



Central Coast Council

Draft Swift Parrot Species Management Plan

Photo credit: Christina Port

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Executive Summary

The swift parrot is a rare species with high extinction risk, that migrates from summer breeding areas in Tasmania to the eastern Australia mainland during autumn and winter. The species primarily forages on flowering Eucalypt trees and lerp, which is a sugary covering left on Eucalypt leaves by psyllid insects. A National Recovery Plan for the species sets out various actions to meet the following three objectives by 2032.

1. Maintain or improve the extent, condition and connectivity of habitat of the swift parrot,
2. Anthropogenic threats to swift parrot are demonstrably reduced,
3. Measure and sustain a positive population trend.

The swift parrot is listed as an endangered species under the *NSW Biodiversity Conservation Act 2016* (BC Act) and critically endangered under the federal Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Key threats to the species on the mainland include habitat loss, modification, fragmentation and competitive exclusion and competition by other bird species such as the noisy miner (*Manorina melanocephala*) and rainbow lorikeet (*Trichoglossus haematodus*).

The Central Coast local government area (LGA) provides important winter habitat for the swift parrot. Sightings of the species on the Central Coast, especially in large numbers is attributed to flowering of key foraging eucalypts and climate conditions elsewhere across the species winter range. During periods of drought, coastal habitat (being more productive), provides critical refuge.

The Central Coast is situated at the centre of a growth corridor between Sydney and Newcastle. Rapidly increasing population and development within the LGA is placing increasing development pressure on the remaining swift parrot habitat. Large areas of swift parrot habitat occur on land use zones (residential, industrial or commercial) which may enable future development, including 31% of swift parrot habitat identified under the NSW Government Biodiversity Assessment Method important habitat map.

The aim of this Species Management Plan (SMP) is to provide local context to ensure the long-term viability and improvement of swift parrot foraging habitat on the Central Coast. This SMP outlines the approach that Council must take in relation to the assessment of planning proposals, local development and Council works to avoid, minimise and mitigate impacts to the swift parrot.

1. Legislative context

In NSW, proposals or activities that impact on swift parrot habitat are primarily assessed in accordance with the *Biodiversity Conservation Act 2016* (BC Act) and the *Environment and Planning Act 1979*. The BC Act applies to proposals that trigger the Biodiversity Offset Scheme (BOS). If the BOS is triggered, development applications and planning proposals must include a Biodiversity Development Assessment Report (BDAR), or for some planning proposals, a Biodiversity Certification Assessment Report (BCAR) (refer to Section 7.2 of this SMP). If the BOS is not triggered, an Ecological Assessment Report is required which includes a threatened species test of significance completed in accordance with Section 7.3 of the BC Act.

Under the BC Act, proponents must demonstrate that they have taken all reasonable steps to avoid and minimise direct, indirect, and prescribed impacts on biodiversity values before considering offsets for residual impacts. The BC Act also requires the consent authority to determine whether a development will result in a Serious and Irreversible Impact (SII) on a threatened species or ecological community. A SII is an impact that a consent authority considers likely to significantly increase the extinction risk of the threatened entity.

Determination of whether an impact is SII is made in accordance with the four principles prescribed in Section 6.7 of the Biodiversity Conservation Regulation. The concept of SII is fundamentally about protecting threatened entities that are most at risk of extinction from potential development impacts. The swift parrot is identified as a species at risk of a SII by the NSW Government because it meets principle 1: rapid rate of decline. Other principles that also require consideration is principle 2: small population size and, principle 4: unlikely to respond to management (due to time lags associated with habitat restoration). If Council determines that local development under Part 4 of the EP&A Act is likely to result in a SII, in accordance with Section 7.6 (2) of the BC Act, Council must refuse to grant consent.

Development applications or other projects that impact on swift parrot habitat may require referral under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Referrals are submitted through the EPBC Act Business Portal, where the department then determines whether the proposed development is considered a 'controlled action' that needs approval under the EPBC Act. Projects that impact on swift parrot habitat require approval if the department determines the action has, will have, or is likely to have, a significant impact on the swift parrot (refer to Section 6.0 for further details).



Photo credit: Chris Tzaros

2. The Planning Area

This SMP covers all areas of potential and known swift parrot habitat on the Central Coast, including on private and public land.

3. Aim of this Species Management Plan

There are three aims under this SMP, with objectives set out below on how each aim is to be achieved.

1. Ensure the long-term viability and improvement of swift parrot foraging habitat on the Central Coast.
 - The extent of occurrence of swift parrot habitat is validated and effectively considered during land use planning.
 - Council improves existing and restores new swift parrot habitat in applicable Council reserves, through conservation agreements or other funding mechanisms.
 - Retained swift parrot habitat subject to development approvals is managed appropriately to ensure its viability for the swift parrot.
2. Ensure that development proposals and other activities avoid, minimise and mitigate impacts on swift parrot habitat.
 - Avoid-minimise and mitigation strategies under this SMP are applied and enforced on relevant proposals and activities.
3. Engage stakeholders in swift parrot conservation and support research activities that improve knowledge of the species local occurrence and requirements.
 - Proponents of development are aware and understand swift parrot conservation challenges.
 - Habitat use preferences of the swift parrot are monitored through annual winter bird surveys completed by Council.
 - Community engagement and participation in swift parrot environmental education and recovery activities.

4. Swift parrot ecology and overview

The swift parrot is a small fast flying parrot which feeds on nectar and lerp. The species breeds in Tasmania over summer before migrating to the mainland from autumn to spring, foraging within the Eucalypt forests of eastern Australia. Other foraging areas include Box-Ironbark forests and woodlands of central Victoria, and the coastal forests and the Box Gum woodlands of southwestern and north-western New South Wales, as far north as Gympie in Queensland (DCCEEW 2024; Figure 1).

Saunders and Heinsohn (2008) conducted a landscape scale study in NSW to identify the most important swift parrot overwintering habitats, over a five-year period. They reported an increased importance of coastal habitat during periods of drought, along with evidence of long-term repeated use of the same sites. During the millennial drought of 2002, the Central Coast region of NSW was found to support a large proportion of the swift parrot population with the abundance of swift parrots 21.7 times greater than in non-drought years (Saunders & Heinsohn 2008). At the site level, Saunders and Heinsohn (2008) found that the occurrence of swift parrot was explained when the number of trees in flower or supporting lerp increased in a given habitat patch. Further, swift parrot occurrence was positively correlated to increasing numbers of non-aggressive competitors. Factors negatively influencing the occurrence of the swift parrot included the occurrence of the rainbow lorikeet in coastal forests and the noisy miner in woodlands. Both these species favour urban and/or heavily modified habitats, thus may be a threat to swift parrot habitat use in these areas.

Population estimates conducted for the Action Plan for Australian Birds 2010, indicated there were approximately 2000 mature swift parrots left in the wild (Garnett et al. 2011). As of 2025, the current population estimate is 750 adult individuals (Crates and Heinsohn 2025). Population viability analysis shows that the swift parrot is likely to be functionally extinct within the next 20 years (Crates and Heinsohn 2025). The threats found to be influencing extinction risk within the next 20 years derive from Tasmania, including habitat loss and predation by the sugar glider (*Petaurus breviceps*) (Crates and Heinsohn 2025). Cumulative loss of wintering ground habitat can also impact on swift parrot recovery. Crates and Heinsohn (2025) found that if threats in Tasmania are addressed, but habitat loss at current estimated rates continues to occur throughout the species' winter range, then the Swift Parrot is expected to decline 16% over 50

years. To achieve population recovery, it is necessary to address cumulative habitat loss on the mainland.

