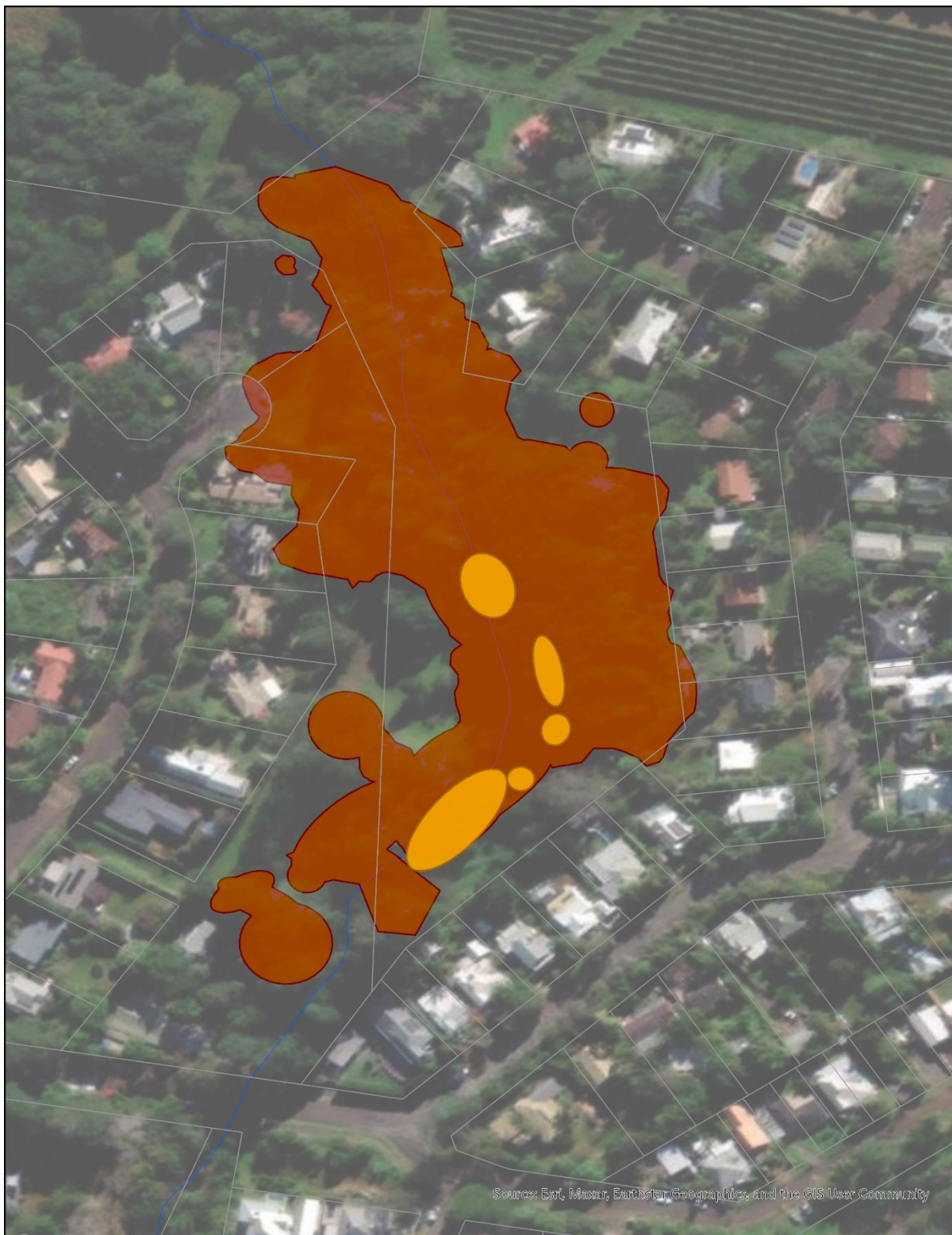
The original rainforest planting of Paddys Creek was undertaken in 1989 by local resident Edie Franks.




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*) (Byron 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 11).

Figure 8 Bangalow, Paddy's Creek Roost Location



 NPWS Estate	 Current Flying Fox Roost Extent	 Historic Flying Fox Roost Extent
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 **Bangalow, Paddy's Creek Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 15.5 31 62 93 Meters


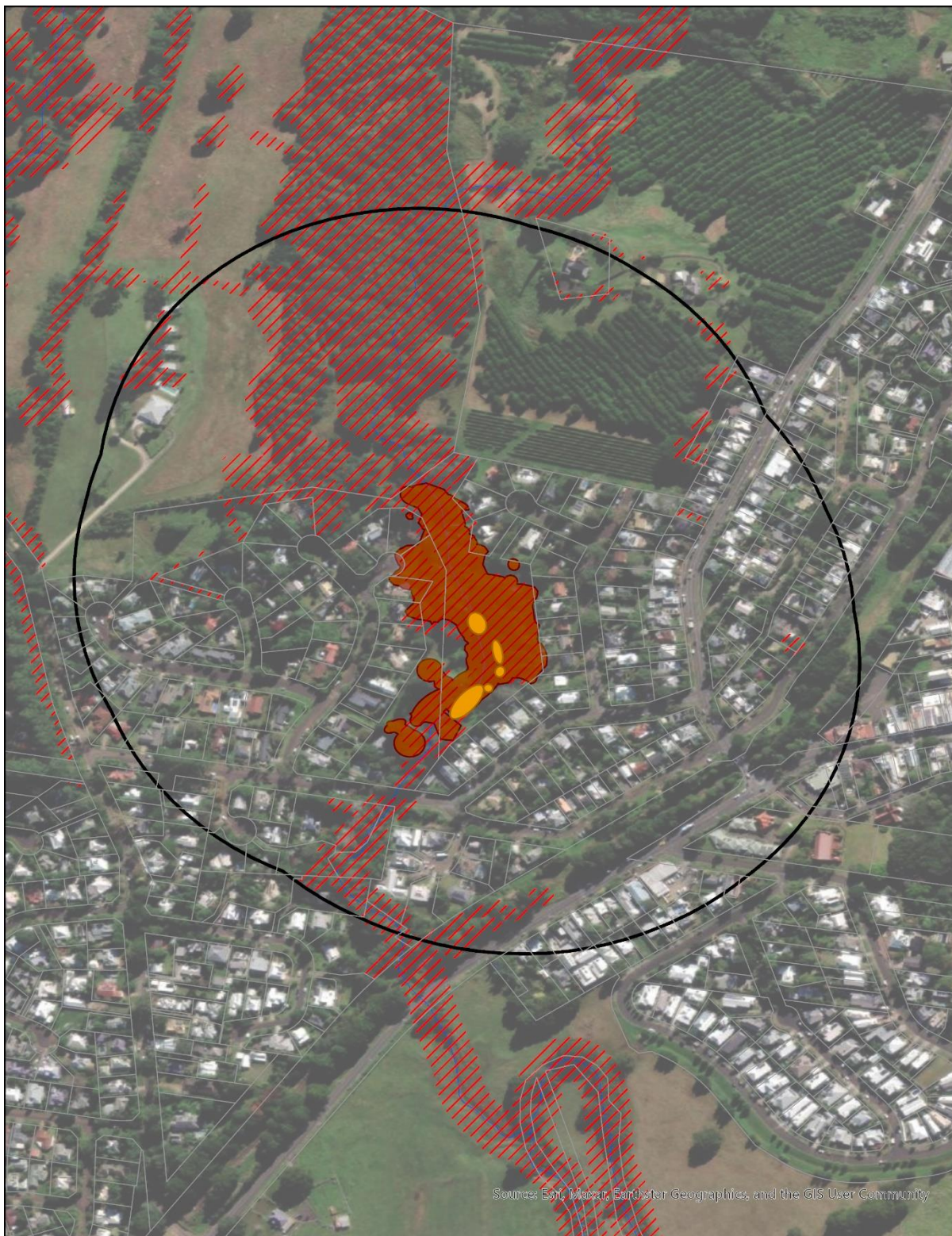


Figure 9 Ecological Values - Bangalow, Paddy's Creek Roost Location

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail



- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

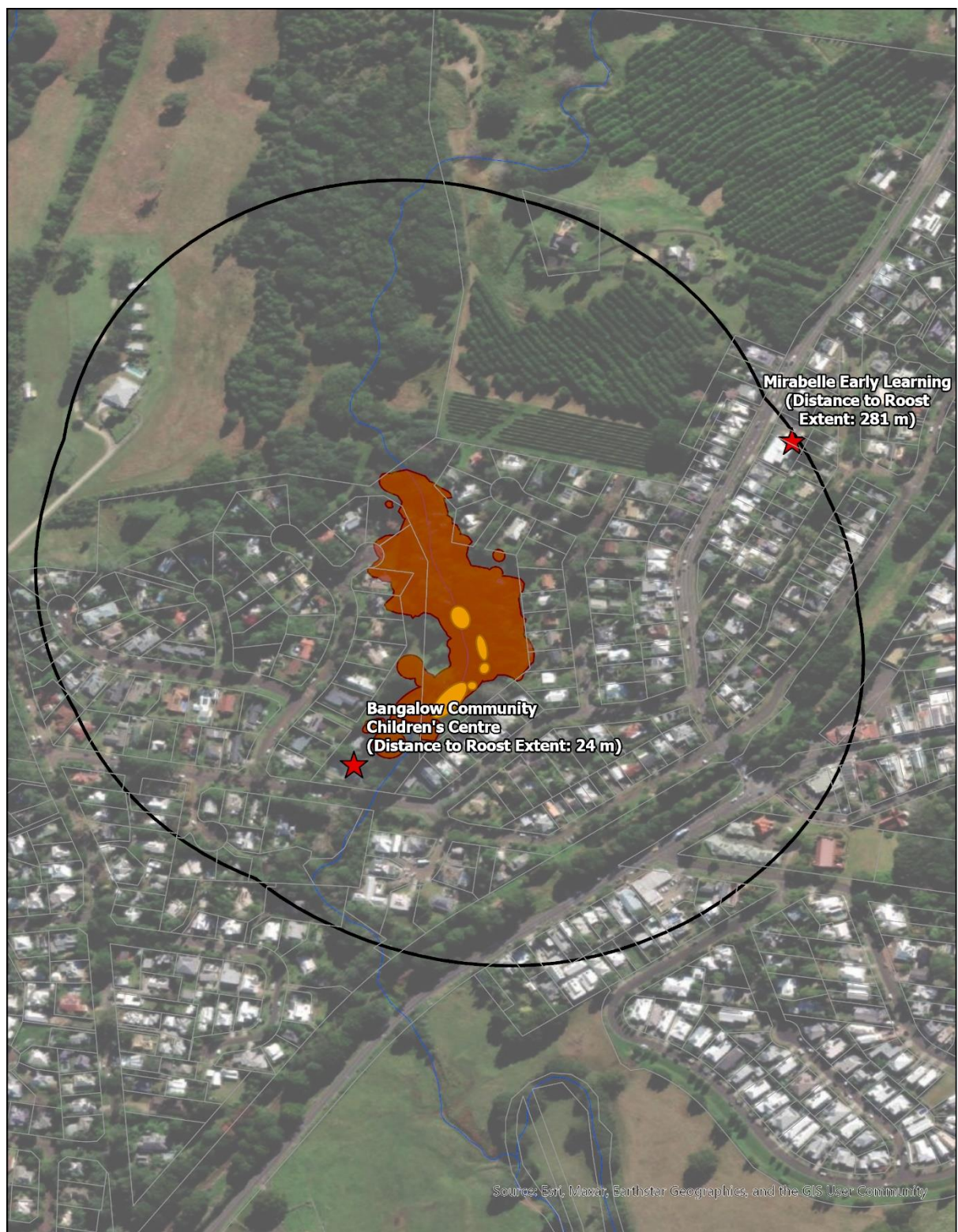
Ecological Values Bangalow, Paddy's Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

0 47 94 188 282

Meters

Figure 10 Sensitive Sites - Bangalow, Paddy's Creek Roost Location



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 300m Buffer
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- ★ Child Care Centre
- ★ Showground
- NPWS Estate
- ★ School

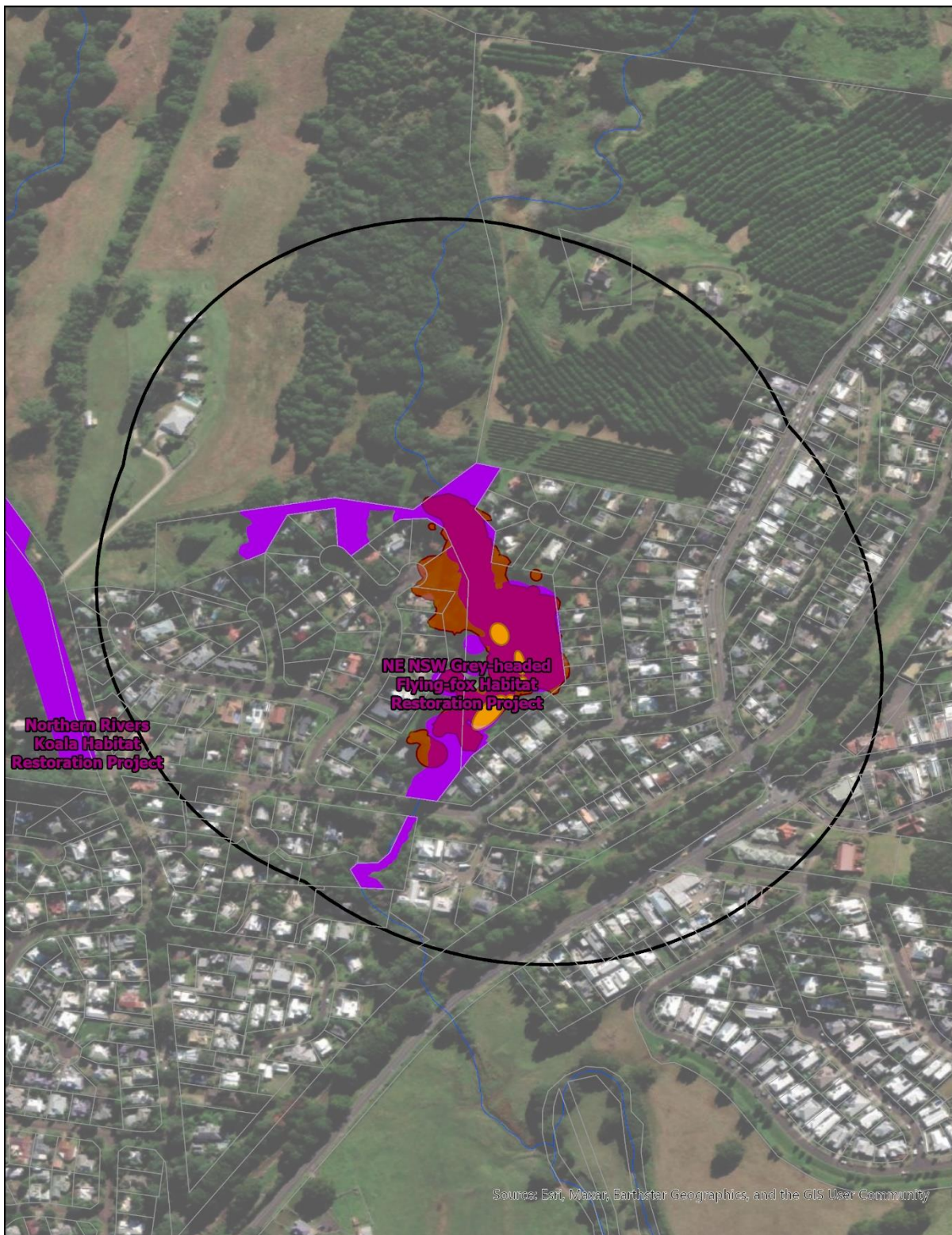
Sensitive Sites Bangalow, Paddy's Creek Flying Fox Roost Extent

Byron Shire Council
Flying Fox Management Plan

0 44 88 176 264

Meters

Figure 11 Habitat Restoration Sites - Bangalow, Paddy's Creek Roost Location



Sources: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- Habitat Restoration Site

Habitat Restoration Bangalow, Paddy's Creek Flying Fox Roost Extent

Byron Shire Council
Flying Fox Management Plan

N

0 47 94 188 282

Meters

2.3 Booyong, Booyong Flora Reserve

Site Description

The Booyong roost site is located 18 Km north-east of Lismore (Figure 12). 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 13).

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

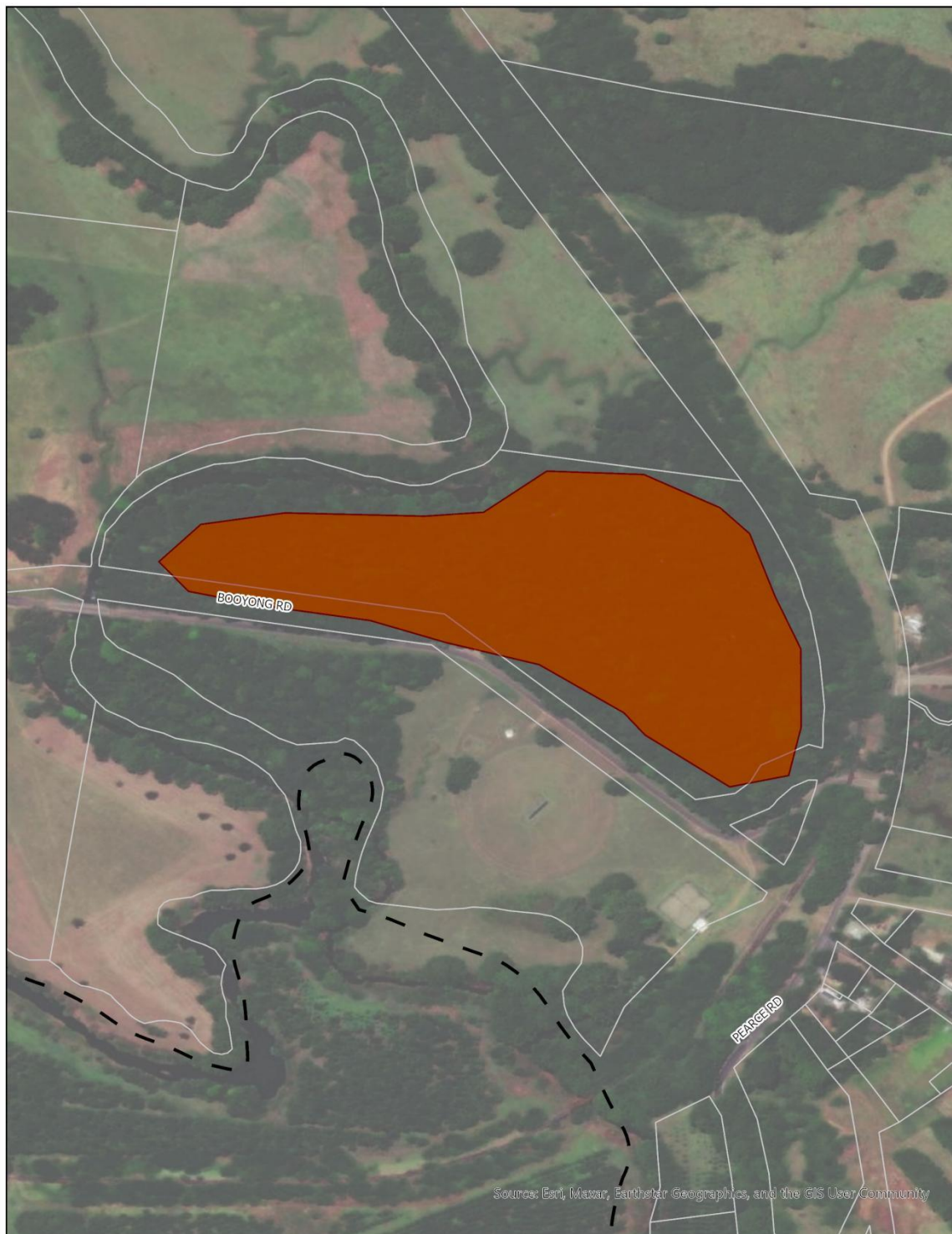
Booyong roost site is located in a rural area with no sensitive sites in close.

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 14).

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

Figure 12 Booyong, Booyong Nature Reserve Roost Location



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

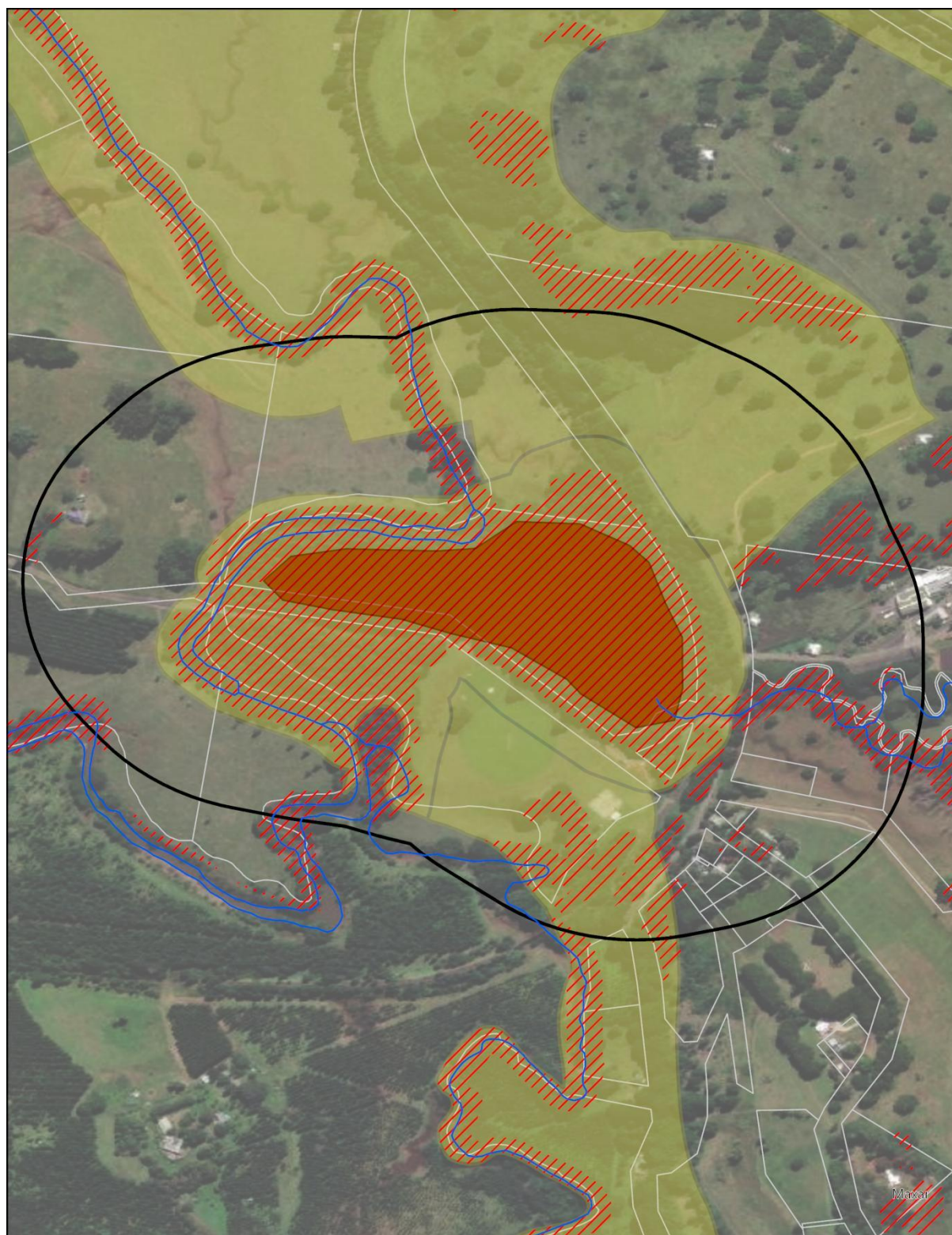
Booyong, Booyong Nature Reserve Roost Location

Byron Shire Council
Flying Fox Management Plan

0 40 80 160 240 Meters

N

Figure 13 Ecological Values - Booyong, Booyong Nature Reserve Roost Location

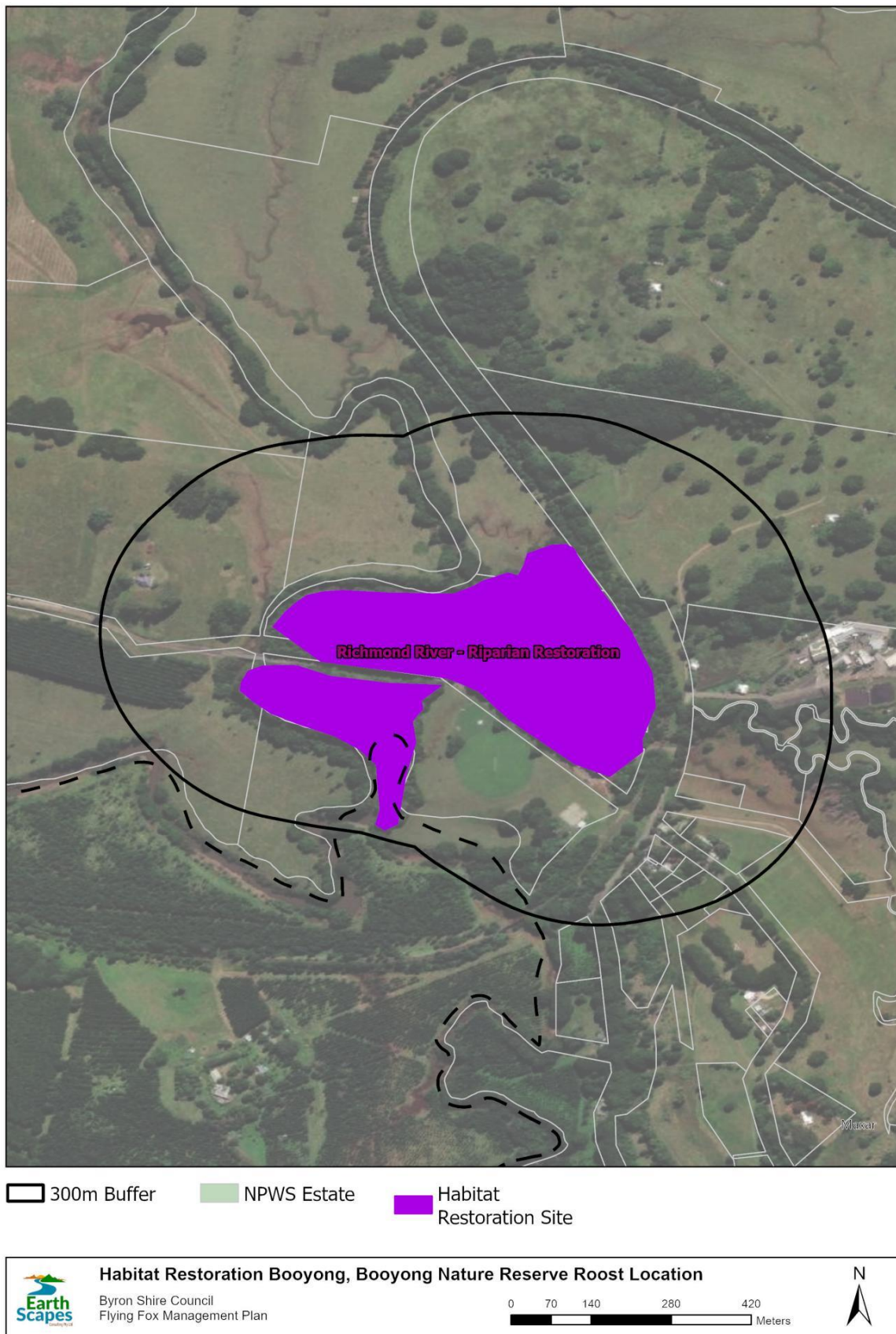


- 300m Buffer
- Wildlife Corridor
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

Ecological Values Booyong, Booyong Nature Reserve Roost Location
Byron Shire Council
Flying Fox Management Plan

0 60 120 240 360
Meters

Figure 14 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 15). 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

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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*), Broad-leaved 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 16):

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 site (Figure 17):

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 15 Byron Bay, Butler Street Roost Location

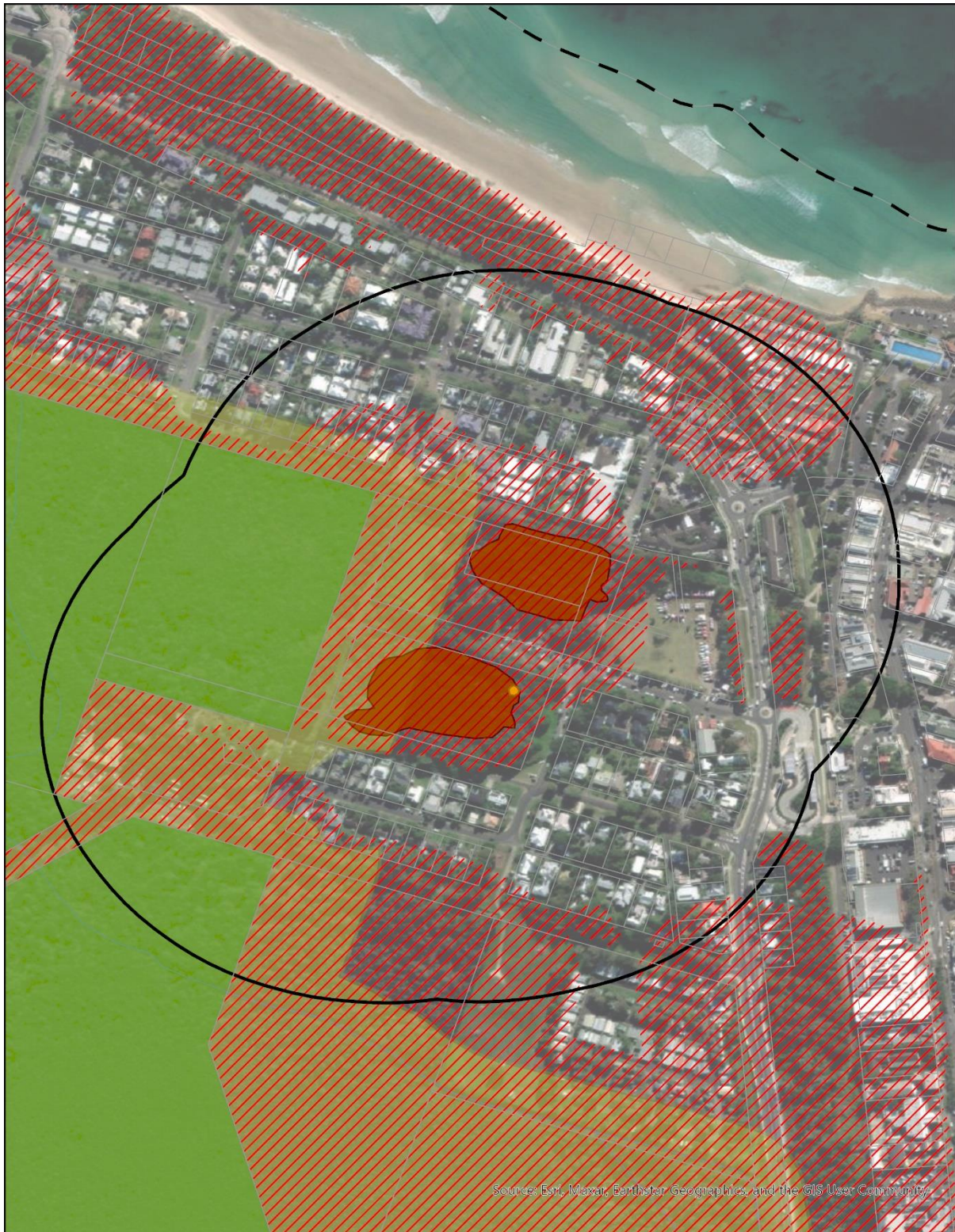


NPWS Estate Current Flying Fox Roost Extent Historic Flying Fox Roost Extent

Byron Bay, Butler Street Roost Location
Byron Shire Council
Flying Fox Management Plan

0 17.5 35 70 105 Meters

Figure 16 Ecological Values - Byron Bay, Butler Street Roost Location



-  300m Buffer
-  Wildlife Corridor
-  Current Flying Fox Roost Extent
-  Historic Flying Fox Roost Extent
-  HEV (2023)
-  NPWS Estate

Ecological Values Byron Bay, Butler Street Roost Location
 Byron Shire Council
 Flying Fox Management Plan

0 48.5 97 194 291
 Meters

Figure 17 Sensitive Sites - Byron Bay, Butler Street Roost Location



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- ★ Child Care Centre
- ★ School
- ★ Showground

Sensitive Sites Byron Bay, Butler Street Roost Location

Byron Shire Council
Flying Fox Management Plan

0 48.5 97 194 291
Meters

2.5 Byron Bay, Middleton St

Site Description

The Middleton Street roost site is located in the centre of Byron Bay township (Figure 18).

The camp is located:

1. Mostly on Crown Reserve R755695 which is owned and directly managed by 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 Childhood 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 19):

Vegetation in over-cleared landscapes (Mitchell landscapes)

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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 camphora*), 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 20):

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 21) 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 18 Byron Bay, Middleton Street Roost Location



- NPWS Estate
- Streams
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

Byron Bay, Middleton Street Roost Location
Byron Shire Council
Flying Fox Management Plan

0 11.5 23 46 69 Meters

N

Figure 19 Ecological Values - Byron Bay, Middleton Street Roost Location

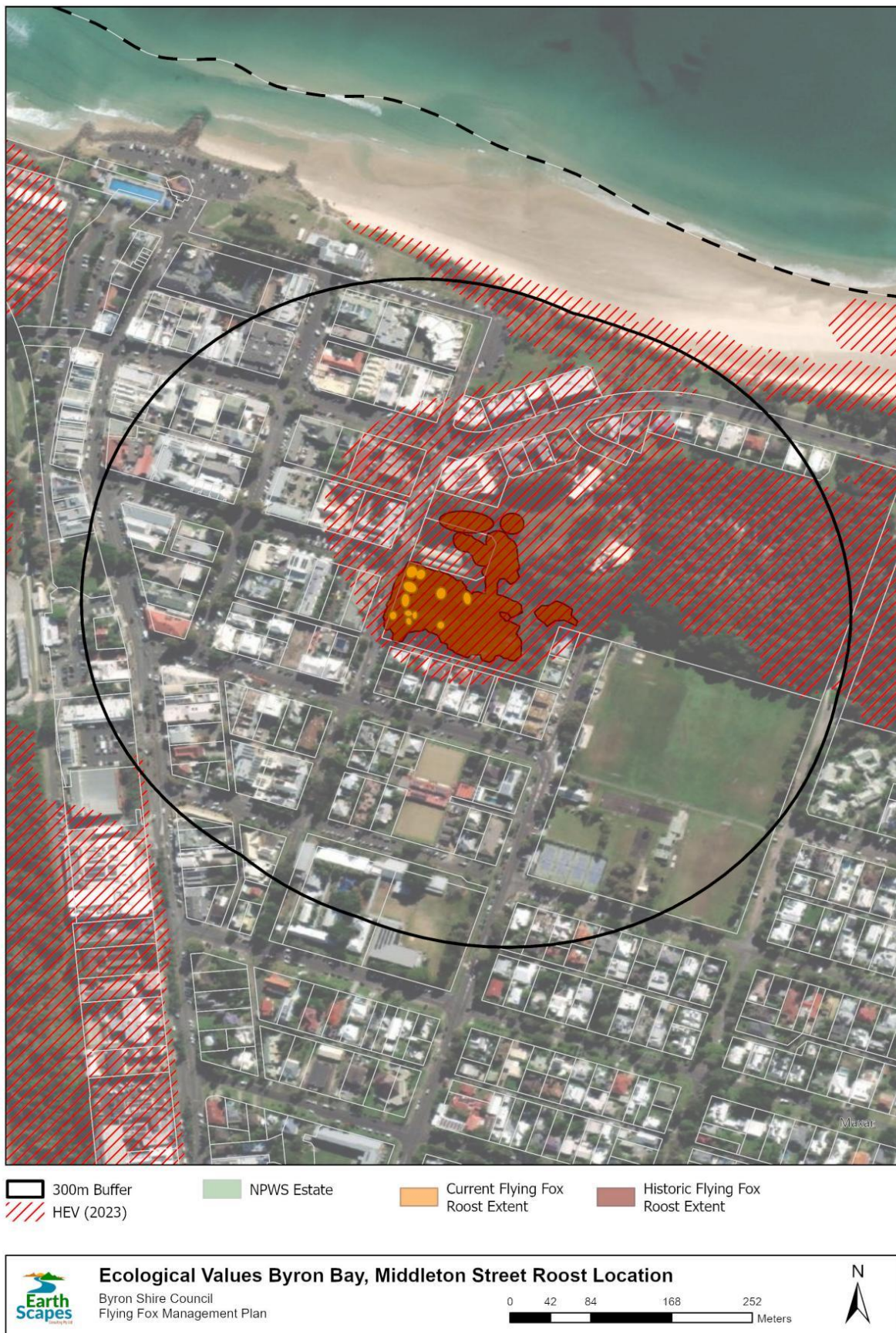
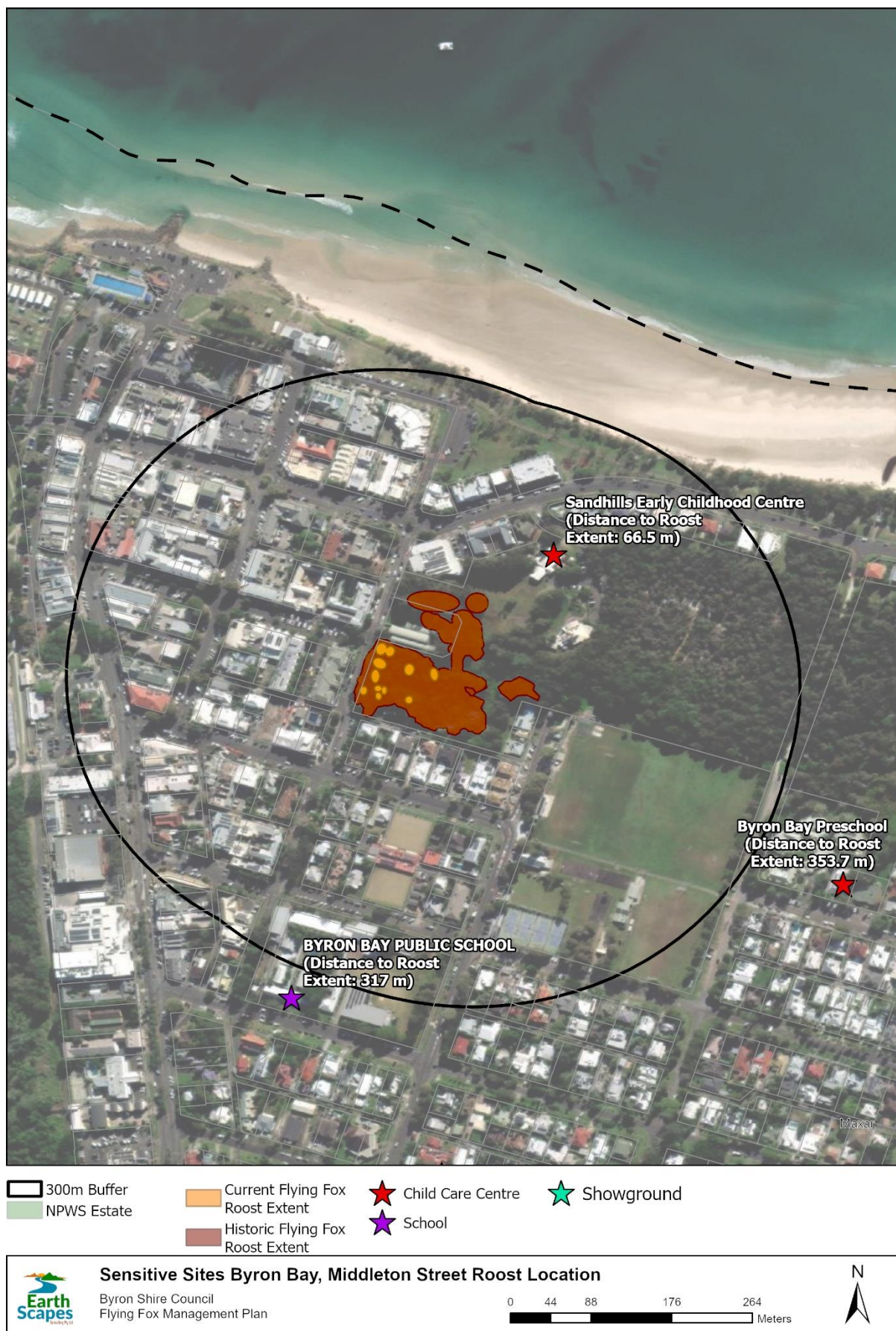


Figure 20 Sensitive Sites - Byron Bay, Middleton Street Roost Location



2.6 Clunes, Booyong Rd

Site Description

The Booyong Road roost site is located southeast of Clunes (Figure 21). 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 22). 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 21 Clunes, Booyong Road Roost Location

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

Clunes, Booyong Road Roost Location
Byron Shire Council
Flying Fox Management Plan

0 13.5 27 54 81 Meters

Figure 22 Ecological values Clunes, Booyong Road Roost Location



- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

Ecological Values Byron Bay, Butler Street Roost Location
Byron Shire Council
Flying Fox Management Plan

0 33.75 67.5 135 202.5
Meters

N

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 23). 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 24), 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 cattleianum*) and Camphor Laurel (*Cinnamomum camphora*) weed species present.