Contemporary land clearing, including the removal of small remnants of winter flowering Eucalypts (even isolated trees), pose a continued threat to the survival of the species (Saunders and Russell 2016). Increased fire frequency and severity, in particular fires that consume the crowns of winter flowering

Eucalypts are a threat to the survival of the swift parrot by potentially affecting flowering intensity post fire (Woinarski and Recher 1997). Secondary threats to swift parrot include collisions with vehicles, windows and other structures (DCCEEW 2024).

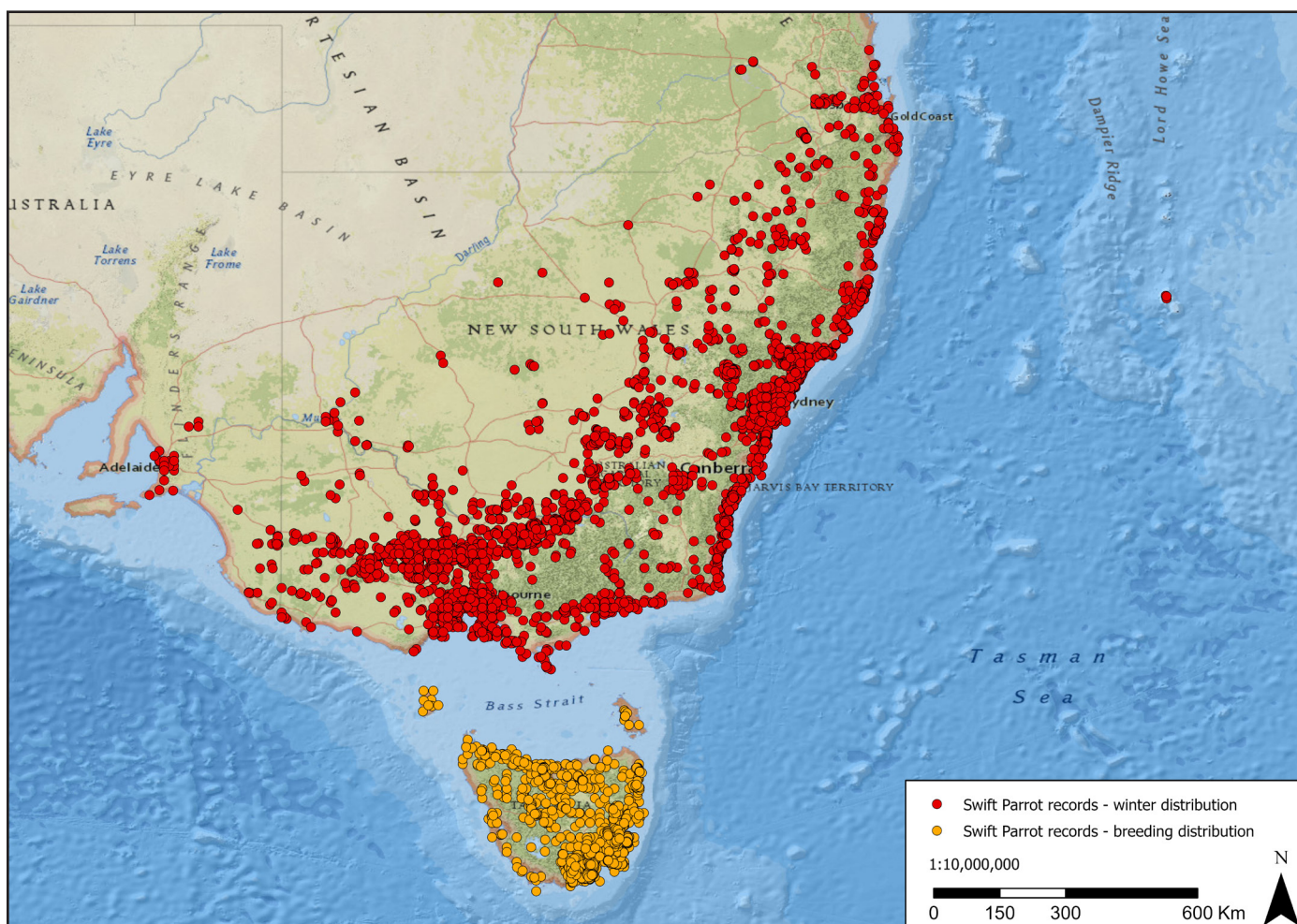


Figure 1. Swift parrot breeding and winter distribution. Data source: Atlas of Living Australia

5. Swift parrot on the Central Coast

5.1 Swift parrot records

According to the NSW BioNet species sightings database, up to the year 2025, there have been 586 records made of the swift parrot on the Central Coast (Figure 2). Some of the records include sightings of multiple individuals or large flocks. Large flocks were recorded during the following years and locations.

1. 2002 – During August up to one third of the entire swift parrot population (650 individuals) was supported at Flynn Reserve, Lake Haven (along the Budgewoi Lake foreshore) and was feeding on Swamp Mahogany. Further, during June and July up to 400 individuals were also recorded in the Bateau Bay area around Murray Street feeding on Blackbutt. There were extensive drought conditions in 2002 which led to a large influx of swift parrot to coastal NSW (Saunders, 2008). Trees in the urban environment were frequently used on the Central Coast, including roosting of individuals in large old trees in residential backyards (Saunders, 2008).
2. 2011 – Over July and August up to 100 individuals were recorded at Watanobbi around Britannia Drive and at Tuggerawong public school with feeding primarily occurring on Spotted Gum.
3. 2019 – Over May and June up to 150 individuals were supported at the Joshua Porter reserve, Chain Valley Bay (along the Lake Macquarie foreshore) with feeding occurring on Swamp Mahogany, Forest Red Gum, Broad-leaved Paperbark and planted Sydney Blue Gum. Swift parrots were last seen at this location in April 2021, with eight individuals recorded.

5.2 Results of Council's own surveys and expert panel workshop

Between 2020 and 2025, Council conducted annual bird surveys across approximately 150 sites in the Central Coast LGA. Surveys involved repeated 10-minute counts during the swift parrot's mainland presence (April to August), with the abundance of all bird species observed or heard calling recorded. The swift parrot was sighted four times at three different locations, which was Pollock Avenue at Wyong (2020),

Brisbane Water National Park (2023, 2025) and Popran National Park (2025), see Figure 3. While swift parrots were not seen every year during Council's surveys, they were recorded by the public each year at other Central Coast locations.

In 2024 Council hosted a swift parrot workshop with an expert panel of 13 people which included recognised swift parrot experts, academics and local and state government staff involved in the assessment of development impacts on the species. Experts reached a consensus regarding the themes discussed, including habitat use, competition with other bird species and management of remaining habitat (refer to McLean et al. 2026).

The following key insights have been obtained through analysis of the Councils bird survey dataset and expert consensus workshop:

- Swift parrot occurrence is rare and sporadic, even in important habitat. Hence, it is important planning decisions do not rely solely on recent sighting records.
- Small-scale but sequential habitat loss, including of individual trees, is causing significant cumulative impacts.
- According to a Principal Components Analysis (a type of statistical test) completed by Council, the most closely associated nectarivore species to the swift parrot was the noisy friarbird, followed by the little lorikeet (listed as vulnerable in NSW) and scaly-breasted lorikeet. Hence, sites that support these species could also indicate importance at supporting the swift parrot.
- The areas with the greatest probability of swift parrot occupancy occurred in low-lying, productive coastal areas in the east of the LGA.
- Trees that have been visited by swift parrot at least once are important. Not all trees flower at the same intensity or the same time every year, and different species will flower at different times throughout the season. Blackbutt is an important source of lerp for swift parrots. The critical importance for swift parrots is the combination of available foraging habitats, as it is uncertain which patch will be important in any one year.
- The avoid-minimise and mitigation measures provided under this SMP can also help support and be applicable to apply to other threatened nomadic pollinator species.

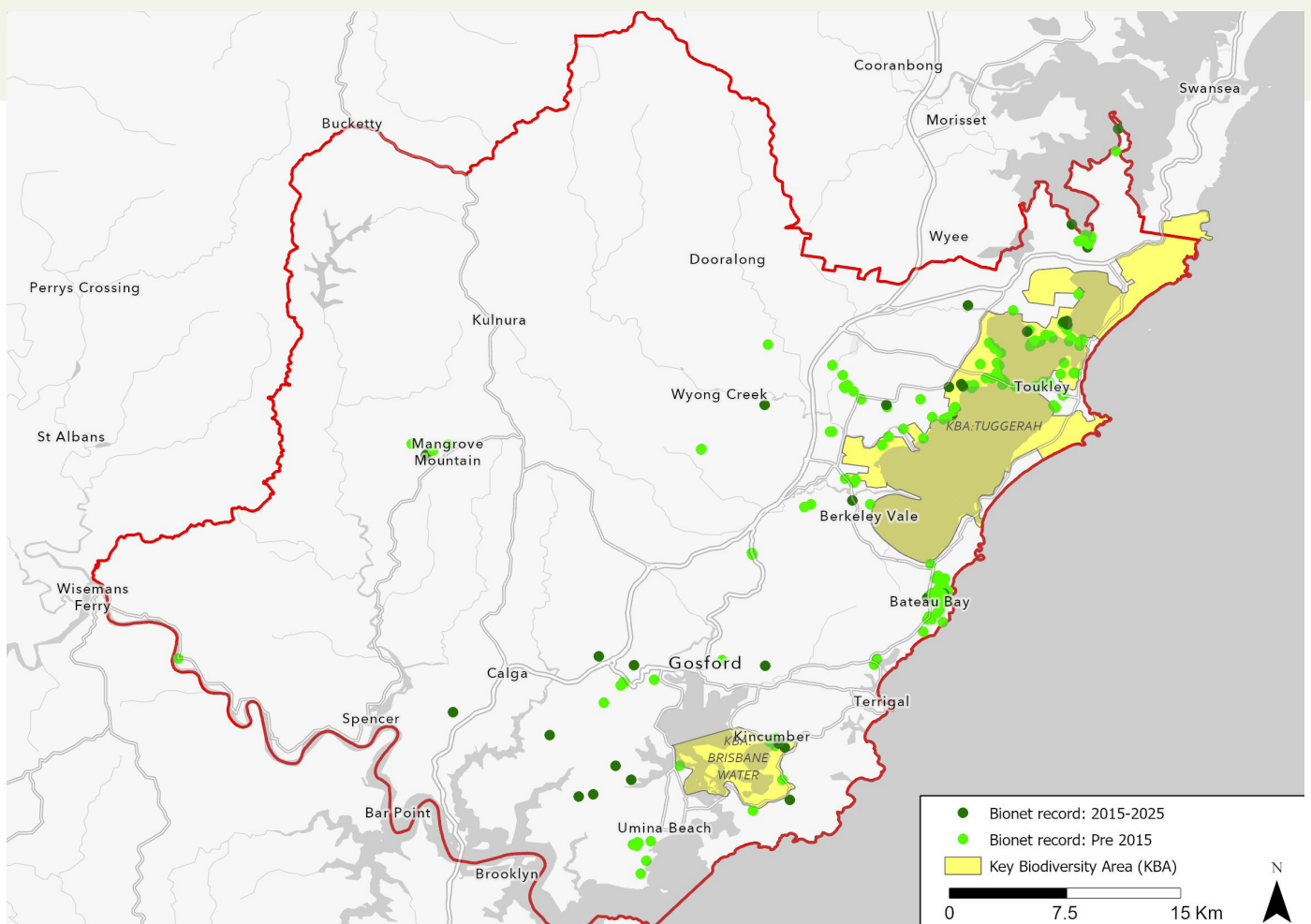


Figure 2. BioNet records of swift parrot and Key Biodiversity Areas identified under the swift parrot National Recovery Plan.

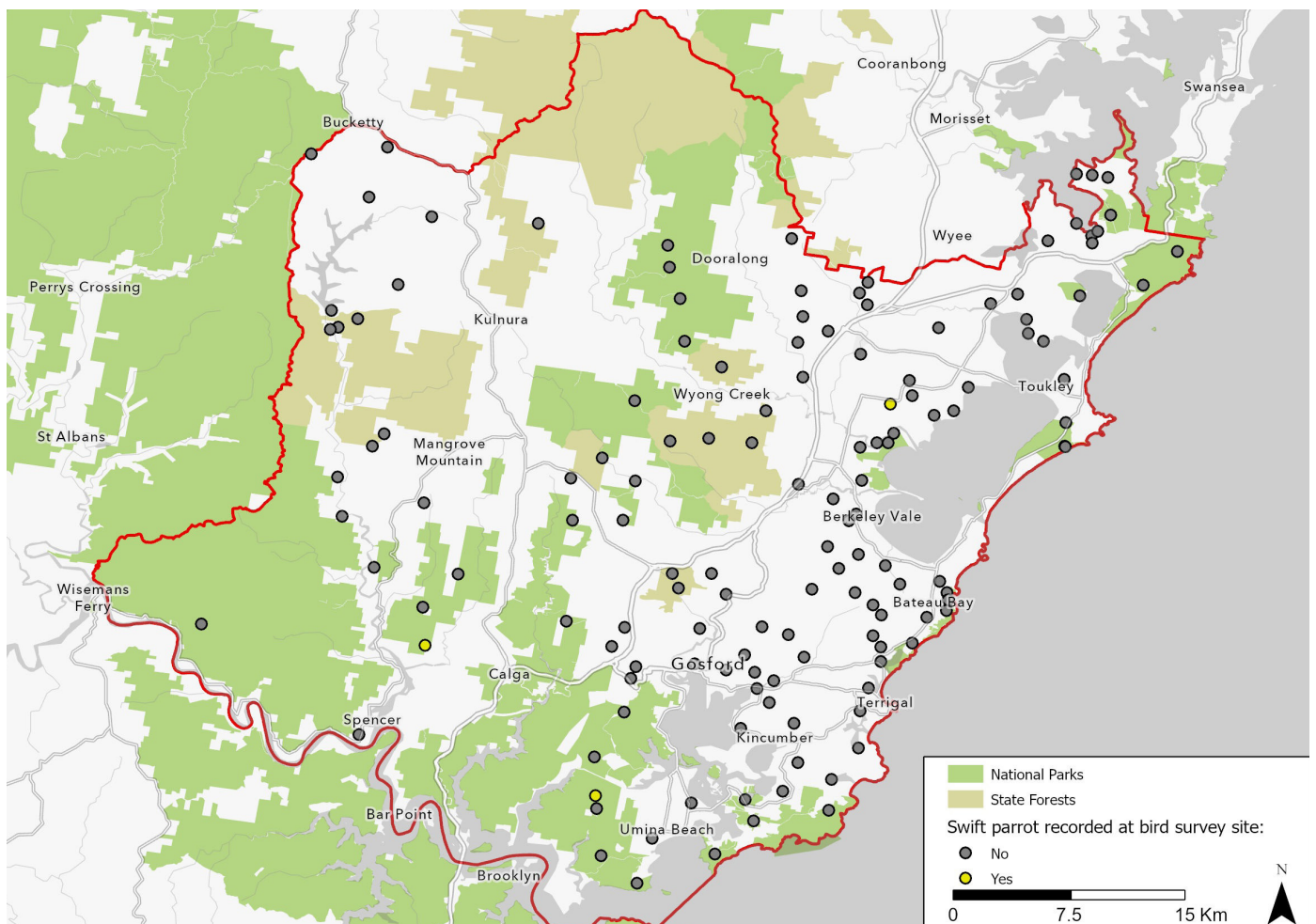


Figure 3. Location of Council bird survey sites.