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

Sensitive Sites

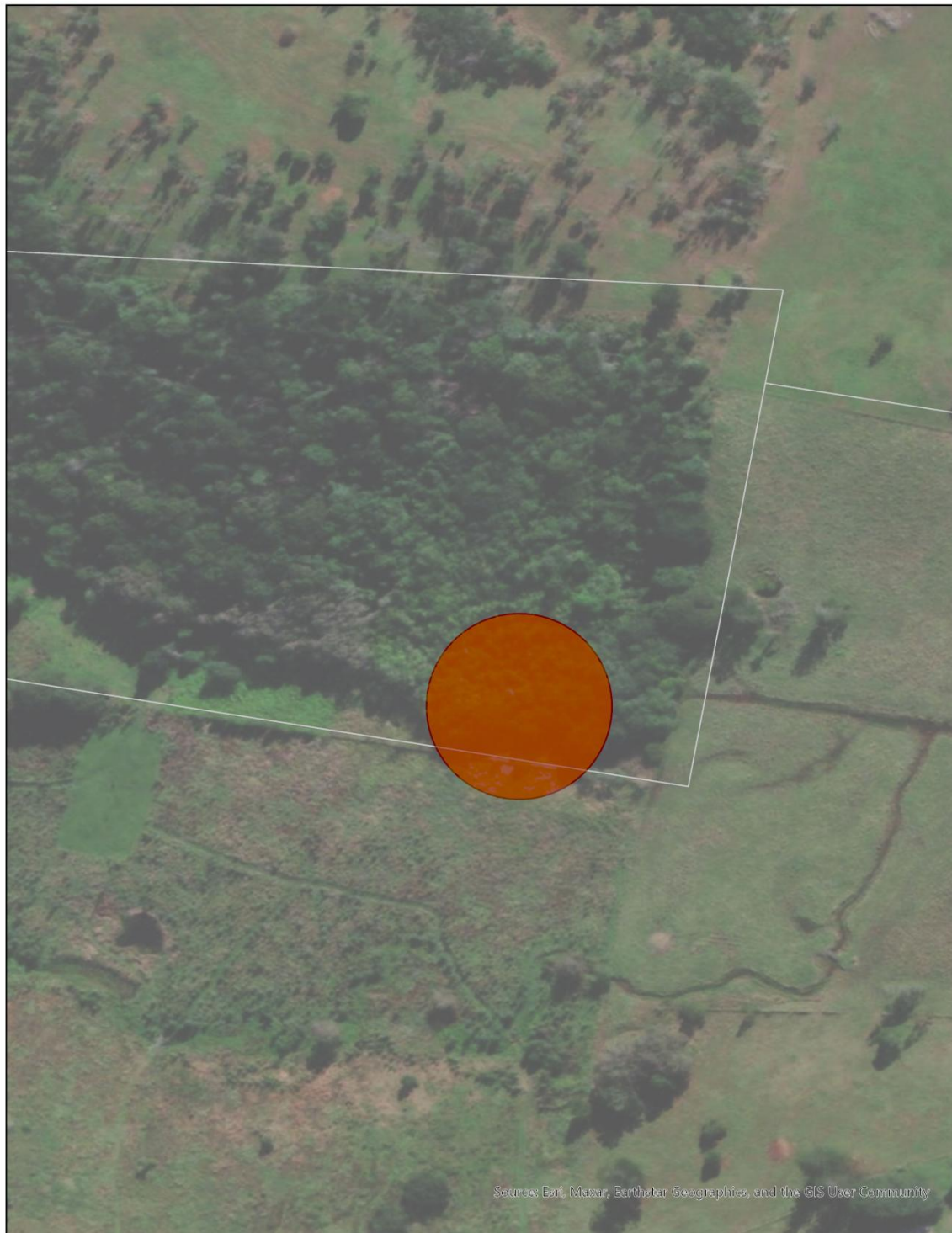
There are no sensitive sites in close proximity to the roost.

Restoration Sites

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Bangalow Koalas, World Wildlife Fund (WWF) undertook koala restoration works south of the site between 2020 and 2023 (Figure 25). 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 23 Coopers Shoot, Picadilly Hill Rd Roost Location



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

 **Coopers Shoot, Picadilly Hill Rd Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 21.5 43 86 129 Meters



Figure 24 Ecological Values - Coopers Shoot, Picadilly Hill Rd Roost Location



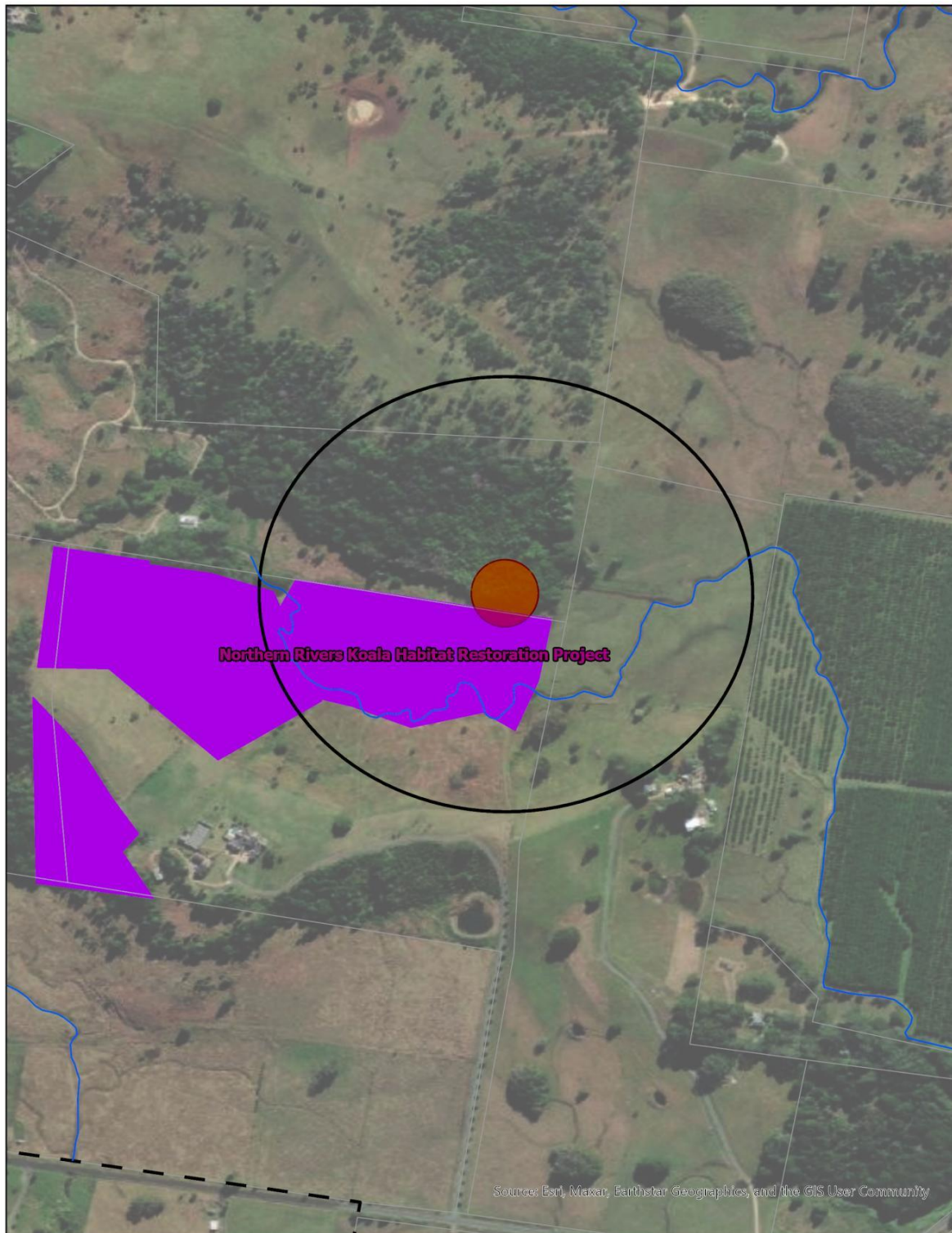
- 300m Buffer
- Wildlife Corridor
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate

Ecological Values Coopers Shoot, Picadilly Hill Rd Roost Location

Byron Shire Council
Flying Fox Management Plan

0 47.5 95 190 285
Meters

Figure 25 Habitat Restoration Sites - Coopers Shoot, Picadilly Hill Rd Roost Location



- 300m Buffer
- NPWS Estate
- Historic Flying Fox Roost Extent
- Habitat Restoration Site

Habitat Restoration Coopers Shoot, Picadilly Hill Rd Roost Location
Byron Shire Council
Flying Fox Management Plan

0 55 110 220 330
Meters

N

2.8 Eureka, Eureka Rd

Site Description

The Eureka roost site is located southeast of Eureka Public School at Coopers Shoot, west of Bangalow (Figure 26). 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 27).

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 (*Guoia 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.

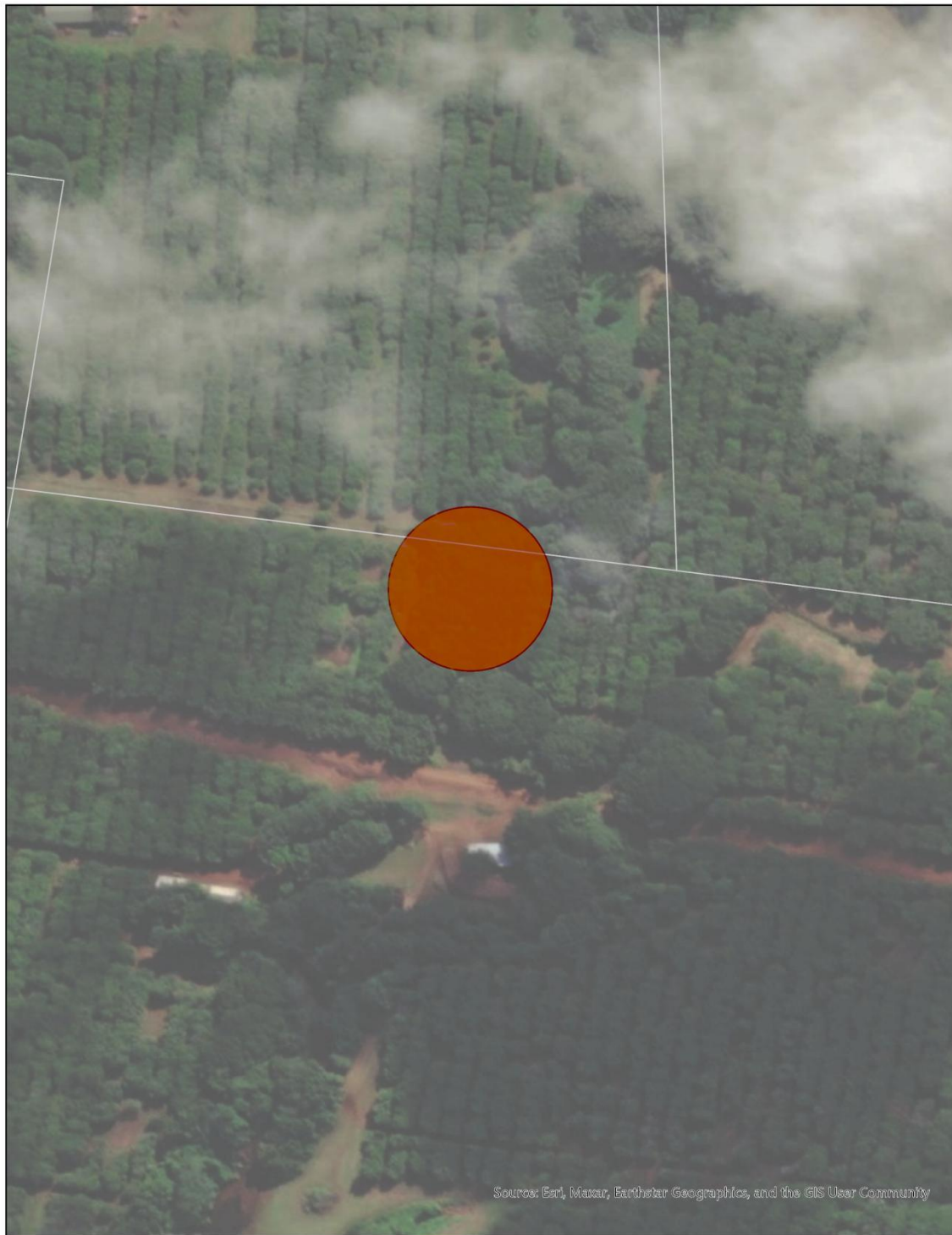
Sensitive Sites

Eureka public school is located 403m from the roost (Figure 28).

Restoration Sites

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

Figure 26 Eureka, Eureka Rd Roost Location



Source: Earl, Maxar, Earthstar Geographics, and the GIS User Community

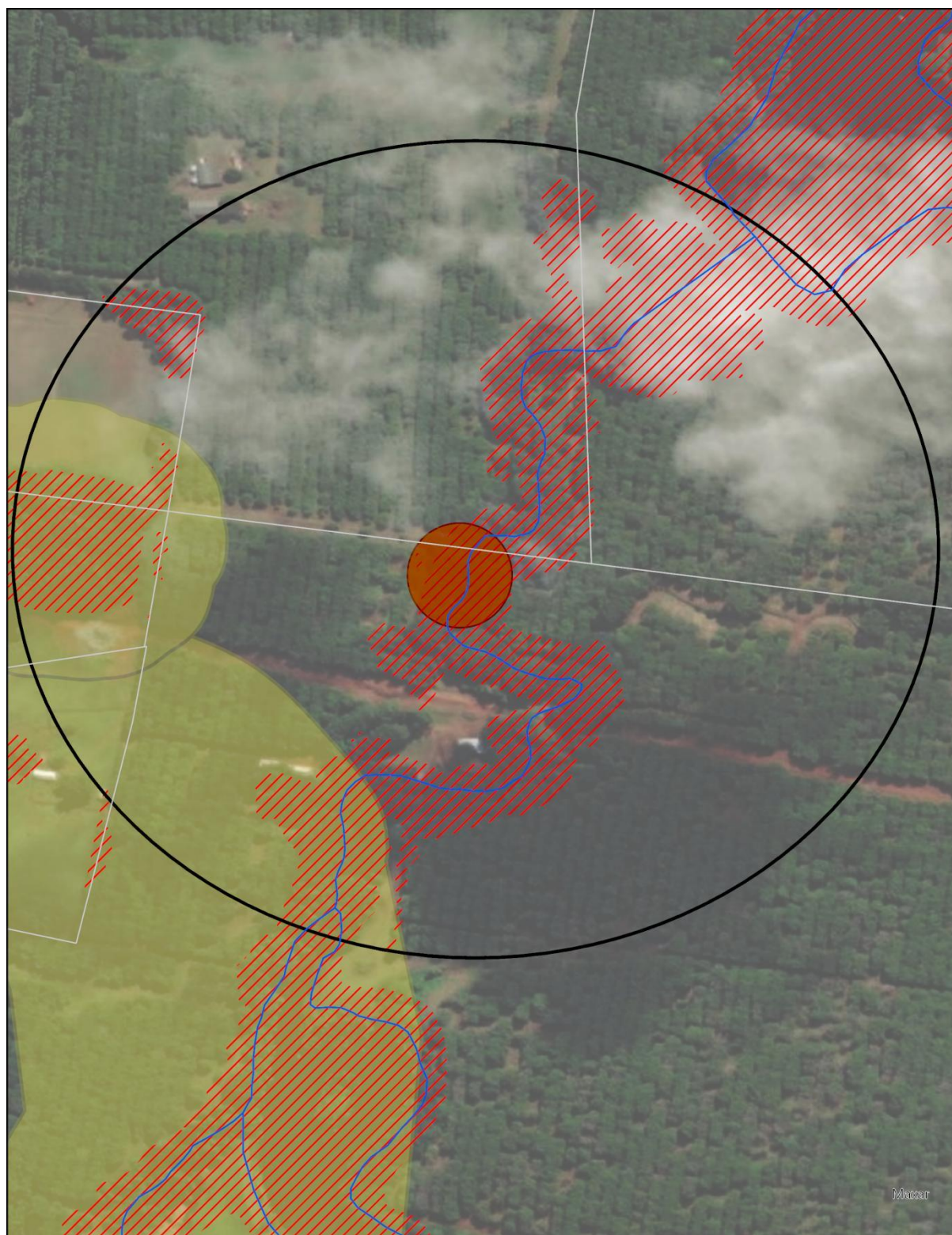
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

Eureka, Eureka Rd Roost Location
Byron Shire Council
Flying Fox Management Plan

0 20 40 80 120 Meters

N

Figure 27 Ecological Values - Eureka, Eureka Rd Roost Location



- 300m Buffer
- Wildlife Corridor
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate

Ecological Values Eureka, Eureka Rd Roost Location

Byron Shire Council
Flying Fox Management Plan

0 31.5 63 126 189
Meters

Figure 28 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 29). 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 30).

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 31).