5.3 Swift parrot key feed trees and habitat

The National Recovery Plan identifies four key feed tree species (Table 1) which the swift parrot primarily uses for foraging on the Central Coast. Table 1 also lists other tree species that occur on the Central Coast where foraging (including for lerp) has also been observed. The distribution of the four feed tree species listed under the National Recovery Plan is shown in

Figures 4-7. Swamp Mahogany is the most prolific and reliable autumn-winter flowering species on the Central Coast that swift parrots use for foraging. Other species, however, may hold comparable significance depending on seasonal flowering patterns and the availability of lerp. In dry sandstone country, use of Banksias such as Heath-leaved (*Banksia ericifolia*) is also considered likely.



Table 1. Swift parrot feed tree species

Feed tree species	Landscape occurrence	Height	Flowering period ¹	Flowering reliability ¹	Vegetation formation and key PCTs
Species listed under the National Recovery Plan					
Spotted Gum <i>Corymbia maculata</i>	Sandstone escarpments, dry slopes and coastal hills along the coastal lowlands, escarpments and undulating foothills (Figure 4)	45m	December-September	Low, 30% of years	Wet Sclerophyll Forests, Dry Sclerophyll Forests (Shrub/grass sub-formation) PCTs: 3234, 3241, 3244, 3433, 3437
Blackbutt <i>Eucalyptus pilularis</i>	Well-drained loams and sandy soils of coastal plains, foothills and lower slopes, typically occupying more fertile and better-drained positions (Figure 5)	70m	December-September	Moderate, 45% of years	Wet Sclerophyll Forests, Dry Sclerophyll Forests (both shrub/grass sub-formation) PCTs: 3242, 3250, 3544
Swamp Mahogany <i>Eucalyptus robusta</i>	Inundated coastal freshwater swamps and poorly drained low-lying areas such as creek flats and depressions (Figure 6)	25m	March-July	High, >70% of years	Forested Wetlands PCTs: 3983, 3986, 3995, 3997, 3998, 4006, 4020, 4021, 4044, 4057
Forest Red Gum <i>Eucalyptus tereticornis</i>	Sandy colluvial soils on flats, benches and low-lying sandy alluvial flats adjoining large lakes, lagoons and estuaries (Figure 7)	50m	June-March	High, 60% of years	Wet Sclerophyll Forests, Dry Sclerophyll Forests (both shrub/grass sub-formation), Forested Wetlands PCTs: 3141, 3238, 3445, 4036, 4042
Other species where opportunistic use is considered likely					
Red Bloodwood <i>Corymbia gummifera</i>	Nutrient-poor sandy or sandstone-derived soils, typically occurring on coastal plains, ridges and upper slopes.	30m	December-May	Low, 30% of years	Dry Sclerophyll Forests (Shrubby sub-formation) PCTs: 3582, 3593, 3622
Scribbly Gum <i>Eucalyptus haemastoma</i>	Shallow soils derived from sandstone along ridges, exposed slopes or low-lying areas on alluvial deposits	15m	June–September	Not reported	Dry Sclerophyll Forests (Shrubby sub-formation), Heathlands PCTs: 3583, 3586, 3593, 4127
Grey Ironbark <i>Eucalyptus paniculata</i>	Moderately fertile soils on sandstone- or shale-influenced ridges and upper slopes, and occasionally on well-drained colluvial or alluvial soils	30m	May-August	Low, 30% of years	Wet Sclerophyll Forests (Grassy sub-formation), Dry Sclerophyll Forests (Shrub/grass sub-formation) PCTs: 3234, 3263, 3437, 3587
Broad-leaved Paperbark <i>Melaleuca quinquenervia</i>	Freshwater coastal swamps and poorly drained low-lying areas such as floodplain depressions and creek flats	15m	February-June	High, >70% of years	Forested Wetlands PCTs: 3995, 3997, 4000, 4004, 4006, 4007, 4020

¹Flowering period and reliability reported above is based off a study by Eby and Law (2008) in north-east NSW.

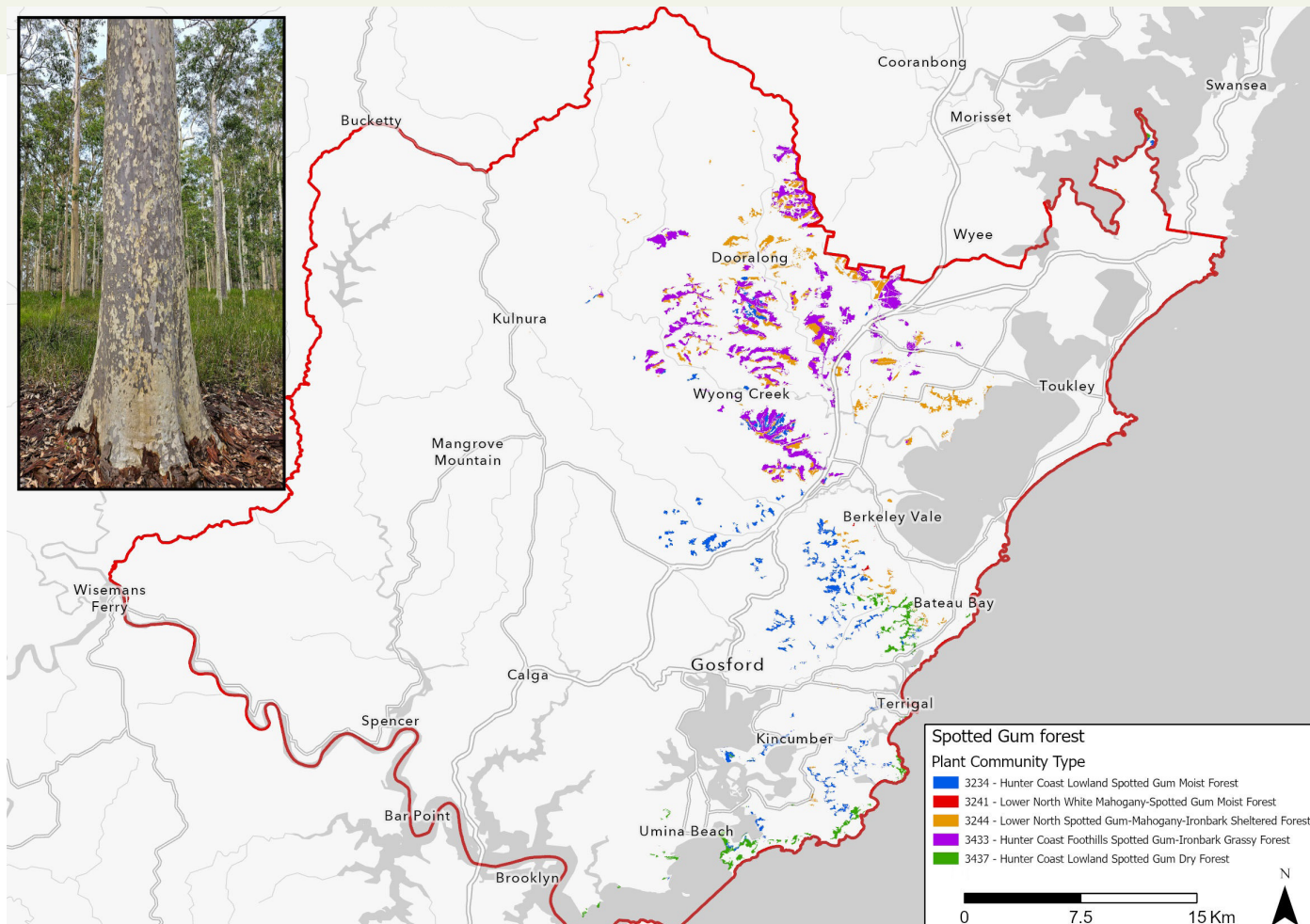


Figure 4. Distribution of Spotted Gum forest across the LGA (note, vegetation mapping requires ground truthing).

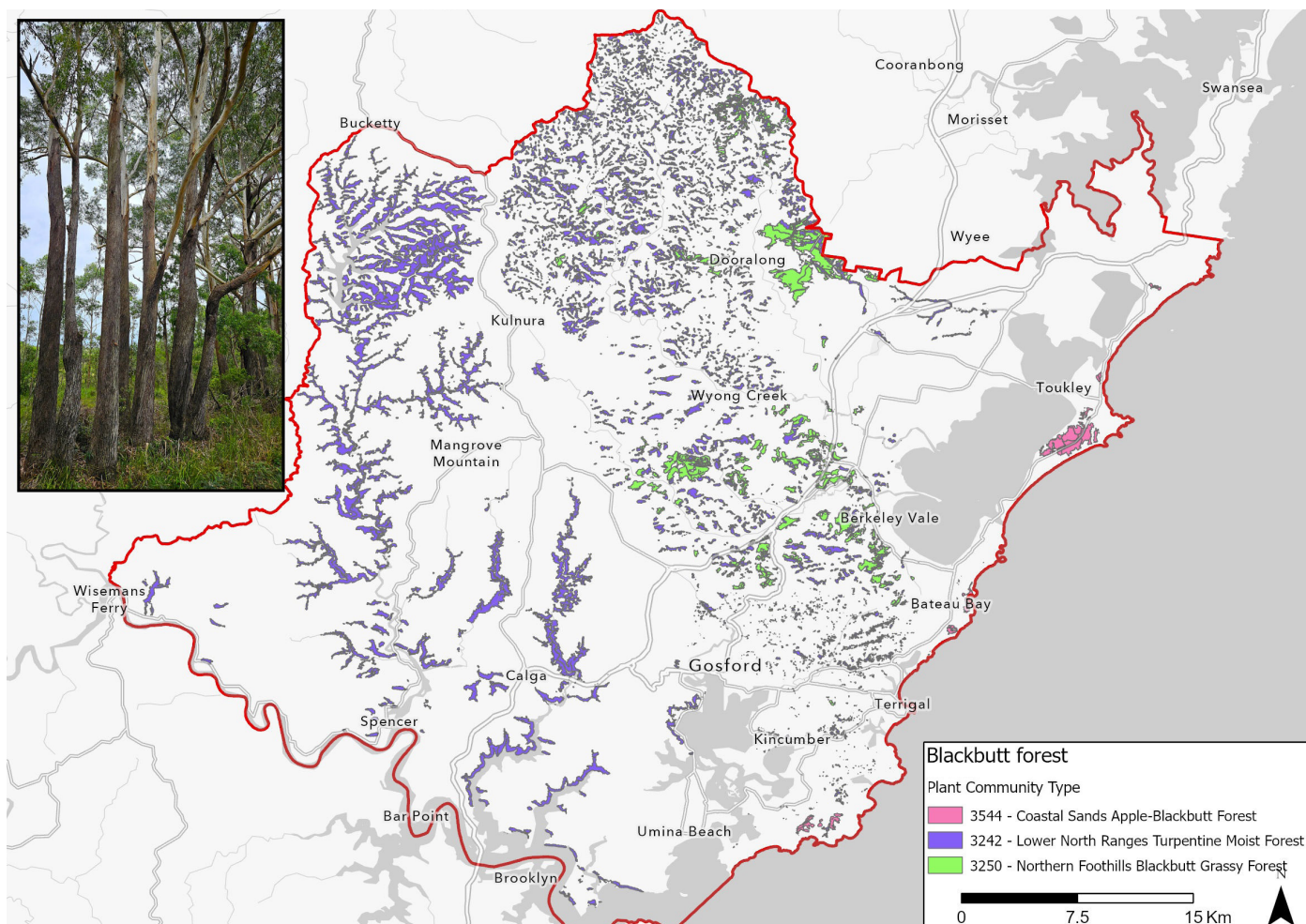


Figure 5. Distribution of Blackbutt forest across the LGA (note, vegetation mapping requires ground truthing).

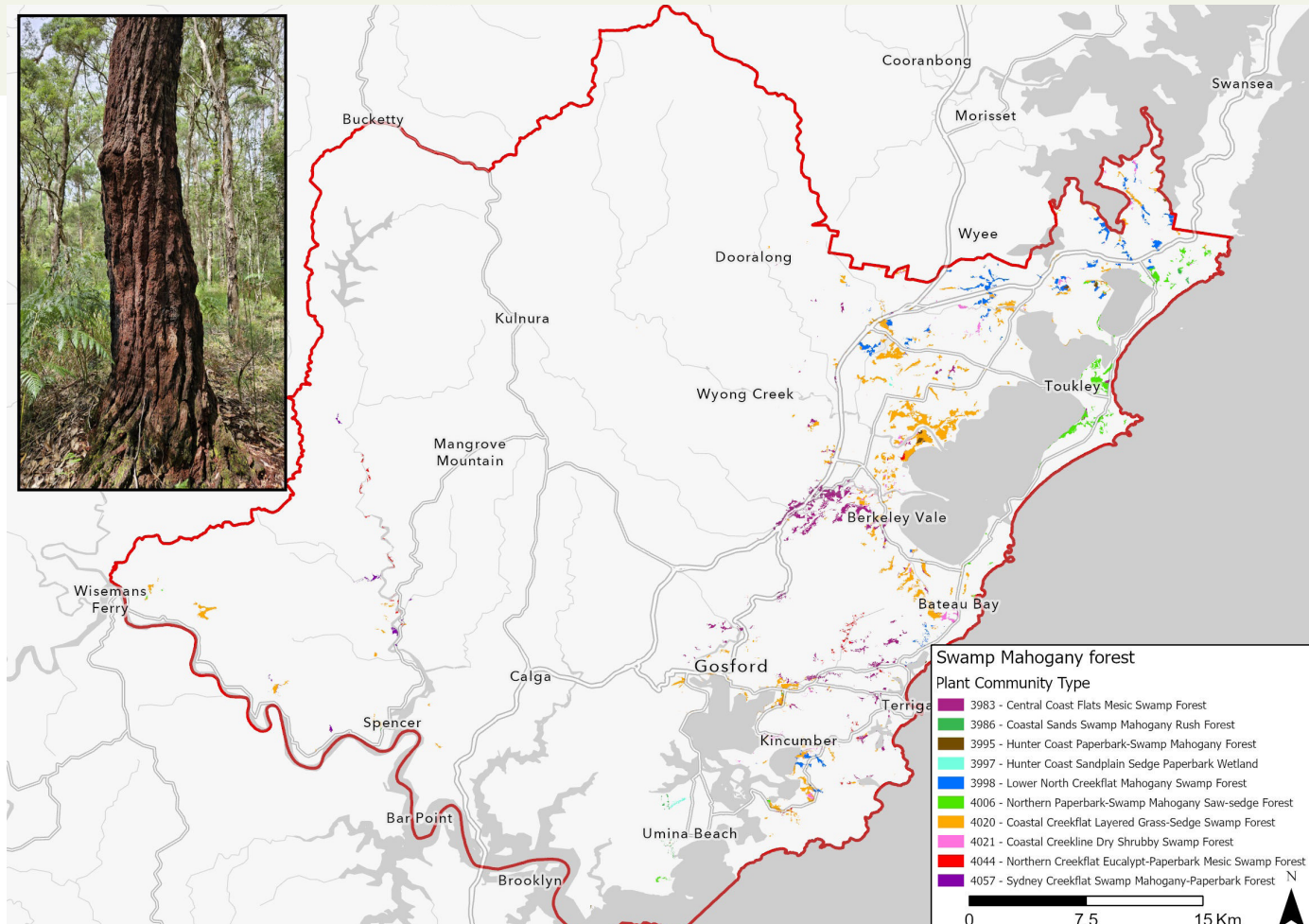


Figure 6. Distribution of Swamp Mahogany forest across the LGA (note, vegetation mapping requires ground truthing).