Restoration Sites

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

Figure 29 Ewingsdale - Citriadora Dr Roost Location

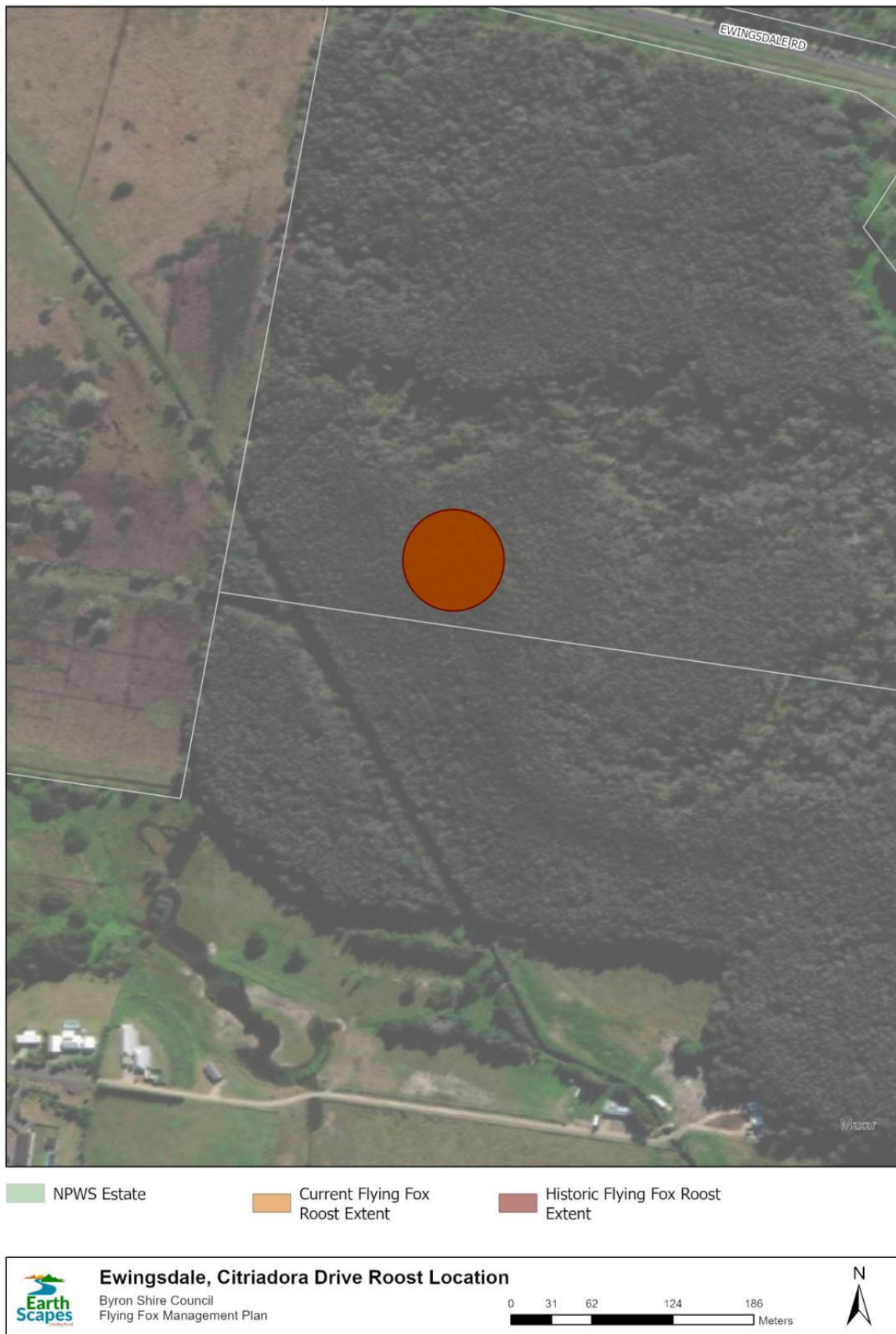
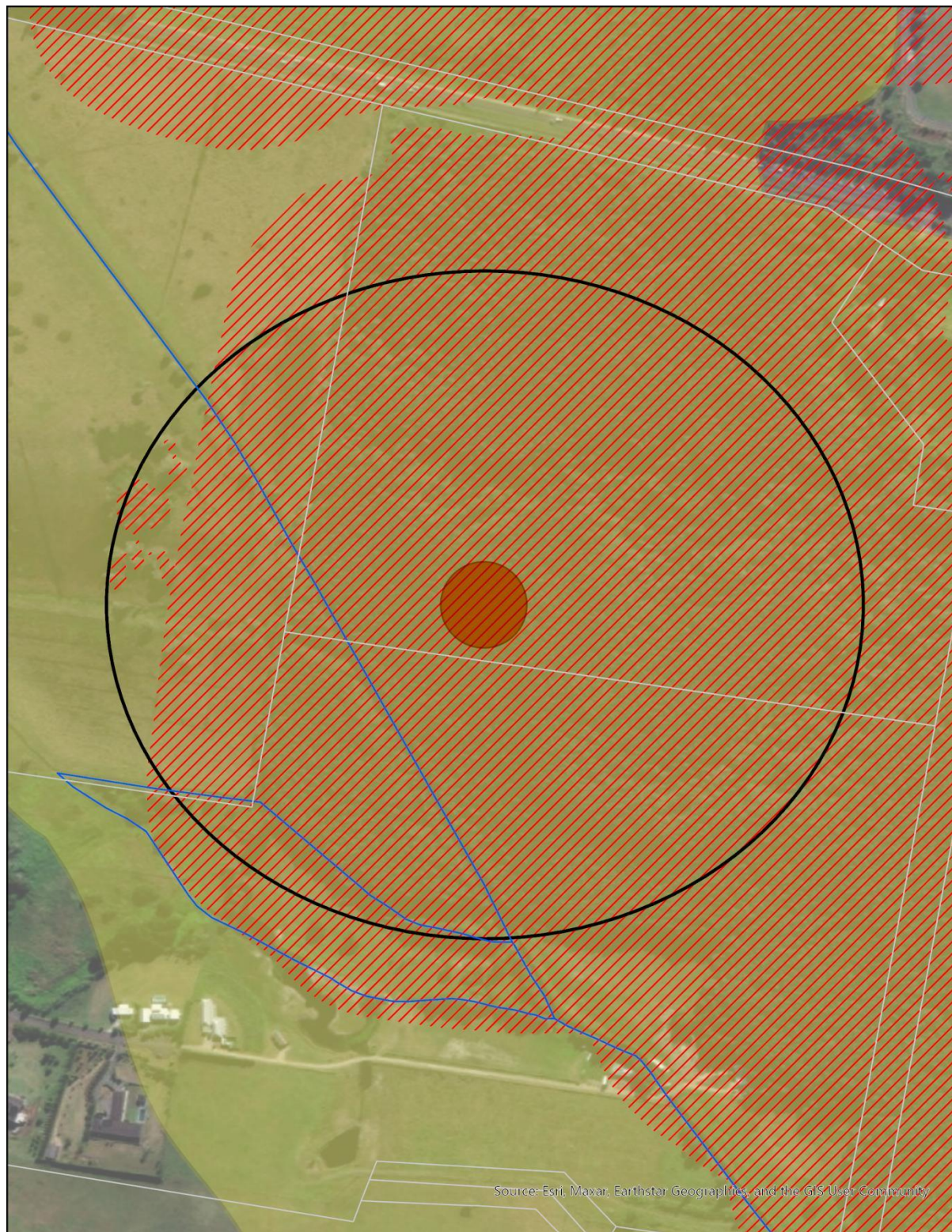


Figure 30 Ecological Values - Ewingsdale - Citriadora Dr Roost Location



Source: Esri, Maxar, Earthstar, Geographics, and the GIS User Community

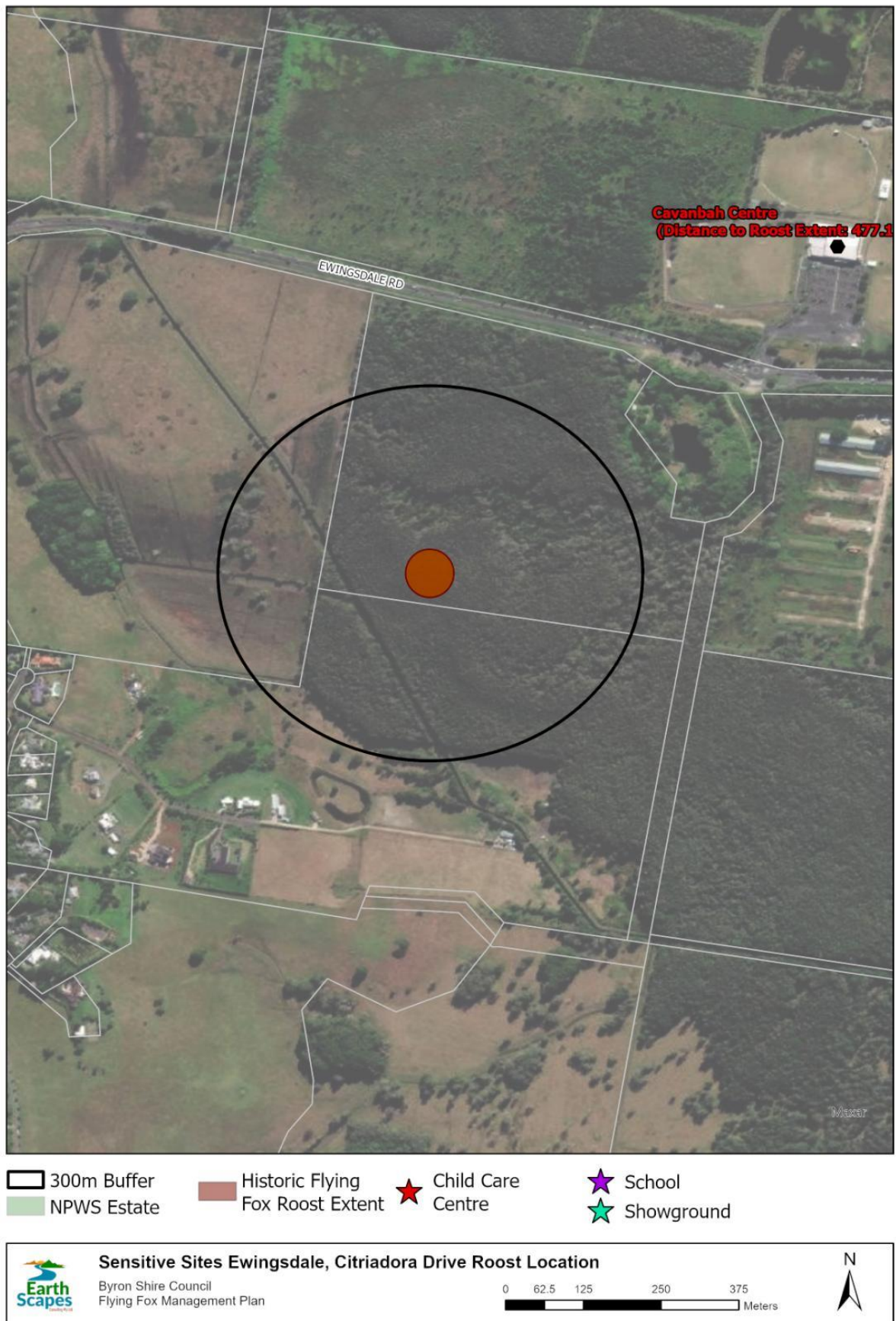
- 300m Buffer
- HEV (2023)
- Wildlife Corridor
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

Ecological Values Ewingsdale, Citriadora Drive Roost Location

Byron Shire Council
Flying Fox Management Plan

0 38.75 77.5 155 232.5
Meters

Figure 31 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 32). 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 32 Ewingsdale - Plantation Dr Roost Location



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

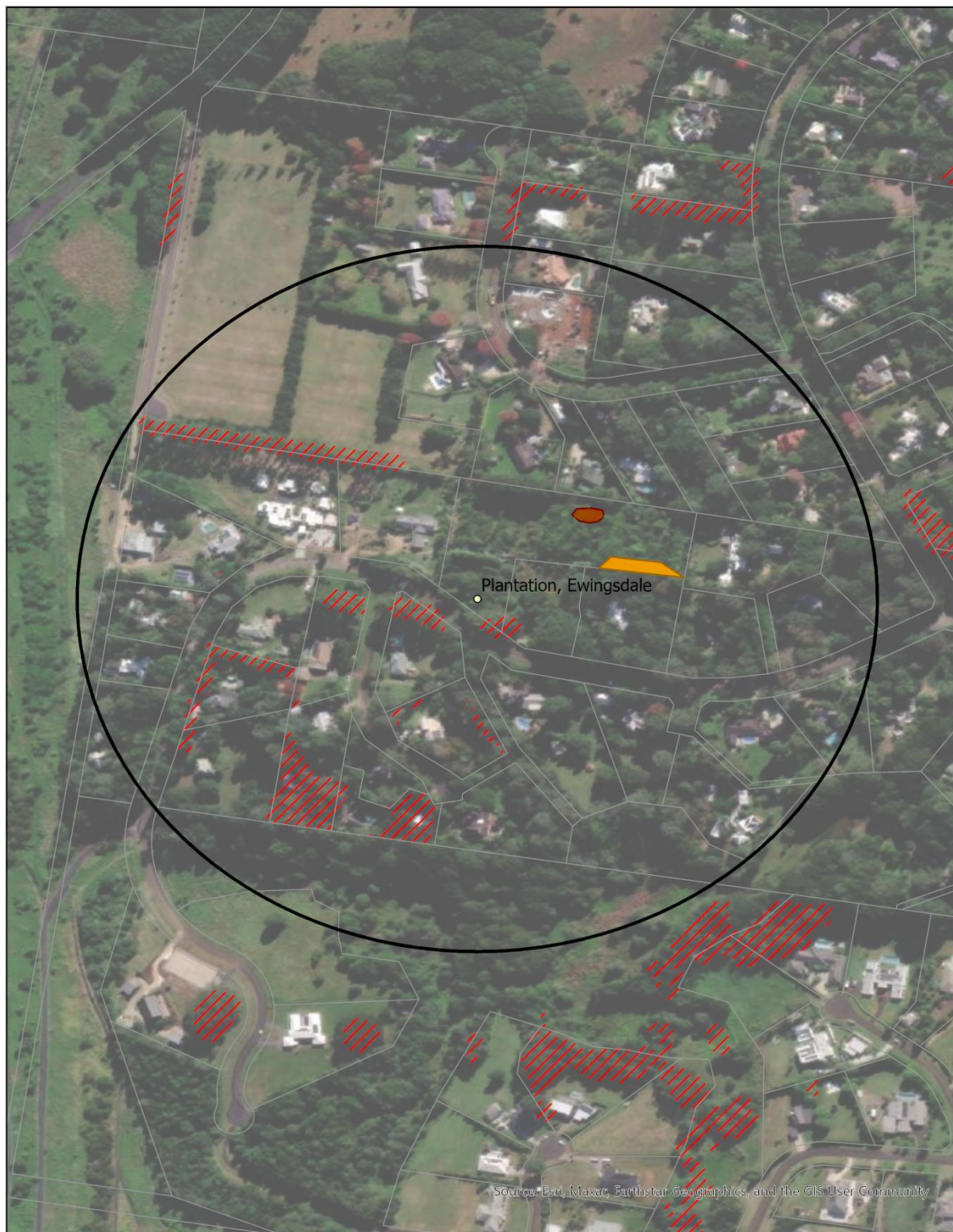
Ewingsdale, Plantation Drive Roost Location

Byron Shire Council
Flying Fox Management Plan

0 11.5 23 46 69 Meters

N

Figure 33 Ecological Values - Ewingsdale - Plantation Dr Roost Location



- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

Ecological Values Ewingsdale, Plantation Drive Roost Location
Byron Shire Council
Flying Fox Management Plan

0 37 74 148 222

Meters

N

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 34). 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 35). 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*, *Coffea arabica*, *Ochna serrulata* and *Cinnamomum camphora*).

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

Sensitive Sites

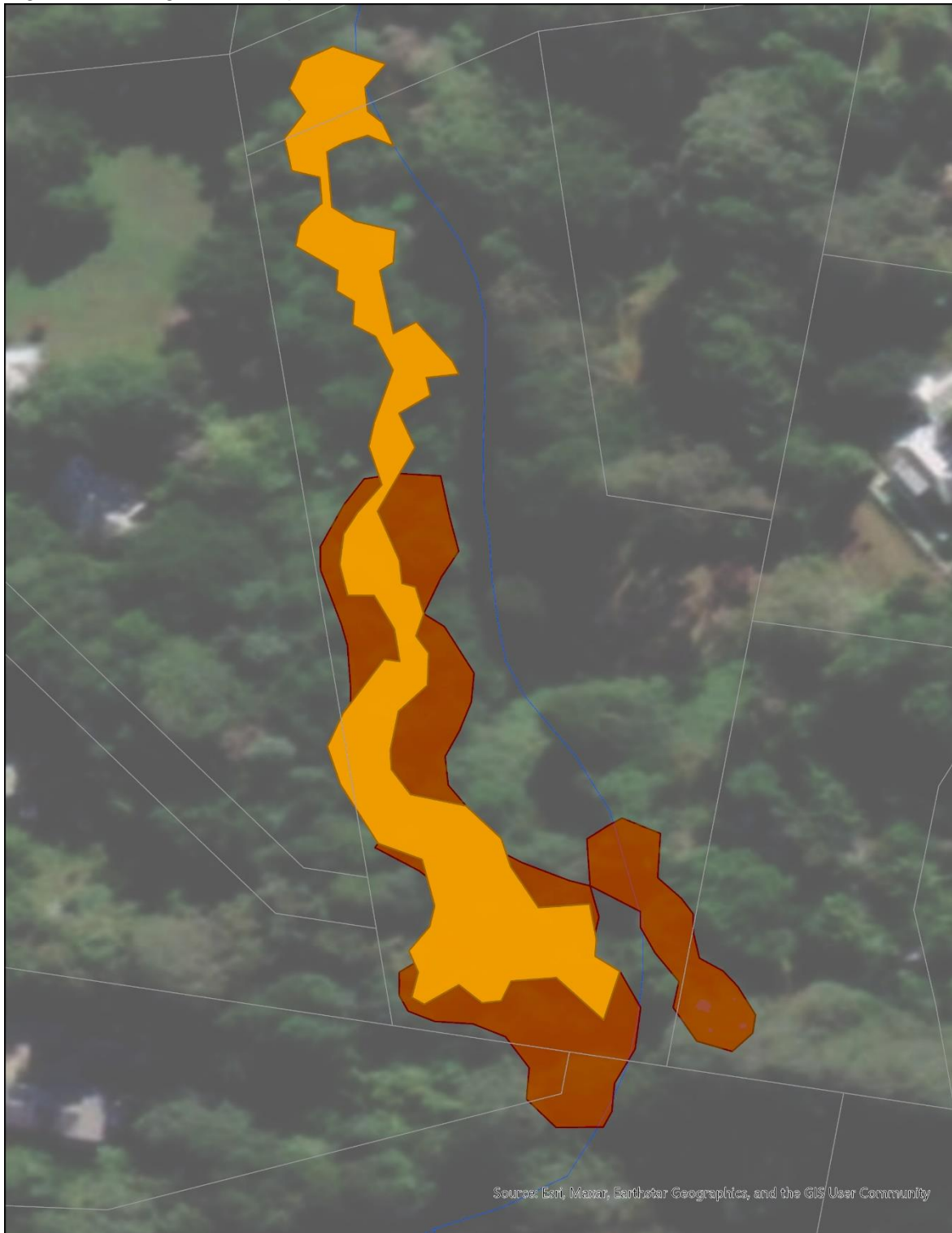
The Simpson Creek roost is an urban area (Figure 36). Byron Bay hospital is located 371.1m from the roost.

Restoration Sites

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail


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 37). This project was undertaken by Brunswick Valley Landcare between 2016 and 2017 to restore flying-fox habitat.

Figure 34 Ewingsdale, Simpsons Creek Roost Location



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

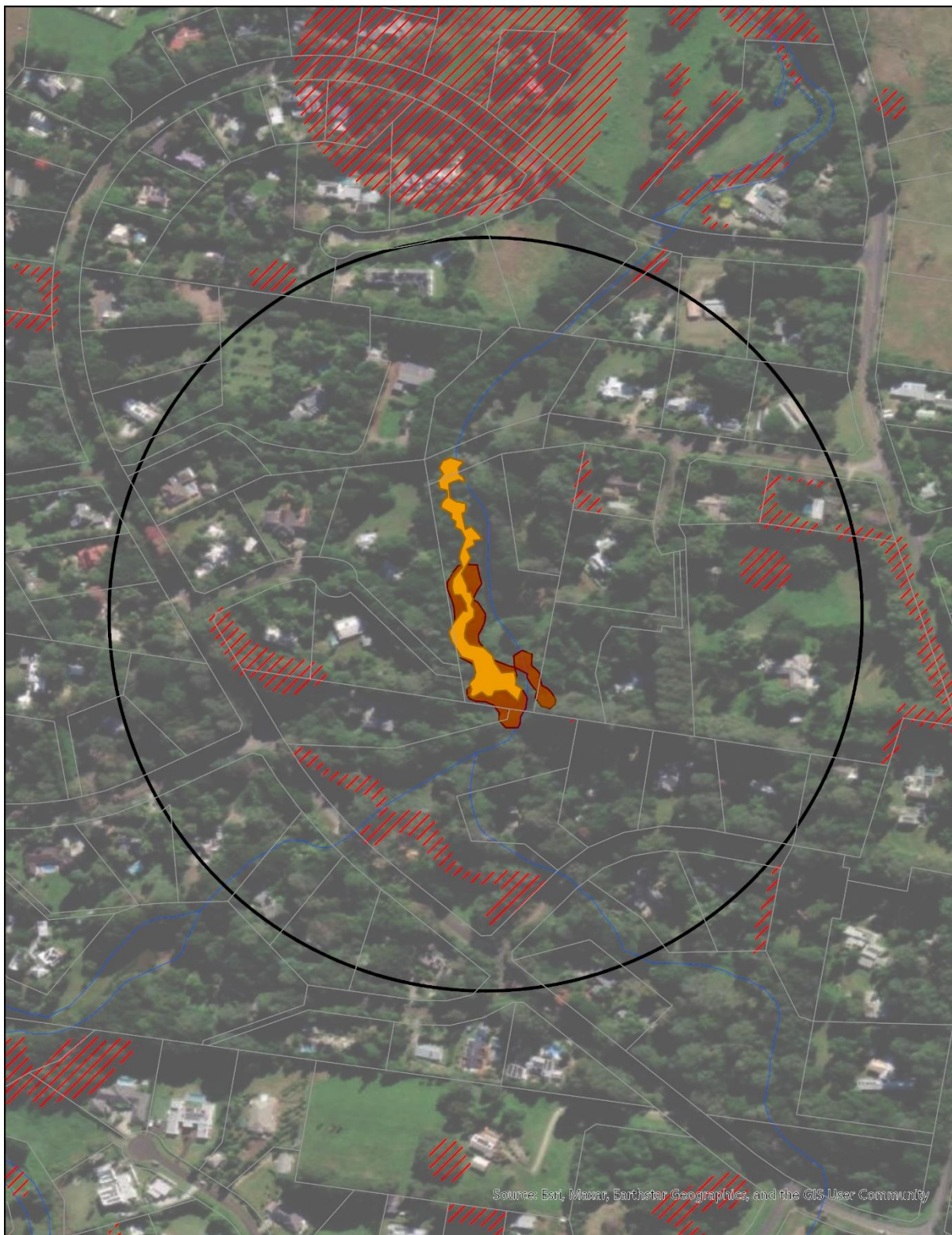
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

 **Ewingsdale, Simpson Creek Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 8.75 17.5 35 52.5 Meters



Figure 35 Ecological Values - Ewingsdale, Simpsons Creek Roost Location



- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

Ecological Values Ewingsdale, Simpson Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

0 35 70 140 210

Meters

Figure 36 Sensitive Sites - Ewingsdale, Simpsons Creek Roost Location



- 300m Buffer
- Current Flying Fox Roost Extent
- ★ Child Care Centre
- ★ Showground
- NPWS Estate
- Historic Flying Fox Roost Extent
- ★ School

Sensitive Sites Ewingsdale, Simpson Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

0 35 70 140 210
Meters

N

Figure 37 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 38). 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 39).

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 40). This project was undertaken between 2008 and 2010 to restore flying-fox habitat along Stony Creek.


Figure 38 Federal, Coachwood Ct Roost Location



NPWS Estate

Current Flying Fox
Roost Extent

Historic Flying Fox Roost
Extent

 **Federal, Coachwood Court Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 8.5 17 34 51 Meters

N

Figure 39 Ecological Values - Federal, Coachwood Ct Roost Location

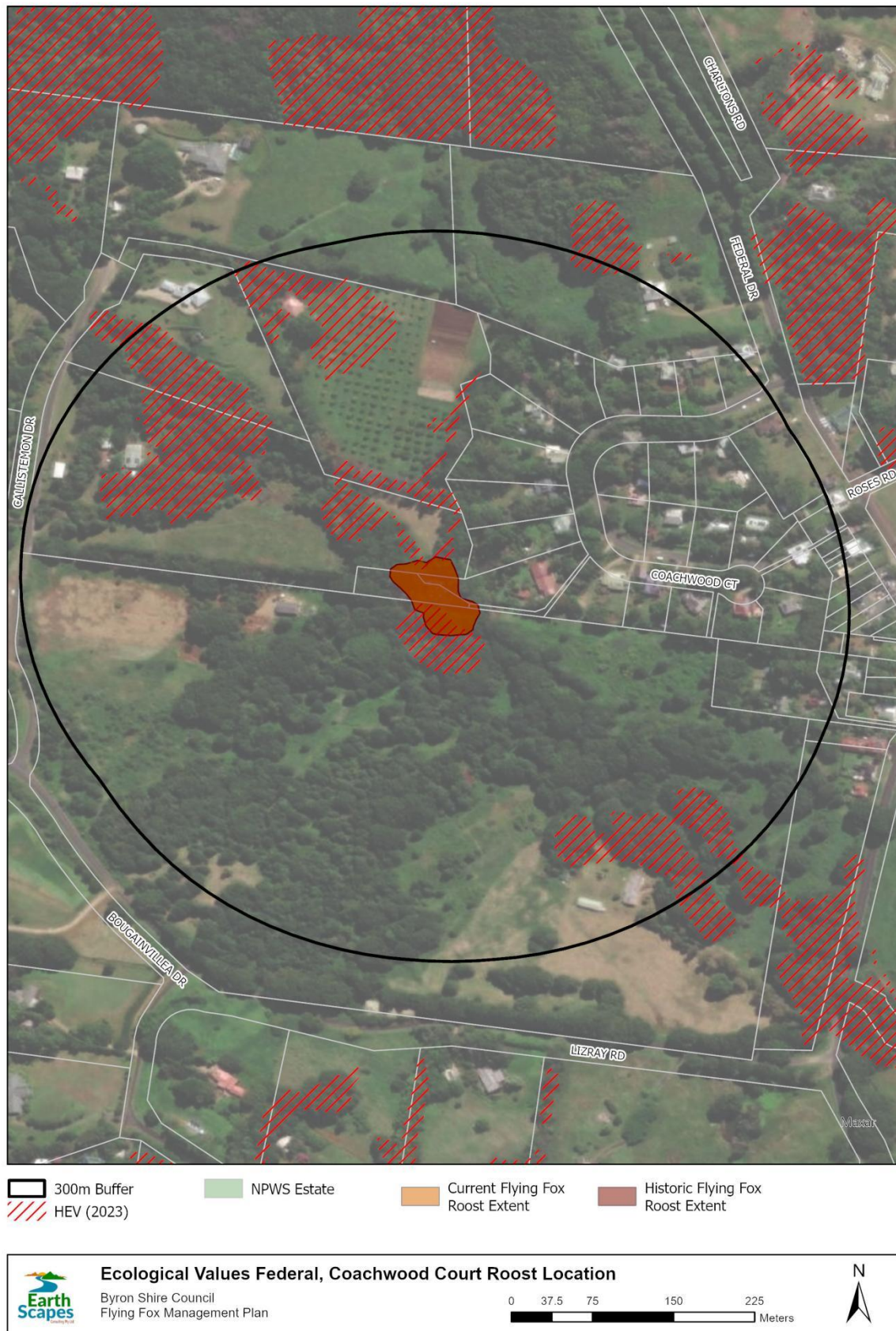
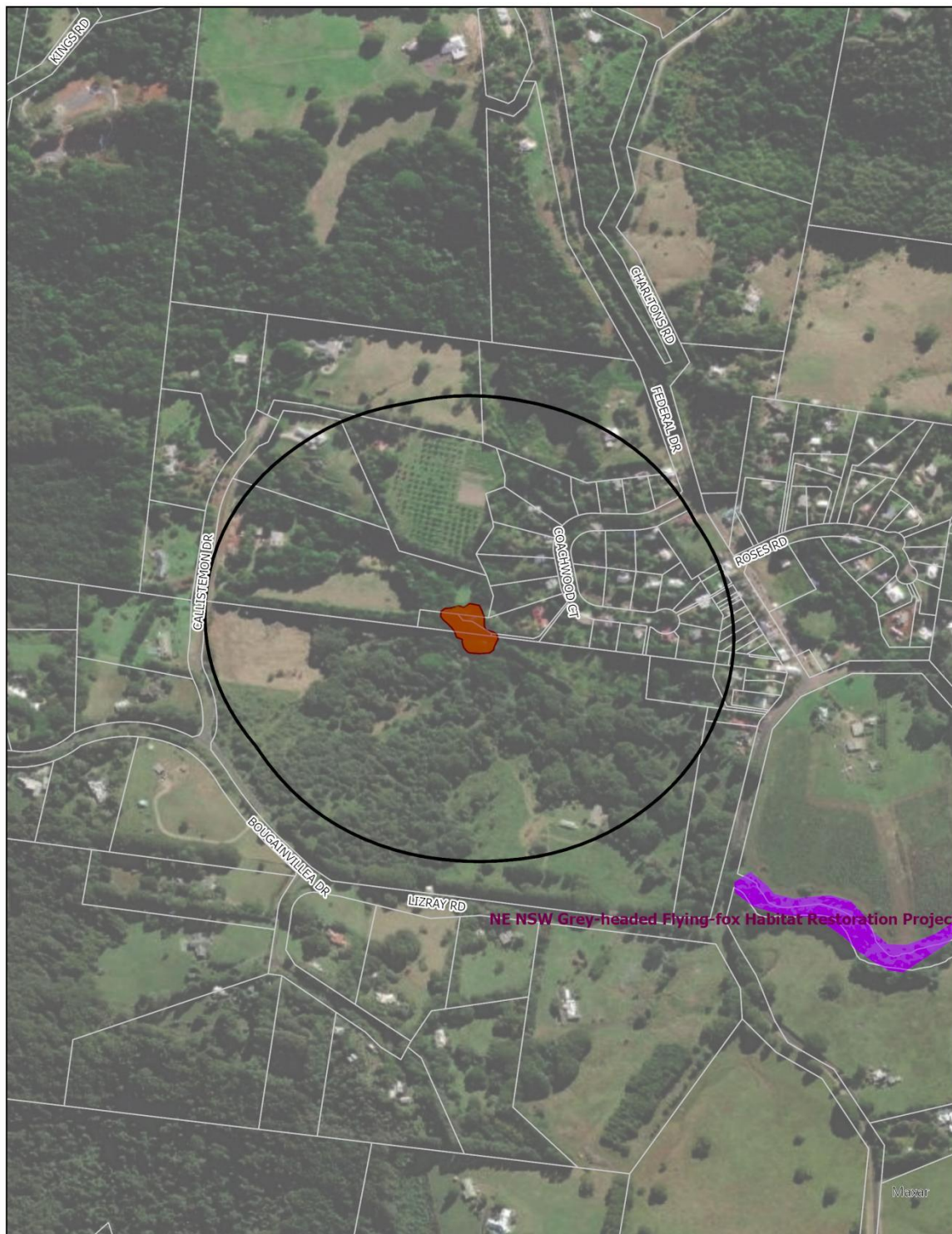


Figure 40 Habitat Restoration Sites - Federal, Coachwood Ct Roost Location



- 300m Buffer
- NPWS Estate
- Historic Flying Fox Roost Extent
- Habitat Restoration Site

Habitat Restoration Federal, Coachwood Court Roost Location
Byron Shire Council
Flying Fox Management Plan

0 62.5 125 250 375
Meters

N

2.13 Mullumbimby, Garden Ave

Site Description

The Garden Avenue roost site in the Mullumbimby township is in a residential area (Figure 41). 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.
2. 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.
3. 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.

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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 42):

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 43):

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 44). Additional work is planned by Council on the western side of the river.

Figure 41 Mullumbimby, Garden Ave Roost Site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

NPWS Estate

Current Flying Fox Roost Extent

Historic Flying Fox Roost Extent

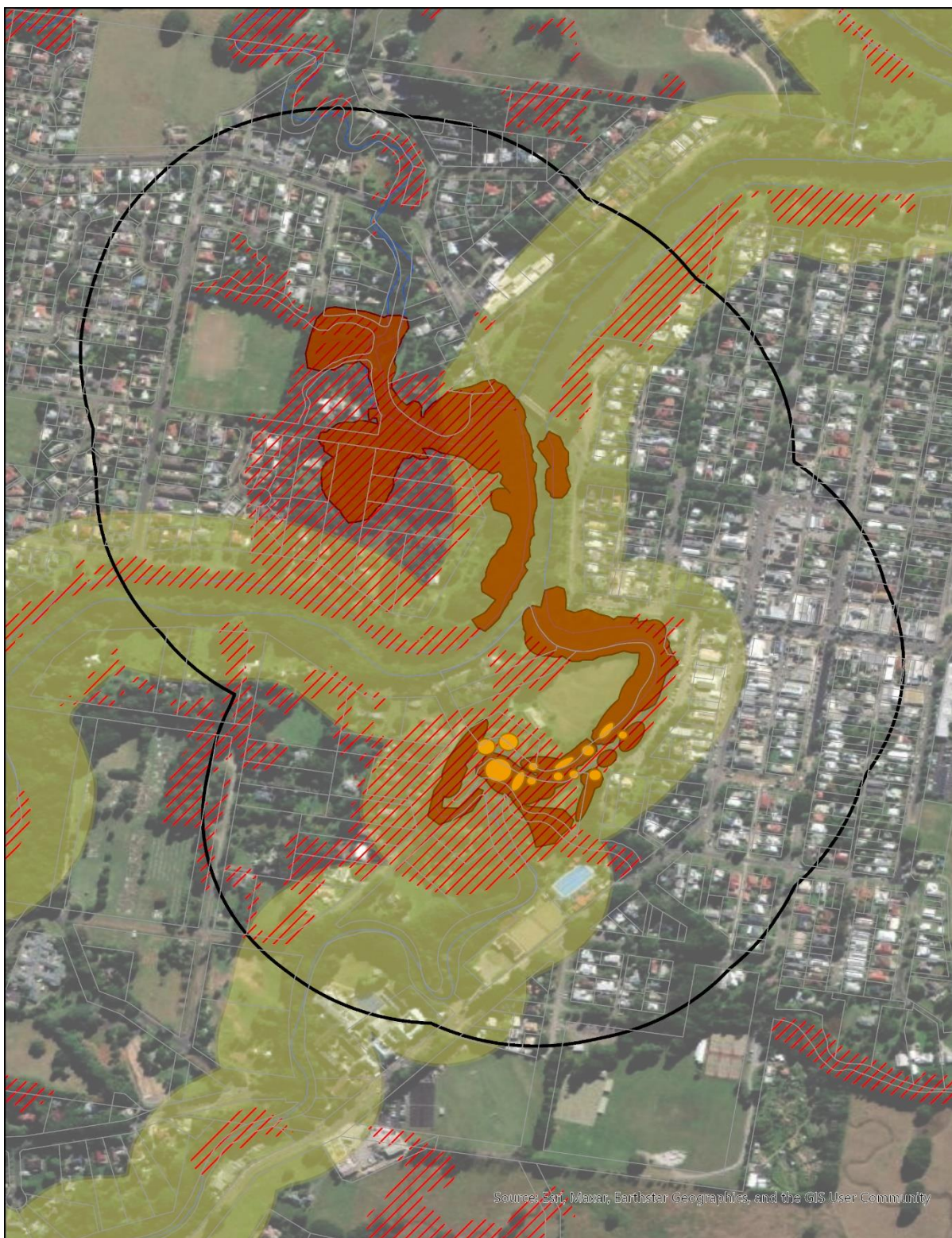


Mullumbimby, Garden Avenue Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 42 Ecological Values - Mullumbimby, Garden Ave Roost Site



- 300m Buffer
- Wildlife Corridor
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)

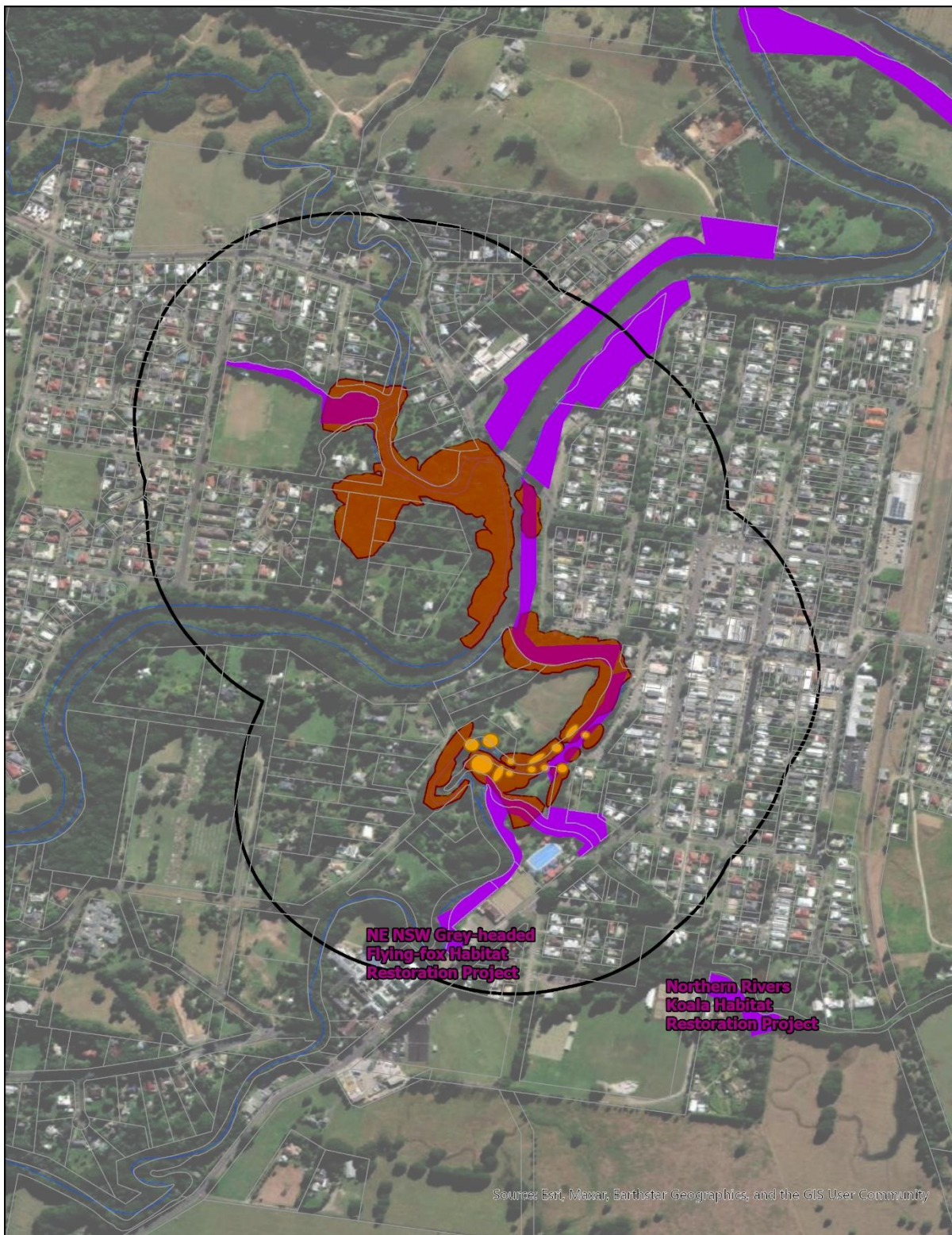
Ecological Values Mullumbimby, Garden Avenue Roost Location
Byron Shire Council
Flying Fox Management Plan

0 65 130 260 390
Meters

Figure 43 Sensitive Sites - Mullumbimby, Garden Ave Roost Site



Figure 44 Habitat Restoration Sites - Mullumbimby, Garden Ave Roost Site



Habitat Restoration Mullumbimby, Garden Avenue Roost Location

Byron Shire Council
Flying Fox Management Plan

0 75 150 300 450 Meters

2.14 Mullumbimby Showground

Site Description

The roost site is located at Mullumbimby Showground on the western edge of Mullumbimby (Figure 45). 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 46).

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

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

(*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.

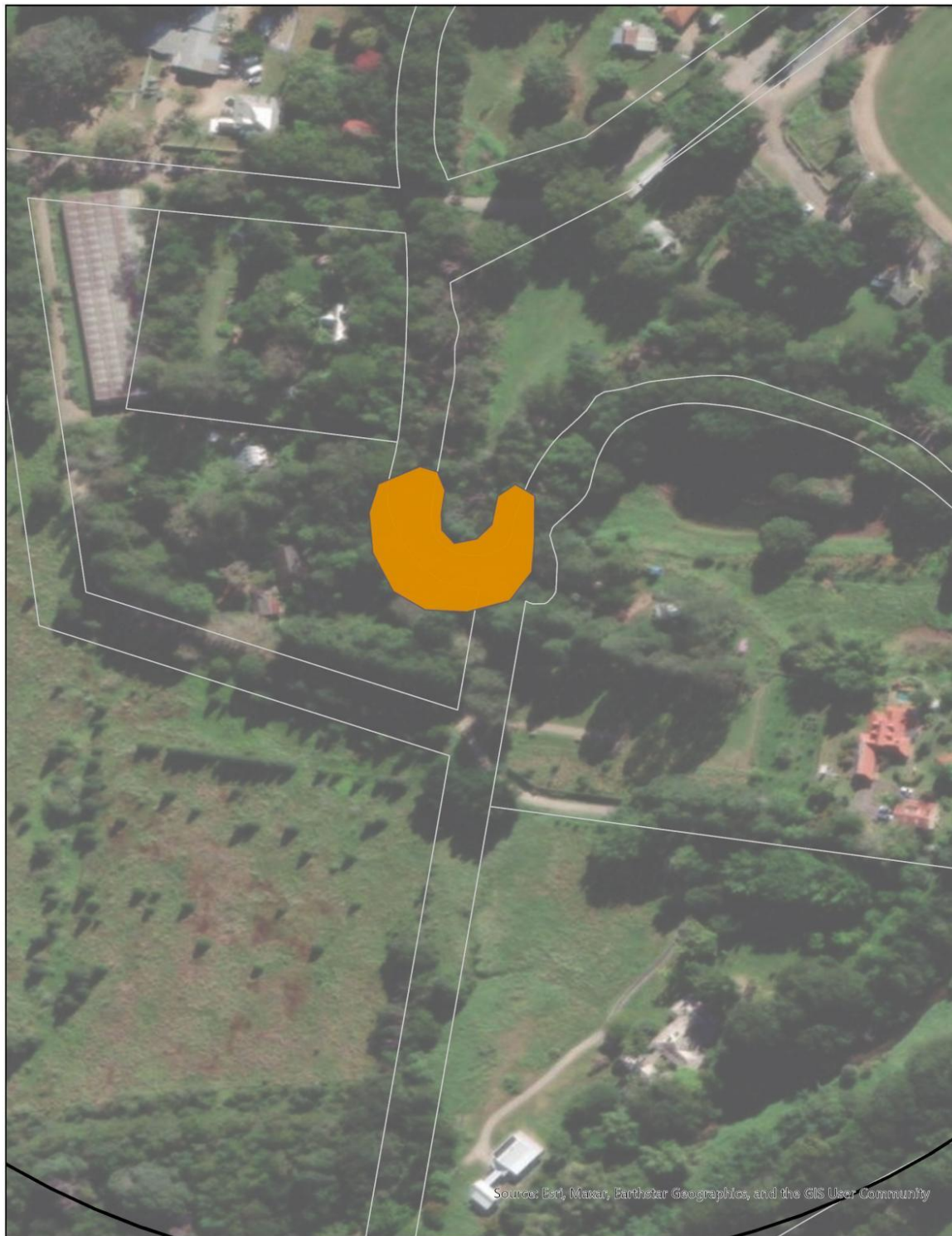
Sensitive Sites

The roost is located at Mullumbimby Showgrounds. The showground ring is 218m from the roost (Figure 47).