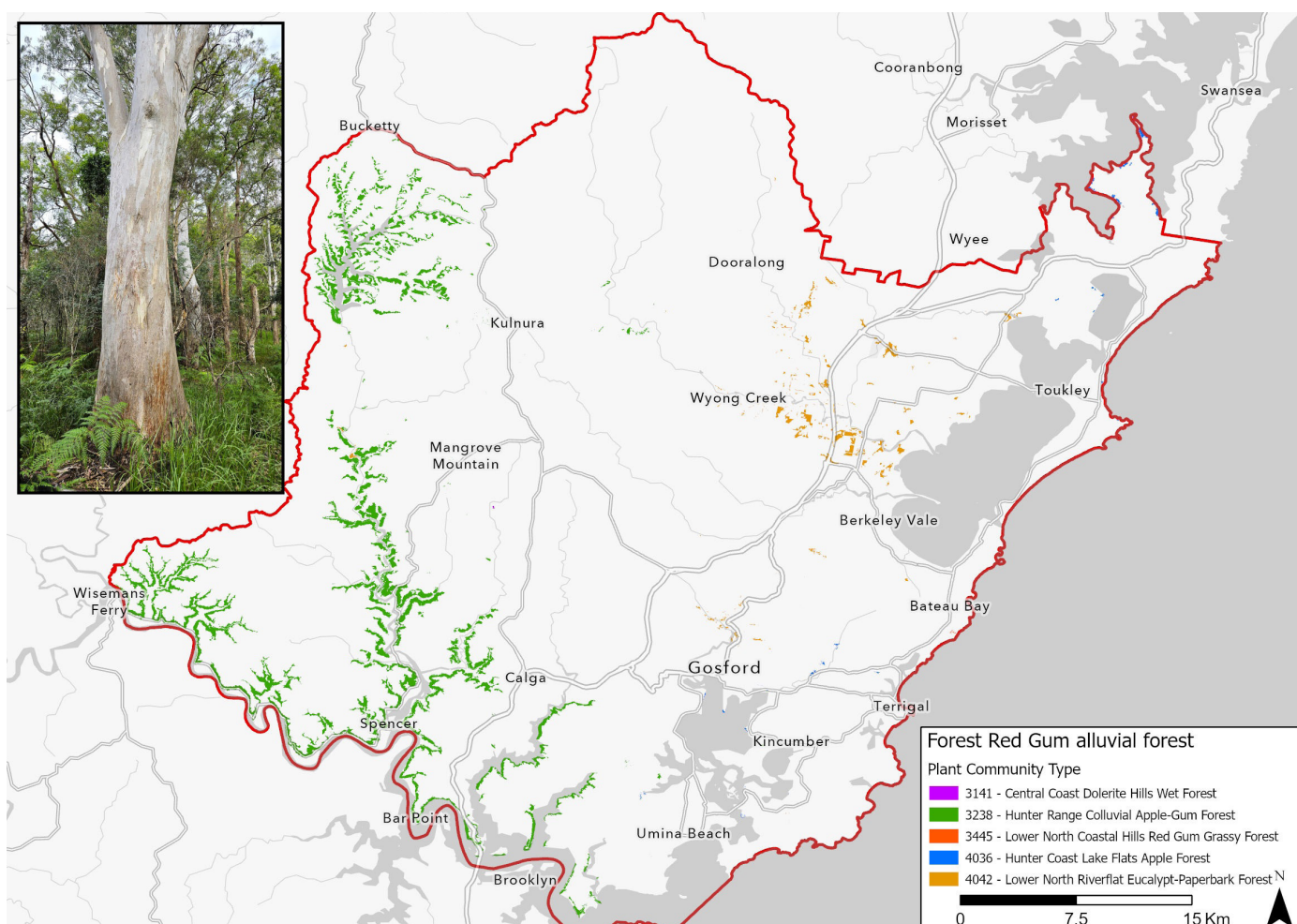


Figure 7. Distribution of Forest Red Gum forest across the LGA (note, vegetation mapping requires ground truthing).

6. Swift parrot habitat mapping

As detailed below, there are three key published maps that Council may refer to, to help identify important areas and habitat for the swift parrot. The BAM swift parrot important habitat map has direct legal authority that Council applies under the BC Act to relevant applications. The other maps do not have statutory reference in NSW, however, as per Section 7.13 (6)(a) of the BC Act, they can be taken into consideration regarding assessment of impacts.

1. Biodiversity Assessment Method (BAM) swift parrot important habitat map

This map has legal authority through application of the BAM under the BC Act. The map is not publicly accessible but is available to accredited assessors that prepare biodiversity assessment reports. The map is based on confirmed swift parrot sightings between 1990 and 2020 using data contained within the NSW BioNet and Birdlife Australia databases. The mapping applies a 2km buffer to areas with five or more swift parrot observations, where the observations have occurred over two or more years that are within 2km of one another, or areas with a single record of 40 or more swift parrots. Within the buffer areas, swift parrot important habitat is defined as plant community types that are associated with the swift parrot after excluding any areas of vegetation of less than one hectare. Of concern, Crates et al. (2025) estimated that between the years 2000 and 2019, 597 ha of mapped habitat on the Central Coast has been cleared.

A total of 5852 ha of land across the LGA is mapped, of this 31% of the area (1785 ha) occurs in residential, employment or rural land use zones which is at high risk of being impacted by development. Suburbs that are mapped include: Bateau Bay, Budgewoi, Buff Point, Chain Valley Bay, Charmhaven, Crangan Bay, Doyalson, Foresters Beach, Gwandalan, Halekulani, Hamlyn Terrace, Kanwal, Kariong, Kingfisher Shores, Lakehaven, Long Jetty, Norah Head, Noraville, Rocky Point, San Remo, Shelly Beach, Summerland Point, Tacoma, Tacoma South, Tuggerawong, Wadalba, Watanobbi, West Gosford, Woongarrah, Wyong.

Relevance of map: For proposals subject to the BOS, in areas that are mapped, the BAM requires swift parrot presence to be assumed. Potential SAIL also needs to be assessed.

2. Mapped Key Biodiversity Areas (KBAs)

The National Recovery Plan (recovery plan) for the swift parrot made under the EPBC Act identifies critical habitat for the survival of the swift parrot. This includes all preferred foraging species (refer to Table 1) that occur within known and likely foraging habitat on the mainland.

The recovery plan has identified those actions that remove habitat critical to the survival would interfere with the recovery of swift parrots and reduce the area of occupancy of the species. These are also considerations under the Matters of National Environmental Significance, Significant Impact guidelines 1.1 for making a referral.

The recovery plan has identified two mapped areas (KBAs) on the Central Coast relevant for the swift parrot. As of March 2026, the KBAs are found around the foreshore areas of Tuggerah Lake and Brisbane Waters (as shown on Figure 2). The KBAs are sites with exceptional status and critical importance on a global scale. They identify those known and likely foraging habitats of the swift parrot and are identified as essential for protection under the recovery plan.

Relevance of map: If your development is within a KBA and impacts on known or likely foraging swift parrot habitat, consider referring it to the Commonwealth Department of Climate Change, Energy, the Environment and Water to determine if it's a controlled action. Note, clearing of other known or likely swift parrot habitat outside KBAs may also require consideration for referral.