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 48).


Figure 45 Mullumbimby Showground Roost Location



NPWS Estate

Current Flying Fox Roost Extent

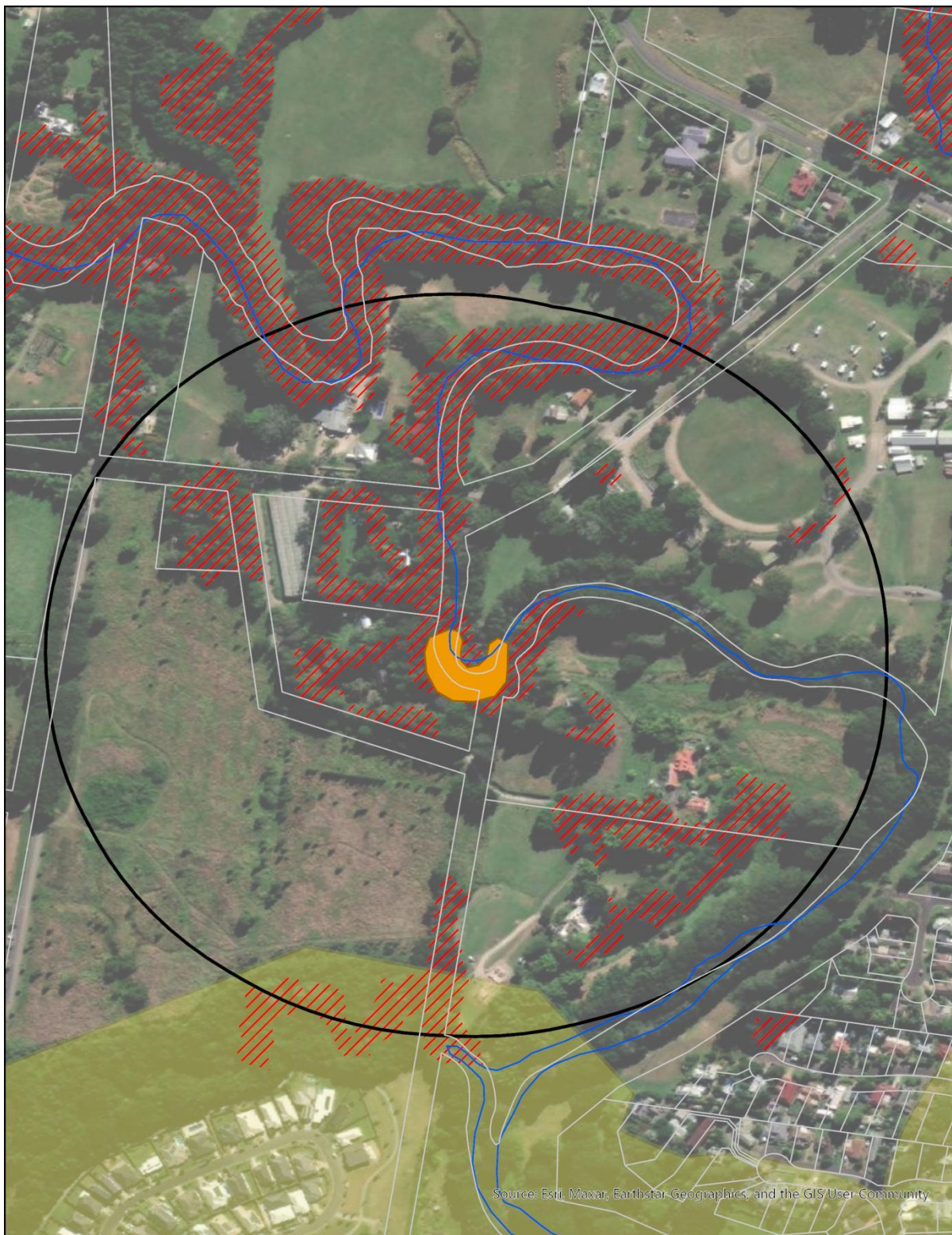
Historic Flying Fox Roost Extent

 **Mullumbimby Showground Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 19.5 39 78 117 Meters

N

Figure 46 Ecological Values - Mullumbimby Showground Roost Location



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

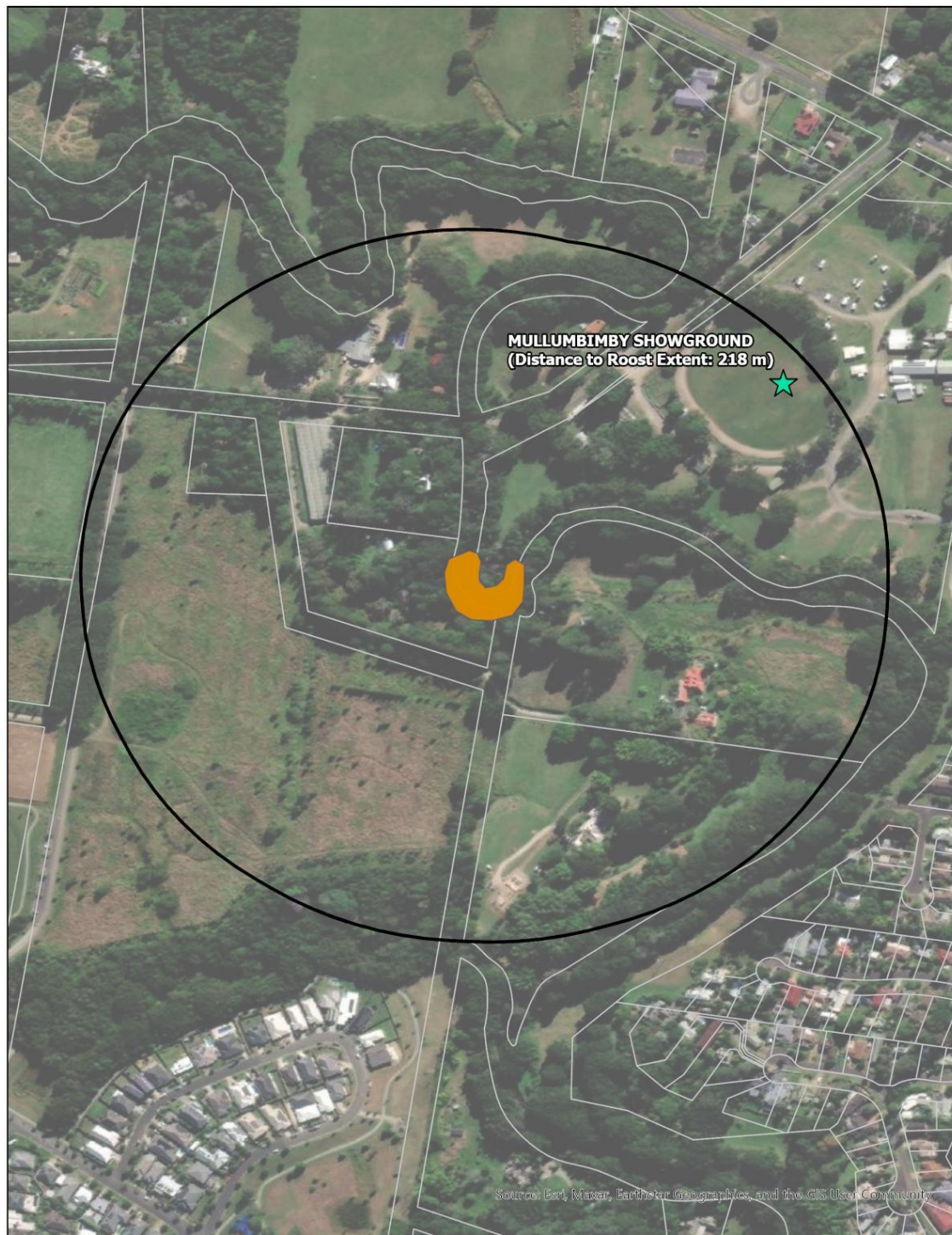
- 300m Buffer
- HEV (2023)
- Wildlife Corridor
- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent

Ecological Values Mullumbimby Showground Roost Location

Byron Shire Council
Flying Fox Management Plan

0 38.75 77.5 155 232.5
Meters

Figure 47 Sensitive Sites - Mullumbimby Showground Roost Location



300m Buffer	Current Flying Fox Roost Extent	Child Care Centre	School
NPWS Estate			Showground

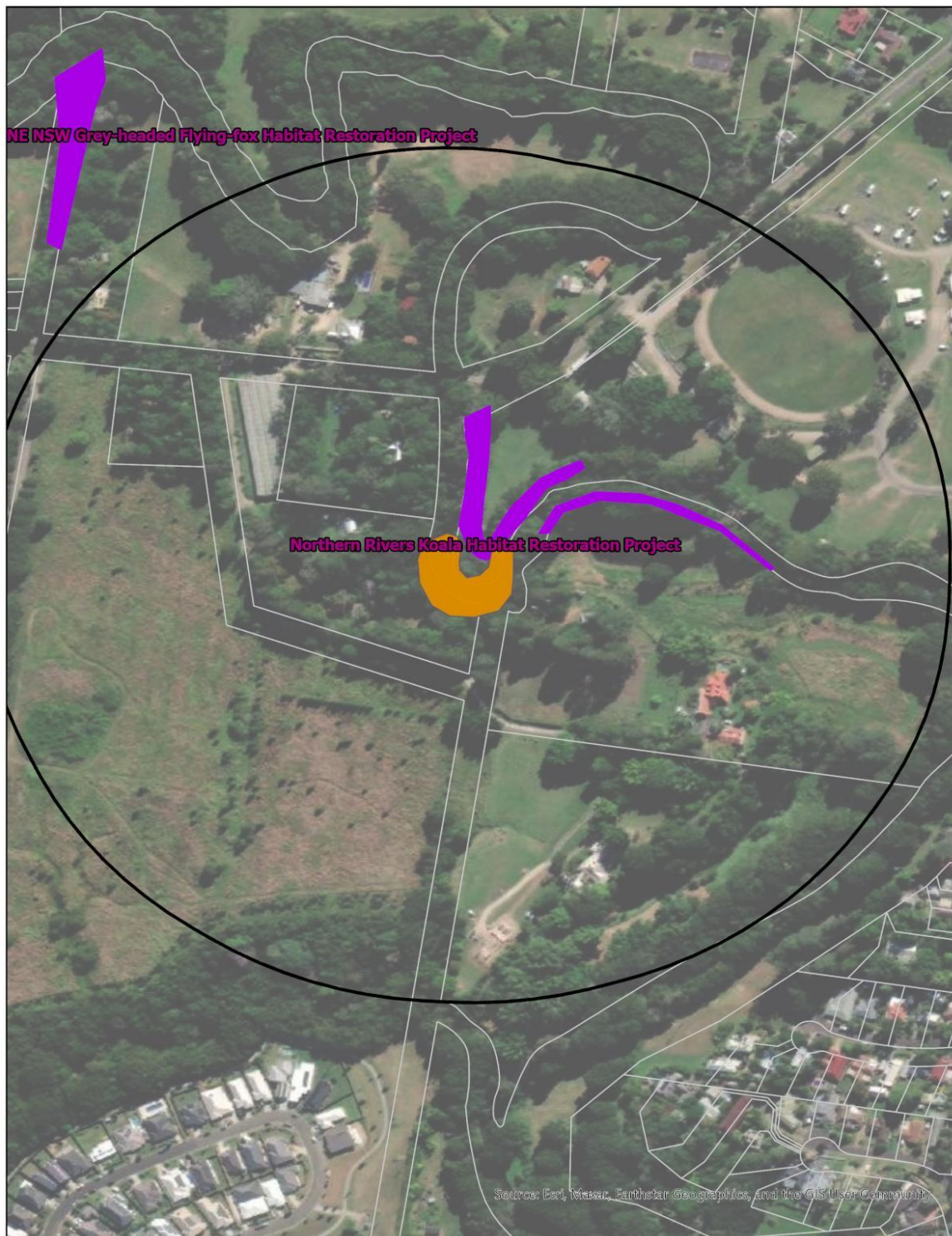
Sensitive Sites Mullumbimby Showground Roost Location

Byron Shire Council
Flying Fox Management Plan

0 40.5 81 162 243 Meters

N

Figure 48 Habitat Restoration Sites - Mullumbimby Showground Roost Location



- 300m Buffer
- NPWS Estate
- Current Flying Fox Roost Extent
- Habitat Restoration Site

Habitat Restoration Mullumbimby Showground Roost Location

Byron Shire Council
Flying Fox Management Plan

0 33.5 67 134 201 Meters

N

2.15 Myocum, The Manse Rd

Site Description

The Myocum roost site is located on Manse Road, Myocum south-east of Mullumbimby (Figure 49). 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 50). 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 51).

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 49 Myocum, The Manse Rd Roost Location



Figure 50 Ecological Values - Myocum, The Manse Rd Roost Location



- 300m Buffer
- Wildlife Corridor
- HEV (2023)
- NPWS Estate
- Historic Flying Fox Roost Extent

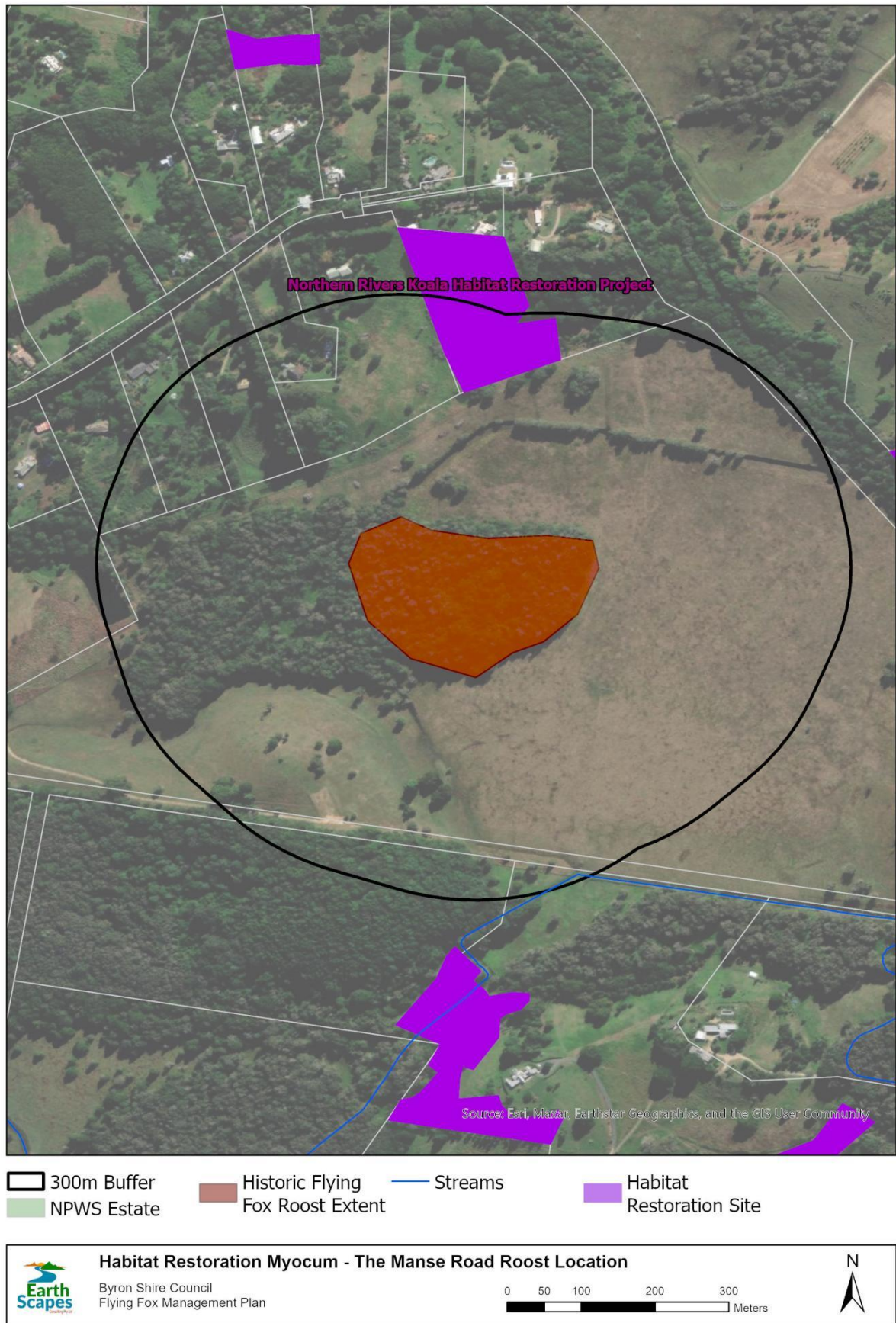


Ecological Values Myocum - The Manse Road Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 51 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 52). 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 53). 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 *Guioia* (*Guioia semiglauc*). 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 52 Nashua, Taylors Rd Roost Location



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent



Nashua, Taylors Road Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 53 Ecological Values - Nashua, Taylors Rd Roost Location



-  300m Buffer
-  Wildlife Corridor
-  Current Flying Fox Roost Extent
-  Historic Flying Fox Roost Extent
-  HEV (2023)
-  NPWS Estate



Ecological Values Nashua, Taylors Road Roost Location

Byron Shire Council
Flying Fox Management Plan



2.17 Ocean Shores, Brunswick River

Site Description

The Ocean Shores roost site is located in Brunswick Heads Nature Reserve in Ocean Shores (Figure 54). 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 55).

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 56):

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 57). 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 54 Ocean Shores, Brunswick River Roost Location



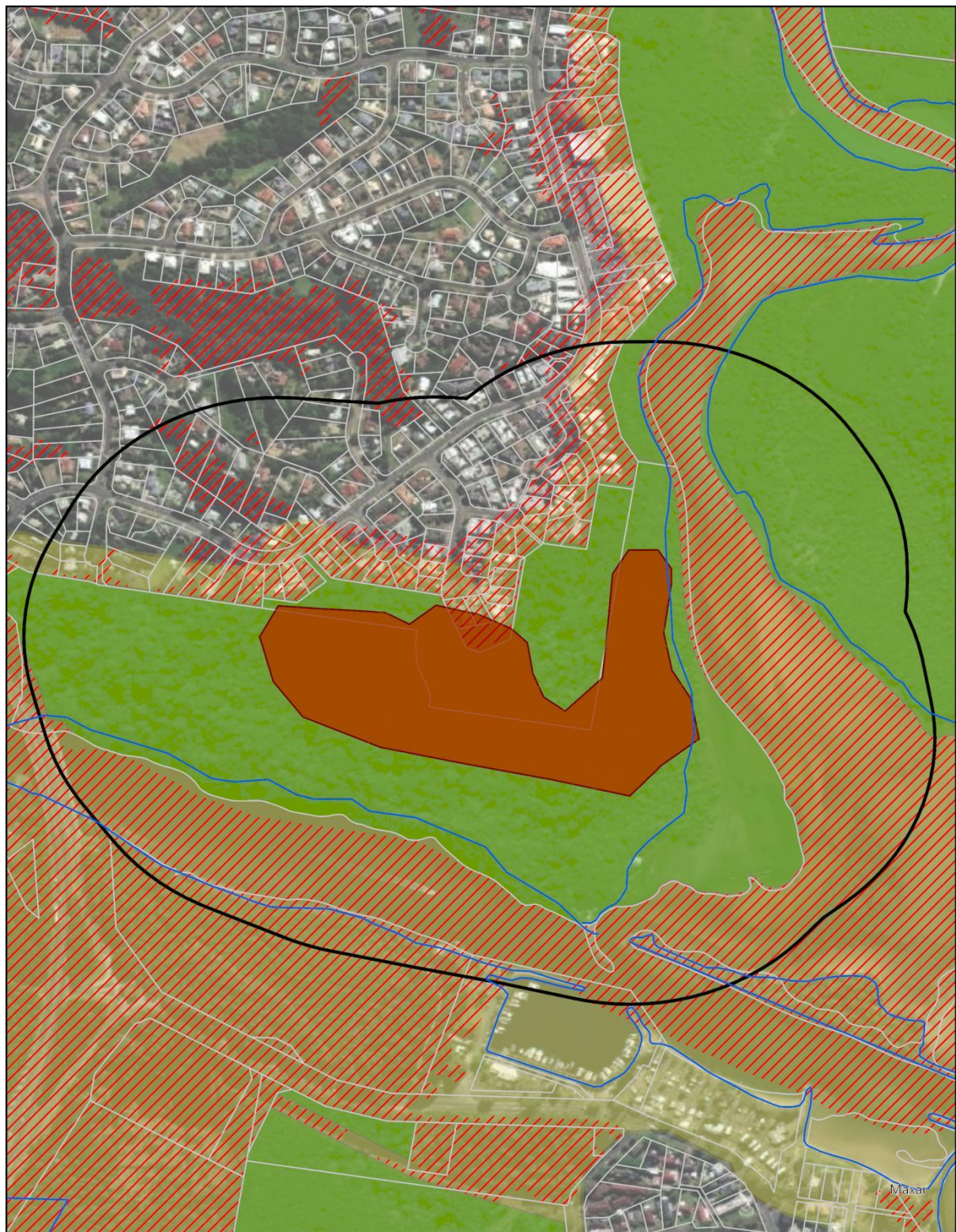
NPWS Estate Current Flying Fox Roost Extent Historic Flying Fox Roost Extent

Ocean Shores Roost Location
Byron Shire Council
Flying Fox Management Plan

0 36 72 144 216 Meters

N

Figure 55 Ecological Values - Ocean Shores, Brunswick River Roost Location



- 300m Buffer
- Wildlife Corridor
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate



Ecological Values Ocean Shores Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 56 Sensitive Sites - Ocean Shores, Brunswick River Roost Location

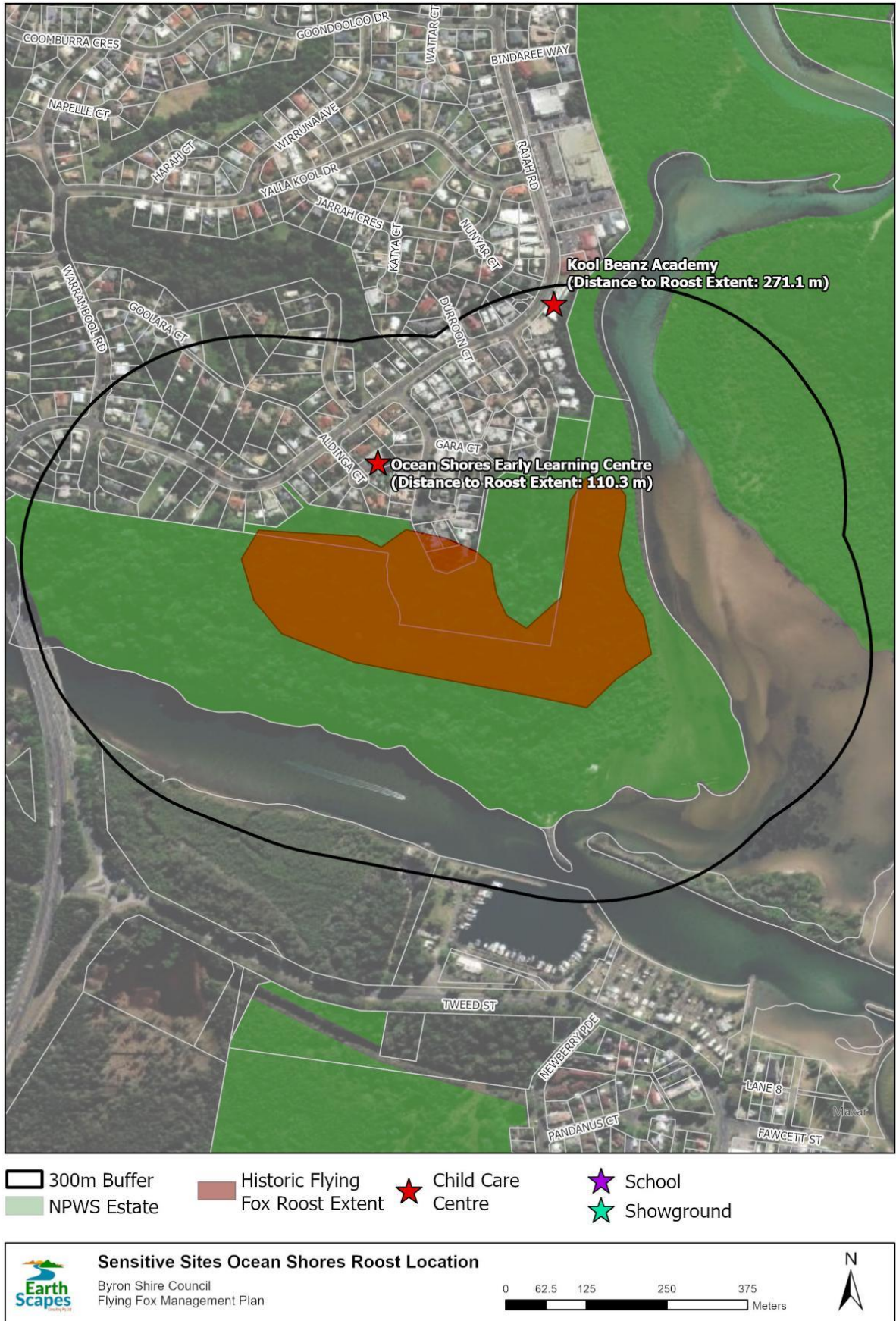
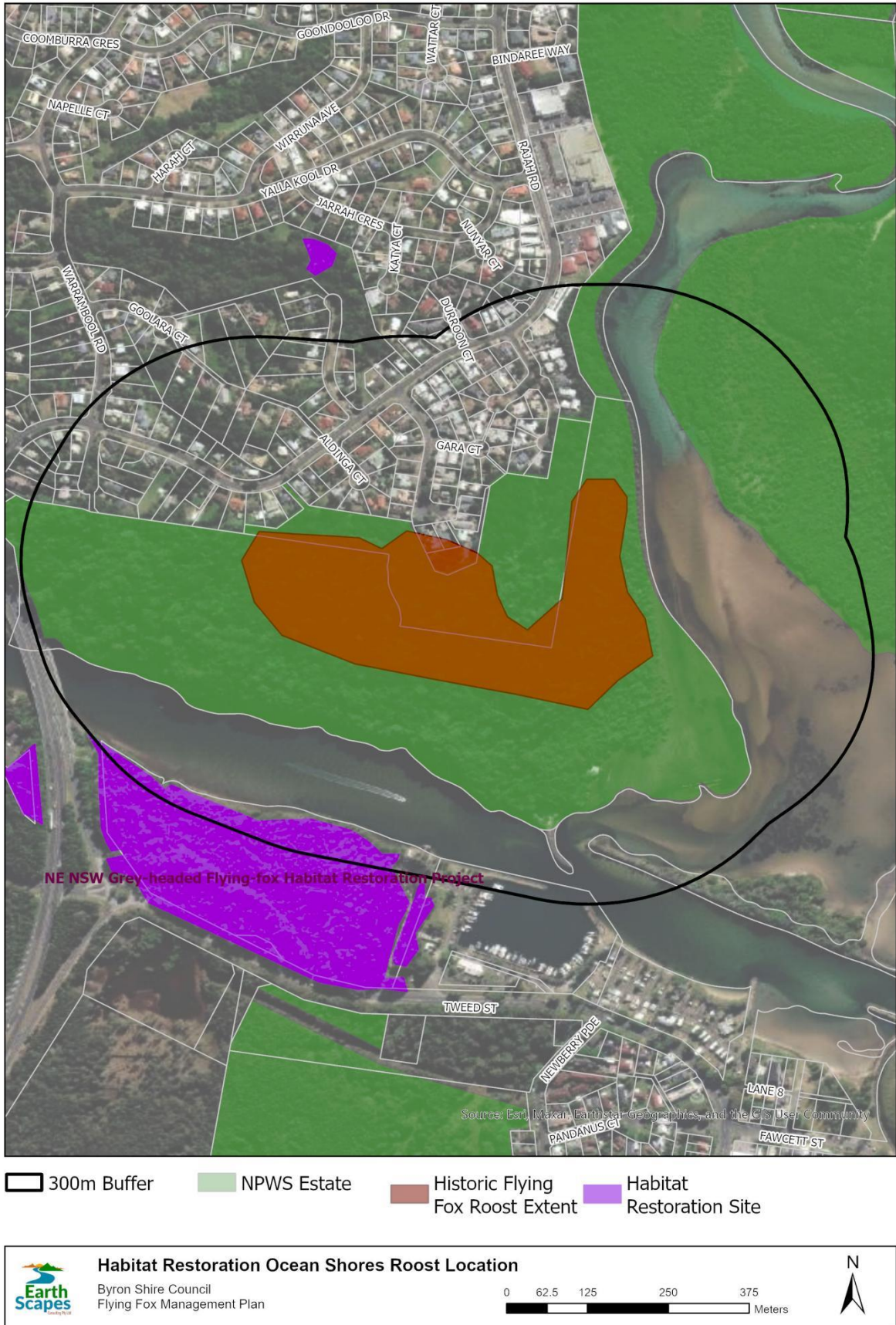


Figure 57 Habitat Restoration Sites - Ocean Shores, Brunswick River Roost Location



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 58). 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 59).

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.

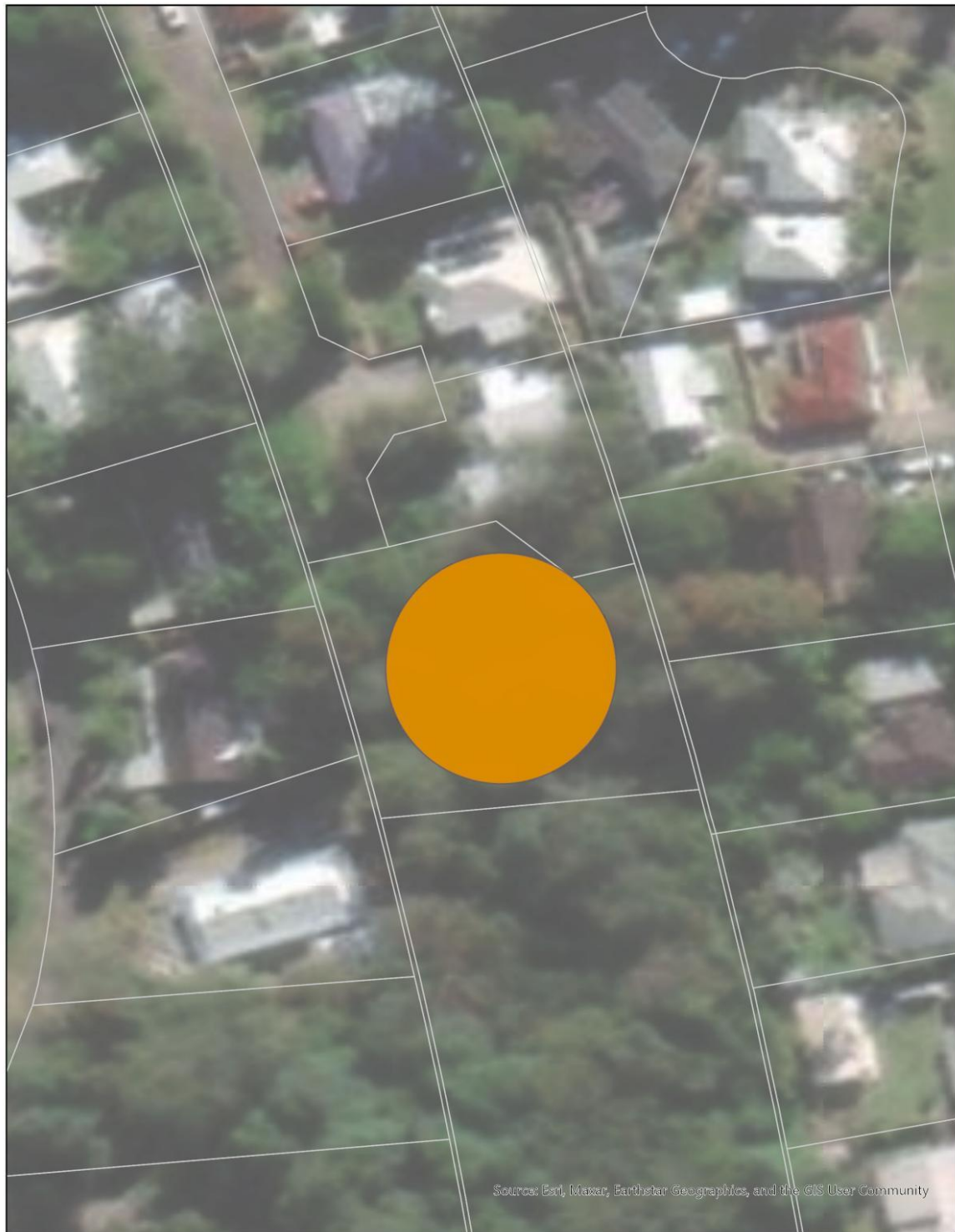
Sensitive Sites

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 58 Ocean Shores, Jardine Ct Roost Location



NPWS Estate Current Flying Fox Roost Extent Historic Flying Fox Roost Extent

 **Ocean Shores, Jardine Court Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 6 12 24 36 Meters

N

Figure 59 Ecological Values - Ocean Shores, Jardine Ct Roost Location



- 300m Buffer
- Wildlife Corridor
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate

Ecological Values Ocean Shores, Jardine Court Roost Location

Byron Shire Council
Flying Fox Management Plan

0 36 72 144 216
Meters

2. 19 Ocean Shores, Marshalls Creek

SITE DESCRIPTION

The Ocean Shores roost site is located in Marshalls Creek Nature Reserve in Ocean Shores (Figure 60). 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 61).

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.

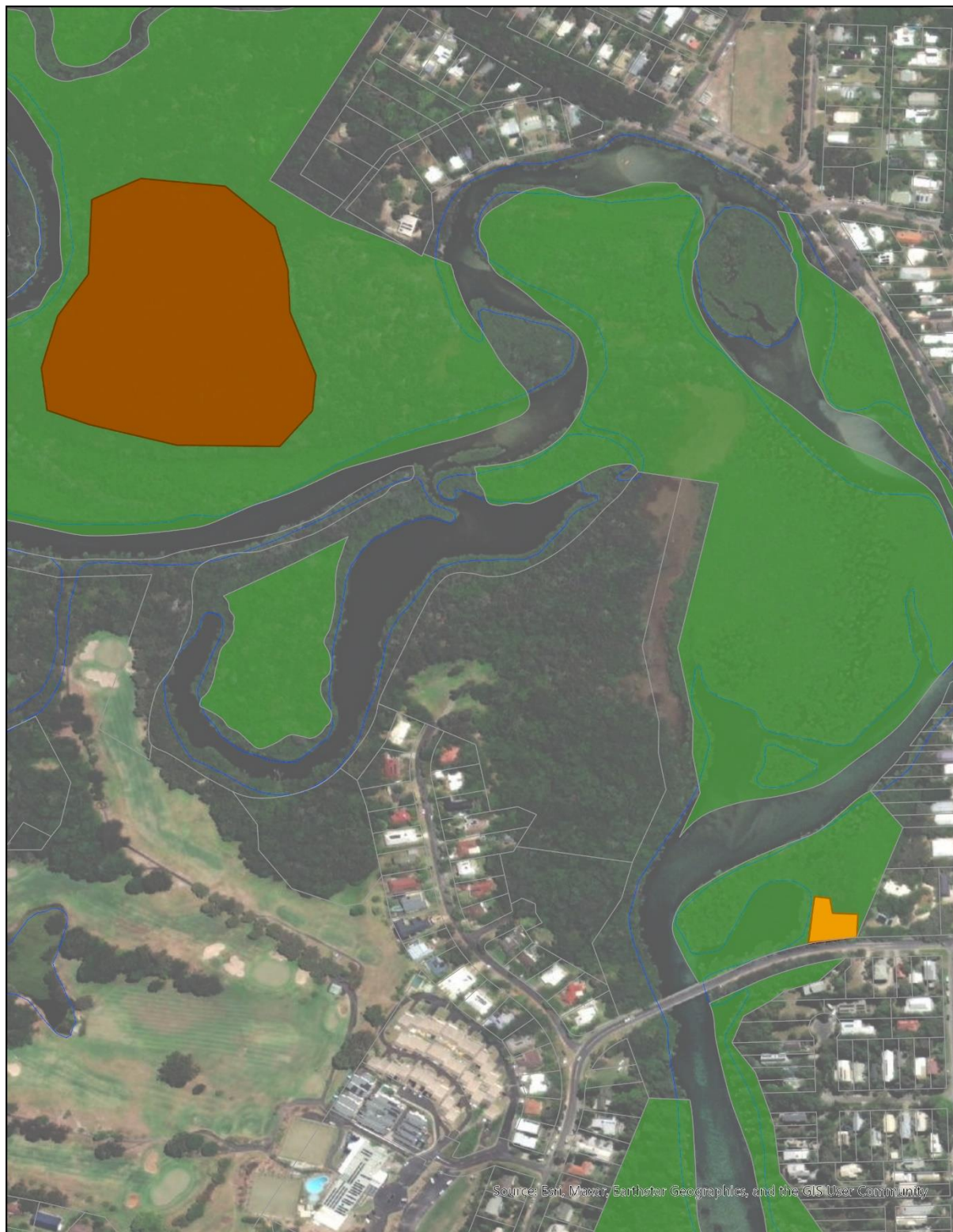
Sensitive Sites

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 62).

Figure 60 Ocean Shores, Marshalls Creek Roost Location



- NPWS Estate
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent



Ocean Shores, Marshalls Creek Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 61 Ecological Values - Ocean Shores, Marshalls Creek Roost Location



- 300m Buffer
- Wildlife Corridor
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate



Ecological Values Ocean Shores, Marshalls Creek Roost Location

Byron Shire Council
Flying Fox Management Plan

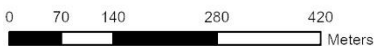
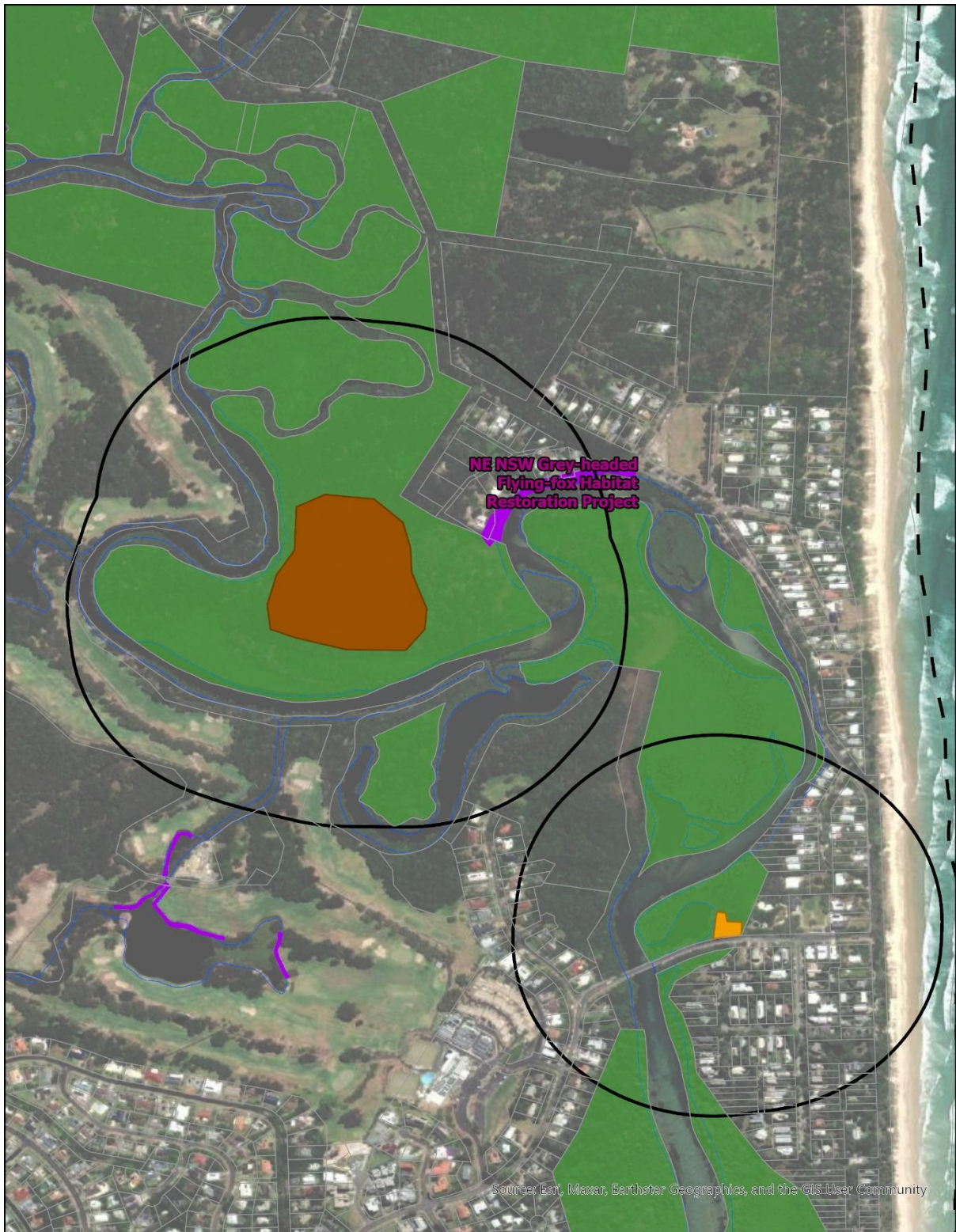


Figure 62 Habitat Restoration Sites - Ocean Shores, Marshalls Creek Roost Location



Sources: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 300m Buffer
- Current Flying Fox Roost Extent
- Historic Flying Fox Roost Extent
- Habitat Restoration Site
- NPWS Estate



Habitat Restoration Ocean Shores, Marshalls Creek Roost Location

Byron Shire Council
Flying Fox Management Plan



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 63). 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 64).