3. Crates et al. (2025) species distribution model

Crates et al. (2025) prepared a species distribution model for the swift parrot in the lower hunter and Central Coast region. The model considered various environmental variables and identified 8,058 hectares of potential habitat with a predicted suitability greater than 70% on the Central Coast (refer to Figure 8). Of this area, 3,431 hectares (43%) are at risk of development due to their presence in residential, employment, or rural zones. Additionally, 5,764 hectares, representing 72% of the Crates et al. (2025) map, are situated outside the BAM swift parrot important habitat map boundary. These areas may serve as significant habitat for the swift parrot beyond those delineated by the BAM important habitat map, and include locations such as Blue Haven, Buddi National Park, Chittaway Point, Colongra, Crangan Bay, Killcare Heights, Kincumber, Lake Munmorah State Conservation Area, Mount Elliot, Patonga, Pretty Beach, and Tumbi Umbi.

Relevance of map: This map is to be used as a tool to check and verify on site areas of potential high quality swift parrot habitat.

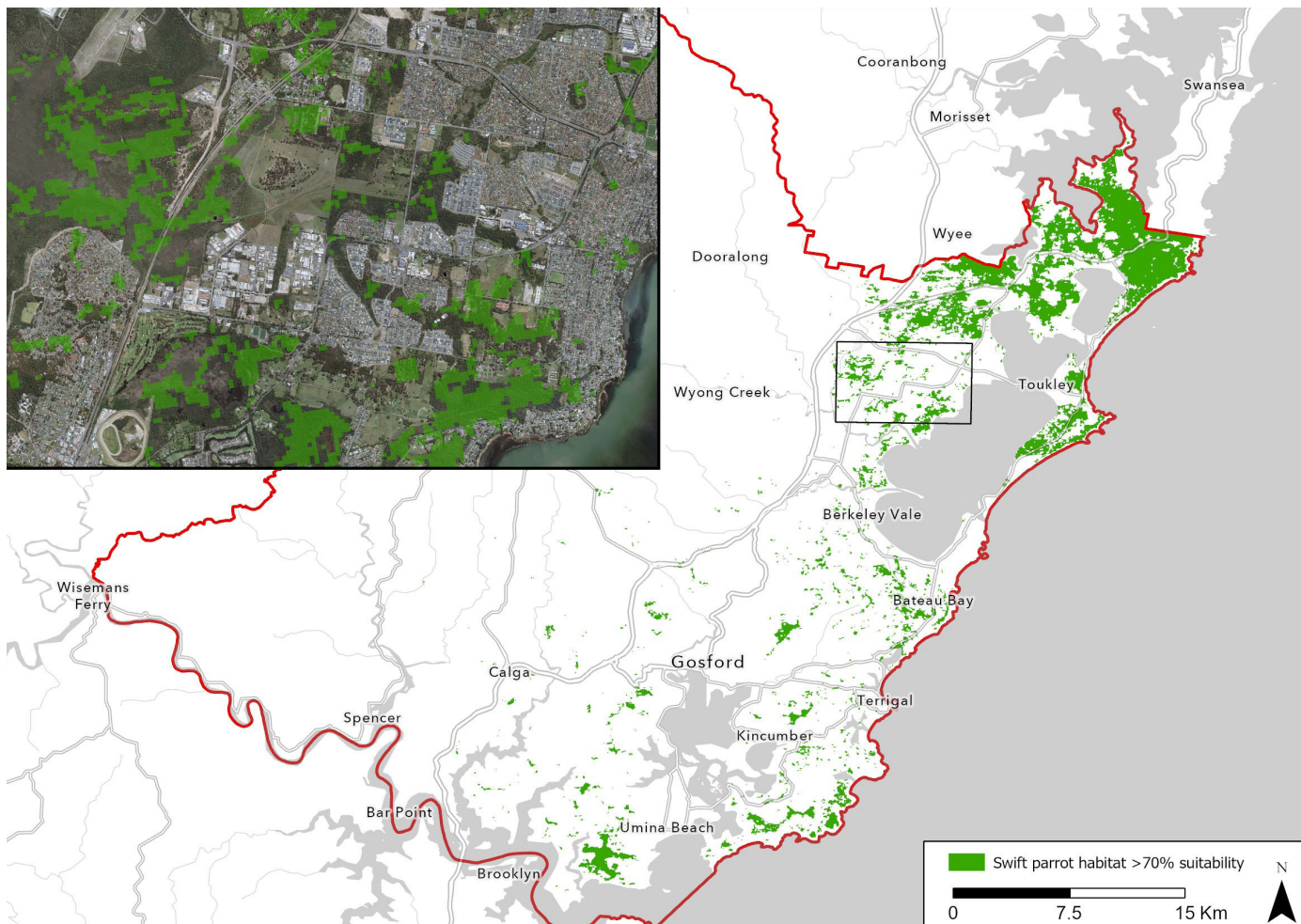


Figure 8. Crates et al. (2025) swift parrot habitat >70% suitable. Insert: close up of east Wyong area.

7. Consideration of swift parrot during landuse planning, development assessment and other activities

7.1 Required surveys

For proposals subject to the BOS, the species is to be assumed present as per the BAM important habitat map. For applications not subject to the BOS, surveys are not required, but it is still encouraged that a targeted bird survey (minimum 20 min search over a 2 ha plot) occurs during peak flowering of autumn-winter flowering eucalypt trees. If suitable feed trees are present (as per Table 1), the species is to be assumed present in these areas.

7.2 Assessment of impacts on the swift parrot

For applications subject to the BOS, impacts on the swift parrot are to be assessed in accordance with the Biodiversity Assessment Method. Impacts on the swift parrot important habitat map trigger the need to calculate applicable species credits and completion of a serious and irreversible impacts (SAII) assessment. A BCAR should accompany planning proposals that involve substantial clearing of vegetation or habitat for threatened species, including the removal of areas identified on the BAM Important Habitat Map.

For applications not subject to the BOS, Council's Flora and Fauna Guidelines are to be followed. For all proposals, compliance with local planning instruments and other applicable legislation will also be required, including the Central Coast Local Environment Plan 2022 and Development Control Plan 2022.

To support effective decision making, including identification of the most important areas to avoid development impacts and Council's consideration of SAI, the following information must be provided and discussed for all proposals:

- Accurately map and determine the area of swift parrot habitat on the site into relevant condition classes, including:
 - Area identified on the BAM important habitat map (for BDARs and BCARs)
 - Number and type of feed tree species present (listed in Table 1), including any feed trees outside the BAM important habitat map
 - Age class of feed trees, including clear identification and mapping of areas that support trees $\geq 60\text{cm}$ DBH (which is identified in the National Recovery Plan as important to retain)
- Identify whether the site occurs within a swift parrot Key Biodiversity Areas (KBA), under the National Recovery Plan (refer to the KBA interactive map, hosted by birdlife Australia).
- Identify whether the site is mapped as suitable habitat ($>70\%$) by Crates et al. 2025 (refer to Figure 8 and Council's online mapping tool).
- Occurrence of aggressive competitor species (e.g. rainbow lorikeets, noisy miners).
- Habitat patch area, connectivity features and any existing fragmentation.
- Site productivity (soil types/fertility, slope).
- Any evidence of swift parrot site fidelity (by considering past records of the swift parrot in the local landscape).
- Consideration and assessment of cumulative impacts, such as areas previously cleared within a growth precinct or those identified as a development investigation area under the Central Coast Regional Plan.
- Demonstrate that genuine avoidance and minimisation steps have been taken (refer to Section 7.3) and appropriate mitigation measures will be provided (refer to Section 7.4).

7.3 Genuine avoidance and minimisation measures

Due to the cumulative impact of incremental habitat loss, including small-scale loss of important feed trees, the following measures must be considered and applied, where applicable to each development proposal or Part 5 activity that impacts on swift parrot habitat.