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 65):

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 66).

Figure 63 Suffolk Park, Beech Dr Roost Location



NPWS Estate Current Flying Fox Roost Extent Historic Flying Fox Roost Extent

 **Suffolk Park, Beech Drive Roost Location**
Byron Shire Council
Flying Fox Management Plan

0 13.5 27 54 81 Meters


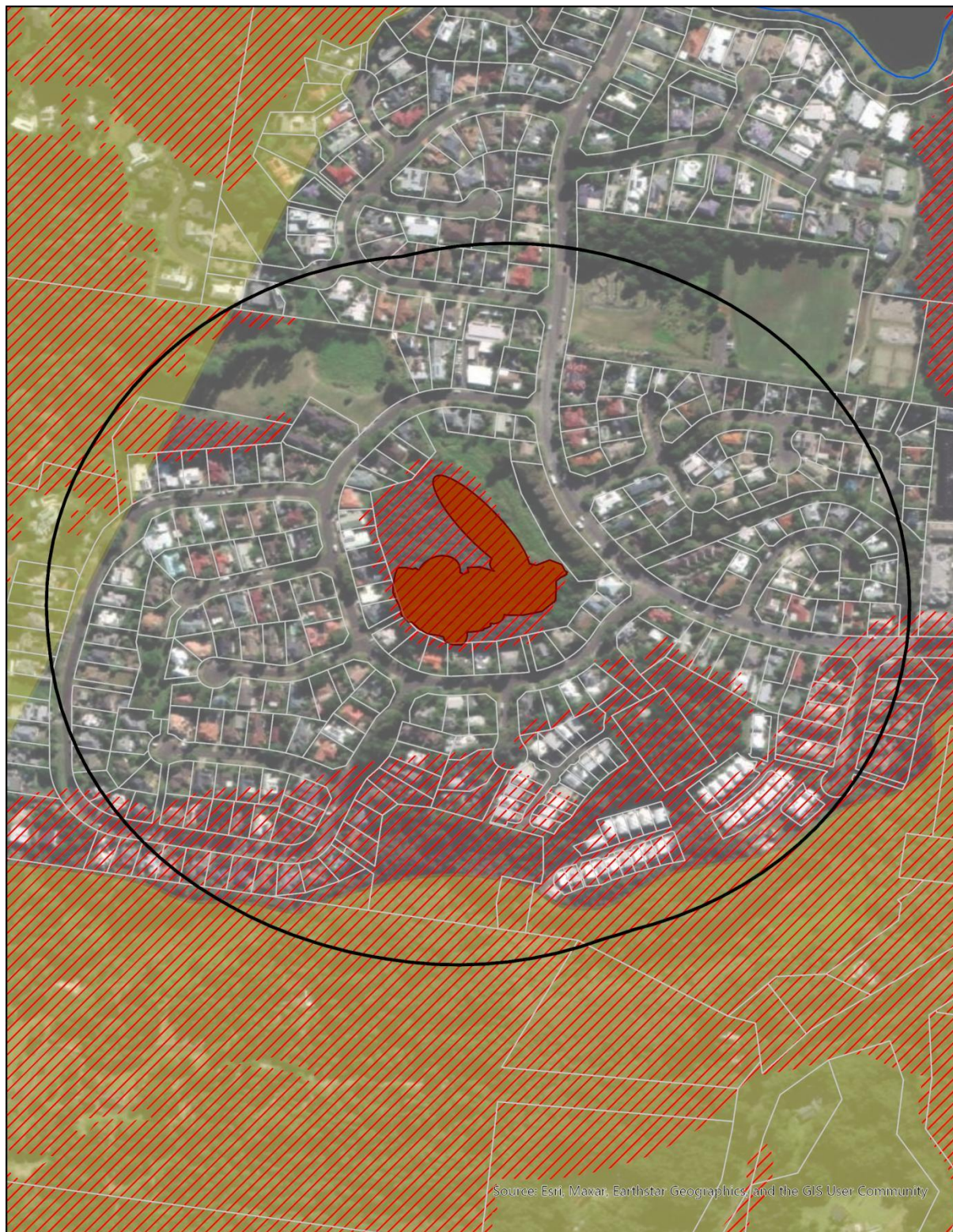


Figure 64 Ecological Values - Suffolk Park, Beech Dr Roost Location



- 300m Buffer
- Wildlife Corridor
- Historic Flying Fox Roost Extent
- HEV (2023)
- NPWS Estate



Ecological Values Suffolk Park, Beech Drive Roost Location

Byron Shire Council
Flying Fox Management Plan



Figure 65 Sensitive Sites - Suffolk Park, Beech Dr Roost Location



- 300m Buffer
- Historic Flying Fox Roost Extent
- Child Care Centre
- Showground
- NPWS Estate
- School

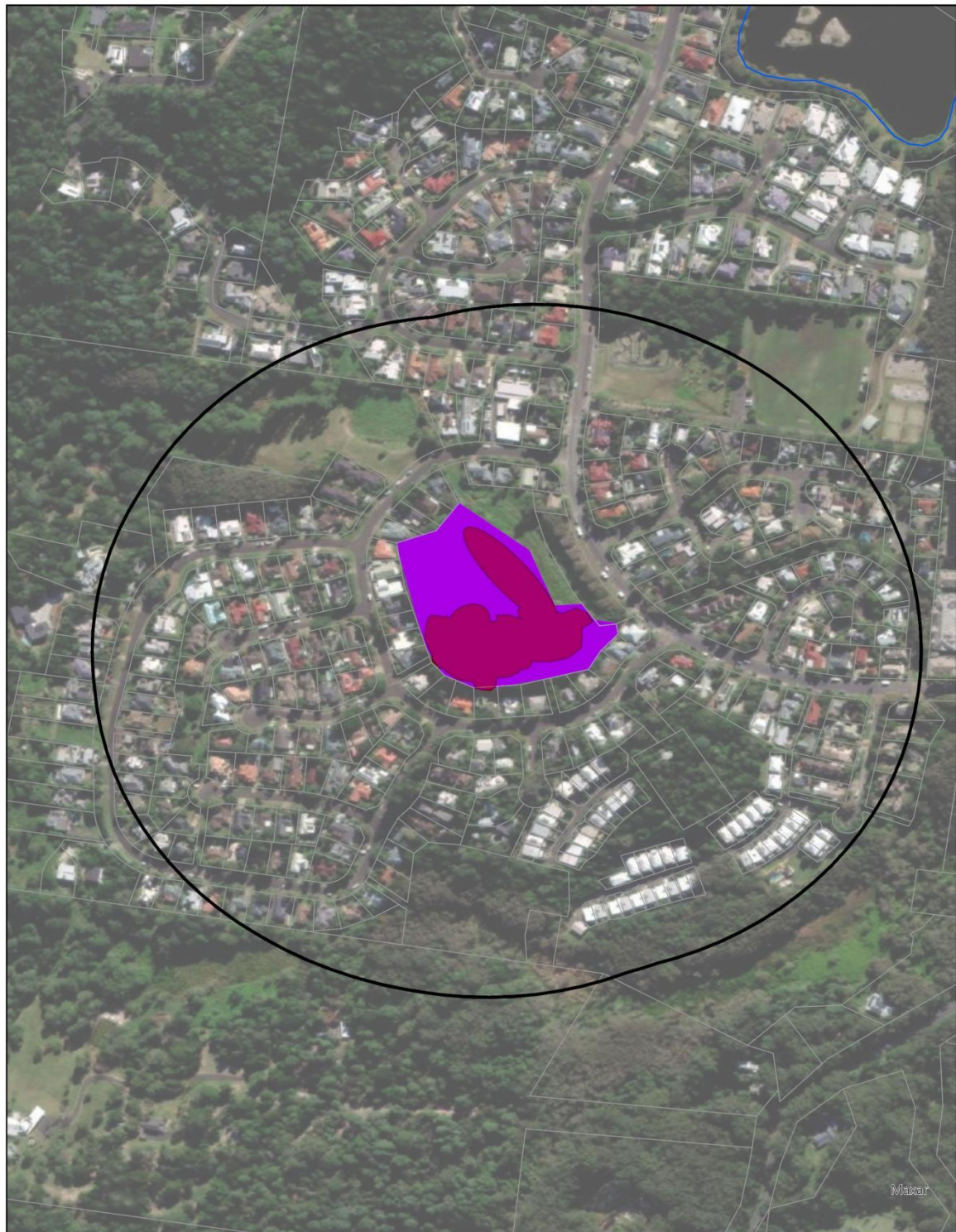
Sensitive Sites Suffolk Park, Beech Drive Roost Location

Byron Shire Council
Flying Fox Management Plan

0 48.5 97 194 291
Meters

N
↑

Figure 66 Restoration Sites - Suffolk Park, Beech Dr Roost Location



NPWS Estate Historic Flying Fox Roost Extent Current Flying Fox Roost Extent Habitat Restoration Site

Habitat Restoration Suffolk Park, Beech Drive Roost Location
Byron Shire Council
Flying Fox Management Plan

0 40.5 81 162 243 Meters

N

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

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

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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.
P	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).

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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.

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

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.
C	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).

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

J	JAMBA	<p>Japan-Australia Migratory Bird Agreement:</p> <p>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).</p>
K	ROKAMBA	<p>Republic of Korea-Australia Migratory Bird Agreement:</p> <p>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).</p>
KTP	Key Threatening Process	<p>Refers to a key process that threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p>
V	Vulnerable	<p>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).</p>

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Flying-fox Camp	Nationally Important GHFF Roost	Flora				Fauna			
		Scientific Name	Common Name	NSW Status	Comm Status	Scientific Name	Common Name	NSW Status	Comm Status
Bangalow, Byron Creek	N	<i>Arthraxon hispidus</i>	Hairy Jointgrass	V	V	<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
		<i>Floydia praealta</i>	Ball Nut	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Isoglossa eranthemoides</i>	Isoglossa	E1	E	<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
		<i>Macadamia integrifolia</i>	Macadamia Nut		V	<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Mixophyes iteratus</i>	Giant Barred Frog	E	E
		<i>Ochrosia moorei</i>	Southern Ochrosia	E1	E				

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE				
		<i>Syzygium moorei</i>	Durobby	V	V				
		<i>Tinospora tinosporoides</i>	Arrow-head Vine	V					
Bangalow, Paddys Creek	N	<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE	<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Booyong, Booyong Nature Reserve	N	<i>Acalypha eremorum</i>	Acalypha	E1		<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V,P	
		<i>Desmodium acanthocladum</i>	Thorny Pea	V	V	<i>Myotis macropus</i>	Southern Myotis	V,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

		<i>Floydia praealta</i>	Ball Nut	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Isoglossa eranthemoides</i>	Isoglossa	E1	E	<i>Phyllodes imperialis southern subspecies</i>	Southern Pink Underwing Moth	E1	E
		<i>Phyllanthus microcladus</i>	Brush Sauropus	E1		<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
		<i>Tinospora tinosporoides</i>	Arrow-head Vine	V		<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Byron Bay, Butler St	N	<i>Cryptocarya foetida</i>	Stinking Cryptocarya	V	V	<i>Amauornis moluccana</i>	Pale-vented Bush-hen	V,P	
						<i>Burhinus grallarius</i>	Bush Stone-curlew	E1,P	
						<i>Caretta caretta</i>	Loggerhead Turtle	E1,P	E
						<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E
						<i>Esacus magnirostris</i>	Beach Stone-curlew	E4A,P	
						<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
						<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pseudomys gracilicaudatus</i>	Eastern Chestnut Mouse	V,P	
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
						<i>Thersites mitchellae</i>	Mitchell's Rainforest Snail	E1	CE
						<i>Tyto novaehollandiae</i>	Masked Owl	V,P,3	
	N	<i>Allocasuarina defungens</i>	Dwarf Heath Casuarina	E1	E	<i>Amauornis moluccana</i>	Pale-vented Bush-hen	V,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

Byron bay, Middleton St		<i>Allocasuarina thalassoscopica</i>			E	<i>Burhinus grallarius</i>	Bush Stone-curlew	E1,P	
		<i>Cryptocarya foetida</i>	Stinking Cryptocarya	V	V	<i>Crinia tinnula</i>	Wallum Froglet	V,P	
						<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E
						<i>Haematopus longirostris</i>	Pied Oystercatcher	E1,P	
						<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V,P	
						<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	
						<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	V,P	
						<i>Myotis macropus</i>	Southern Myotis	V,P	
						<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Thersites mitchellae</i>	Mitchell's Rainforest Snail	E1	CE
						<i>Tyto tenebricosa</i>	Sooty Owl	V,P,3	
Clunes, Booyong Rd	N					<i>Phascolarctos cinereus</i>	Koala	E1,P	E
Coopers Shoot, Picadilly Hill Rd	N	<i>Tinospora tinosporoides</i>	Arrow-head Vine	V		<i>Carterornis leucotis</i>	White-eared Monarch	V,P	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Eureka, Eureka Rd	N	<i>Floydia praealta</i>	Ball Nut	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

		<i>Isoglossa eranthemoides</i>	Isoglossa	E1	E	<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	
Ewingsdale , Citriadora Drive	N					<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V,P	
						<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	
						<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	V,P	
						<i>Myotis macropus</i>	Southern Myotis	V,P	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
							<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P
Ewingsdale , Plantation Drive	N	<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Amaurornis moluccana</i>	Pale-vented Bush-hen	V,P	
						<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Ewingsdale , Simpson creek	N	<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Amaurornis moluccana</i>	Pale-vented Bush-hen	V,P	
						<i>Carterornis leucotis</i>	White-eared Monarch	V,P	
						<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1,P	
						<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V

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						<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Federal, Coachwood d Court	N					<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
Mullumbimby, Garden Ave	N	<i>Acacia bakeri</i>	Marblewood	V		<i>Hirundapus caudacutus</i>	White-throated Needletail	P	V,C,J,K
		<i>Floydia praealta</i>	Ball Nut	V	V	<i>Ixobrychus flavicollis</i>	Black Bittern	V,P	
		<i>Hicksbeachia pinnatifolia</i>	Red Boppel Nut	V	V	<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	

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		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Myotis macropus</i>	Southern Myotis	V,P	
		<i>Phyllanthus microcladus</i>	Brush Sauropus	E1		<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE	<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	
		<i>Rhodomyrtus psidioides</i>	Native Guava	E4A	CE	<i>Petaurus norfolcensis</i>	Squirrel Glider	V,P	
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Gossia fragrantissima</i>	Sweet Myrtle	E	E	<i>Pseudomys novaehollandiae</i>	New Holland Mouse	P	V
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V,P	
Mullum showground	N	<i>Acacia bakeri</i>	Marblewood	V		<i>Hirundapus caudacutus</i>	White-throated Needletail	P	V,C,J,K
		<i>Hicksbeachia pinnatifolia</i>	Red Boppel Nut	V	V	<i>Davidsonia jerseyana</i>	Davidson's Plum	E	E
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Ixobrychus flavicollis</i>	Black Bittern	V,P	
		<i>Phyllanthus microcladus</i>	Brush Sauropus	E1		<i>Petaurus norfolcensis</i>	Squirrel Glider	V,P	
		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Rhodomyrtus psidioides</i>	Native Guava	E4A	CE	<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V,P	
						<i>Tyto novaehollandiae</i>	Masked Owl	V,P,3	
	N	<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E

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Myocum, The Manse Rd		<i>Syzygium hodgkinsoniae</i>	Red Lilly Pilly	V	V				
		<i>Tinospora tinosporoides</i>	Arrow-head Vine	V					
Nashua, Taylor Rd	N	<i>Desmodium acanthocladum</i>	Thorny Pea	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE	<i>Pteropus poliocephalus</i>	Grey-headed flying- fox	V,P	V
Ocean Shores, Brunswick River	N	<i>Acacia bakeri</i>	Marblewood	V		<i>Amaurornis moluccana</i>	Pale-vented Bush- hen	V,P	
		<i>Acronychia littoralis</i>	Scented Acronychia	E1	E	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1,P	
		<i>Archidendron hendersonii</i>	White Lace Flower	V		<i>Haematopus longirostris</i>	Pied Oystercatcher	E1,P	
		<i>Belvisia mucronata</i>	Needle-leaf Fern	E1		<i>Haliaeetus leucogaster</i>	White-bellied Sea- Eagle	V,P	
		<i>Cryptocarya foetida</i>	Stinking Cryptocarya	V	V	<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

		<i>Endiandra floydii</i>	Crystal Creek Walnut	E1	E	<i>Myotis macropus</i>	Southern Myotis	V,P	
		<i>Endiandra hayesii</i>	Rusty Rose Walnut	V	V	<i>Numenius madagascariensis</i>	Eastern Curlew	P	CE,C,J,K
		<i>Endiandra muelleri subsp. bracteata</i>	Green-leaved Rose Walnut	E1		<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	
		<i>Grevillea hilliana</i>	White Yiel Yiel	E1		<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Harnieria hygrophiloides</i>	Native Justicia	E1		<i>Phyllodes imperialis southern subspecies</i>	Southern Pink Underwing Moth	E1	E
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
		<i>Marsdenia longiloba</i>	Slender Marsdenia	E1	V	<i>Sternula albifrons</i>	Little Tern	E1,P	C,J,K
		<i>Melicope vitiflora</i>	Coast Euodia	E1					
		<i>Randia moorei</i>	Spiny Gardenia	E1	E				

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE				
		<i>Senna acclinis</i>	Rainforest Cassia	E1					
		<i>Syzygium hodgkinsoniae</i>	Red Lilly Pilly	V	V				
		<i>Syzygium moorei</i>	Durobby	V	V				
		<i>Tinospora tinosporoides</i>	Arrow-head Vine	V					
		<i>Xylosma terraereginae</i>	Queensland Xylosma	E1					
Ocean Shores, Jardine Court	N	<i>Acronychia littoralis</i>	Scented Acronychia	E1	E	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V,P	
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
Ocean Shores, Marshalls Creek	N	<i>Acronychia littoralis</i>	Scented Acronychia	E1	E	<i>Caretta caretta</i>	Loggerhead Turtle	E1,P	E
		<i>Archidendron hendersonii</i>	White Lace Flower	V		<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	V,P	
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	
		<i>Rhodomyrtus psidioides</i>	Native Guava	E4A	CE	<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	V,P	
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Myotis macropus</i>	Southern Myotis	V,P	
						<i>Phascolarctos cinereus</i>	Koala	E1,P	E
						<i>Potorous tridactylus</i>	Long-nosed Potoroo	V,P	V

Byron Shire Flying-fox Management Plan 2024 - 2029 Roost Detail

						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
Suffolk Park, Beech Dr	N	<i>Archidendron hendersonii</i>	White Lace Flower	V		<i>Amaurornis moluccana</i>	Pale-vented Bush-hen	V,P	
		<i>Cryptocarya foetida</i>	Stinking Cryptocarya	V	V	<i>Carterornis leucotis</i>	White-eared Monarch	V,P	
		<i>Endiandra floydii</i>	Crystal Creek Walnut	E1	E	<i>Hirundapus caudacutus</i>	White-throated Needletail	P	V,C,J,K
		<i>Endiandra hayesii</i>	Rusty Rose Walnut	V	V	<i>Miniopterus australis</i>	Little Bent-winged Bat	V,P	
		<i>Endiandra muelleri subsp. bracteata</i>	Green-leaved Rose Walnut	E1		<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	V,P	
		<i>Macadamia integrifolia</i>	Macadamia Nut		V	<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V,P	
		<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	<i>Pandion cristatus</i>	Eastern Osprey	V,P,3	

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		<i>Psilotum complanatum</i>	Flat Fork Fern	E1,3		<i>Petalura gigantea</i>	Giant Dragonfly	E1	
		<i>Rhodamnia rubescens</i>	Scrub Turpentine	E4A	CE	<i>Petalura litorea</i>	Coastal Petaltail	E1	
		<i>Syzygium moorei</i>	Durobby	V	V	<i>Phascolarctos cinereus</i>	Koala	E1,P	E
		<i>Tinospora tinosporoides</i>	Arrow-head Vine	V		<i>Podargus ocellatus</i>	Marbled Frogmouth	V,P	
						<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	V,P	V
						<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	
						<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	
						<i>Thersites mitchellae</i>	Mitchell's Rainforest Snail	E1	CE



**BYRON
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FOR MORE INFORMATION

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