1. Avoid clearing vegetation that supports feed tree species listed under the National Recovery Plan (see Table 1) that are mapped on the swift parrot important habitat map (related to the Biodiversity Assessment Method) and Key Biodiversity Area map (related to the National Recovery Plan). These areas are essential to maintain and restore.
2. Avoid direct and indirect impacts to other known or potential swift parrot habitat which supports key food plants (listed in Table 1) including forest areas which support stem size classes of trees that are $\geq 60\text{cm}$ at diameter at breast height (DBH).
3. Protect and retain large individual key feed tree species ($\geq 60\text{cm}$ DBH) that occur for example in backyards, parks and road reserves, even where isolated from forest areas.
4. Ensure project design alternatives and layouts are considered to maximise retention of swift parrot habitat that is in any condition.
5. Ensure tree retention proposed is technically feasible and that trees will remain viable in accordance with AS4970:2025 Protection of trees on development sites.
6. Avoid locating development that would fragment or edge-expose intact swift parrot habitat. An analysis of edge ratio metrics is to be undertaken to inform the selected layout. In areas that are surrounded by suitable habitat, development is to be of a compact design rather than lineal configuration.
7. Minimise indirect impacts (such as vehicle collision and edge effects) by applying a buffer (generally, a minimum of 10m) from retained swift parrot habitat in accordance with Central Coast Development Control Plan 2022 - Chapter 2.4.2.7 Urban Interface Area (UIA) Requirements.

For complex sites, it is recommended that a recognised swift parrot species expert is engaged to review, analyse and inform essential areas of the site to avoid, minimise and mitigate impacts. This information must be provided to Council for evidence-based decision making.

7.4 Mitigation measures

Mitigation measures are not to be relied upon to replace loss of moderate-high quality swift parrot habitat. This habitat is irreplaceable, due to its potential critical need to support the swift parrot over the next 20 years and significant time lag (generally >20 years) associated with the maturity of replacement trees (Crates et al. 2025; Owens et al. 2023). The mitigation measures below must be considered for all development proposals or Part 5 activities that impact on swift parrot habitat.

1. Habitat restoration, which targets planting of winter flowering eucalypts and establishing or increasing understorey complexity. These measures are to be detailed and approved by Council under a site-specific Biodiversity/Vegetation Management Plan. For planting guidance refer to Planting to conserve threatened nomadic pollinators in NSW (OEH, 2016).

2. Embed key feed tree species (Table 1) in urban and peri-urban suburbs where there are previous records of the swift parrot. New subdivisions in these areas must ensure appropriate allocation of deep soil to support planting of feed trees along appropriate areas, such as to link habitat breaks

As per the NSW Government Street Tree Planting Design Manual (DPIE, 2021) a contiguous deep soil area (minimum 1m in depth) of between 50-80 cubic meters is required to support a large tree to establish. This can be typically achieved through a verge width of approximately 4-5 m over a minimum length of 12-15 m, assuming a minimum soil depth of 1m. If existing soils are not suitable, soil replenishment may be required or the rooting volume area increased.

3. Undertake replenishment and successive planting of feed trees in areas where natural replacement is not possible (such as parklands, foreshore reserves and road reserves).
4. Provide an adaptive management plan for uncertain impacts on swift parrot habitat e.g. tree die back associated with altered hydrological regimes. The management actions must minimise and mitigate the impact.

Where applicable, a planning agreement may be required with Council to implement the mitigation measures.



8. Recovery Actions

Action	Intended recovery response	Who is responsible
1. Through Council's environmental volunteering program, provide educational workshops and engagement activities on the swift parrot	Increased community awareness and participation in Council's environmental volunteering program	Council ecological staff (environmental management unit)
2. Council identifies suitable Council-owned land that can support restoration of swift parrot habitat, including opportunities for new habitat creation and possible funding mechanisms	Increase in the extent or enhancement of swift parrot habitat, especially within and adjacent important mapped habitat	Council ecological staff (strategic planning, environmental management unit)
3. Where funding is available, Council will support or undertake restoration projects that include planting of swift parrot feed trees, this may include private land and Council land, including road reserve areas.	Increase in the extent or enhancement of swift parrot habitat, especially within and adjacent important mapped habitat	Council ecological staff (strategic planning, environmental management unit, open space and recreation)
4. Ensure that impacts proposed to swift parrot habitat are avoided, minimised and mitigated.	No loss of high value important habitat and improvement of habitat viability for the swift parrot	- Council ecological staff (strategic planning, development assessment staff) - Developers and external consultants acting on their behalf
5. Ensure conservation agreements or land dedication to Council options are explored for land containing swift parrot habitat at the Planning Proposal stage. For relevant development applications, this is to also occur.	Protection of swift parrot habitat	- Council ecological staff (strategic planning, development assessment staff) - Developers and external consultants acting on their behalf
6. Ensure a GIS layer of swift parrot modelled habitat by Crates et al. (2025) is available on Council's online mapping tool.	Identify swift parrot habitat that requires impact avoidance throughout the Central Coast	Council ecological (strategic planning) and geospatial staff
7. Undertake and support swift parrot monitoring programs and conduct or support research studies that increase knowledge of swift parrot habitat.	Increased scientific understanding to inform conservation planning and management	- Council ecological (strategic planning) staff - Research organisations

9. Monitoring, Evaluation and Reporting

Annually, between autumn and spring, Council will complete bird surveys across 150 established sites to inform changes in tree flowering and bird diversity. These surveys will provide consistent, long-term data to identify trends, emerging risks, and inform any possible management responses. The results of the surveys will be analysed and included in a review and update of this plan every five years, commencing in 2030. This review process will ensure the plan remains evidence based, responsive to observed environmental changes, and aligned with contemporary best practice and Council's strategic objectives.

10. References

- Crates, R. and Heinsohn, R., (2025). Quantifying the cumulative impact of winter habitat loss on a critically endangered migratory parrot. *Conservation Science and Practice*, p.e70057.
- Crates, R., Ruser, N. and Heinsohn, R., (2025). Quantifying Past and Predicting Future Cumulative Loss of Habitat for a Critically Endangered Nomadic Bird. *Austral Ecology*, 50(2), p.e70030.
- DCCEEW (2024), National Recovery Plan for the Swift Parrot (*Lathamus discolor*), Department of Climate Change, Energy, the Environment and Water, Canberra.
- Eby, P. and Law, B. (2008). 'Ranking the feeding habitats of Grey-headed flying foxes for conservation management'. Prepared for the NSW Department of Climate Change and Department of Environment, Water, Heritage and the Arts.
- Garnett ST, Szabo JK and Dutson G (2011). The Action Plan for Australian Birds 2010. CSIRO Publishing. Melbourne.
- McLean, C.M., Field, J., Beranek, C.T., Crates, R., Debus, S., Saunders, D., Stojanovic, D., Hingee, M., and Carson, N (2026). Managing a needle in a haystack: use of expert opinion and scientific consensus to consider management of Swift Parrot habitat in the coastal forests of New South Wales. *Australian Journal of Zoology* (accepted, April 2026).
- Owens, G., R. Heinsohn, R. Crates, and D. Stojanovic. (2023). Long-Term Ecological Data Confirm and Refine Conservation Assessment of Critically Endangered Swift Parrots. *Animal Conservation* 26: 450–463.
- Saunders, D. (2008). Ecology and conservation of the swift parrot—an endangered austral migrant, PhD thesis, ANU Canberra.
- Saunders, D.L. and Heinsohn, R. (2008). Winter habitat use by the endangered, migratory Swift Parrot (*Lathamus discolor*) in New South Wales. *Emu-Austral Ornithology*, 108(1), pp.81-89.
- Saunders, D.L. and Russell, T. (2016). Settlement and Swift Parrots—historic and ongoing habitat loss for a critically endangered species (1788–2016). In *Papers and Proceedings of the Royal Society of Tasmania* (Vol. 150, No. 2, pp. 55-73).
- Woinarski, J.C.Z. and Recher, H.F. (1997). Impact and response: a review of the effects of fire on the Australian avifauna. *Pacific Conservation Biology*, 3(3), pp.183-205.





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