

Draft Noosa Threatened Fauna Recovery Road Map

-Strategy 1.3 of the Noosa Environment Strategy-

Noosa Shire Council 2022

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1. Introduction

Noosa Shire is located within the Southeast Queensland bioregion, an area of exceptionally high biodiversity that supports a diverse range of ecosystems. It is this ecosystem diversity that results in a significantly high proportion of regional threatened species and ecological communities. To ensure the future protection and enhancement of existing biodiversity values, The *Noosa Environment Strategy (NES)* was developed in 2019. In relation to long-term survival of threatened and protected fauna, the *NES* details Council’s commitment to significant implementation actions for the first three (3) years of the Strategy (19/20 to 21/22). Hence, the objective of this Road Map is to guide Council’s approach (and funding) to the on-going management of regionally threatened fauna.

The *NES* identifies specific targets for each of Council’s environmental strategies. The primary focus of Strategy 1.3 is to, ‘*Ensure populations of key threatened indicator species remain viable*’ (see Figure 1).

Figure 1: Strategy 1.3 of the Noosa Environment Strategy (2019)

Theme 1 - Biodiversity		
Strategy 1.3: Improve long-term survival for threatened species and ecological communities		
By 2030, populations of key threatened indicator species remain viable.	A baseline is to be developed for 6-8 key threatened species based on: <ul style="list-style-type: none"> • Representativeness across biological families • Representativeness across ecosystems • Iconic value to the Noosa community • Availability of existing data and records Depending on the species selected, there may already be existing data, however a new baseline for some species will be required.	A key threatened species list is already being developed and will be workshopped and finalised in 2019 A longitudinal study of key threatened species will be undertaken over 10 years

For net improvement of regional biodiversity values, an integrated approach in threatened species conservation is required to support other related Council environment strategies, across a diverse range of key habitats. This will be achieved through the provision of clear strategies and key performance indicators, via the pathway described in this document;

- 1) Review of Council’s previous and current actions and strategies in threatened species conservation
- 2) Identification of stakeholder involvement in threatened species conservation
- 3) Desktop review of Council’s supporting biodiversity assessment reports and applicable resources
- 4) The identification of regional habitats, ecological communities and fauna of conservation significance
- 5) Identification of regional threatening processes to fauna, habitats and ecosystem processes.
- 6) A comprehensive analysis of threatened species susceptibility to regional threatening processes
- 7) The nomination of key threatened fauna species for management priority
- 8) Clear processes and actions required to deliver threatened fauna recovery programs
- 9) The supply of a detailed anticipated delivery schedule and budget to achieve the deliverables of *Strategy 1.3* of the *NES*.

2. Background

2.1 Prior works - the *Noosa Nine*

Previous works undertaken in 2017 (prior to the development of the *NES*), nominated nine (9) key and iconic threatened fauna species (known as the *Noosa Nine*) for management priority. Moving forward, this Road Map formalises the decision process, scientifically justifies, and prioritises (through a comprehensive decision matrix), a list of key threatened fauna species which satisfy section 1.3 of the *NES*.

Given Council has already marketed the *Noosa Nine* to the community and some stakeholders, warrants a revamp of the program. Hence, a total of nine (9) key threatened fauna species for management priorities will be nominated under the *NES*.

2.2 Supporting desktop assessments

Council developed the *NES* in 2019, to prioritise investment and deliver an integrated approach to managing Noosa's environment over a ten-year period. In response, two (2) key shire wide biodiversity assessments were commissioned to support the development and implementation of the Strategy;

- *The Noosa Biodiversity Assessment Report 2019* (Eco Logical 2016)
- *The Noosa Shire Priority Species Assessment 2019* (Noosa & District Landcare 2019)

2.3 Active threatened species conservation and stakeholder involvement

Noosa Shire Council is pro-actively invested in threatened fauna conservation, and works closely with community groups, landholders and other agencies to ensure the protection and enhancement of regional biodiversity values. Council also has existing monitoring and management strategies in place for regionally iconic species, including koalas. Table One details Council's active threatened species conservation programs, along with the involvement of key stakeholders, who will be instrumental in the development and implementation of future threatened species management strategies.

Species	Establishment Year	Item	Outcomes
Koala	2016	Noosa Shire Koala Conservation Plan 2016	Details Councils commitments to monitoring and management of the species
	2017	Yurol and Ringtail Project	2,400ha of land transitioning to National Park status over the next 10 years
	2020	QUT Yurol-Ringtail State Forest Koala Baseline and Monitoring Project	Baseline population monitoring
Glossy-black cockatoo	Annual	Great Glossy Counts	Supporting the Glossy Black Conservancy and the regional community members active in population monitoring
	Annual	Financial funding to the Glossy Black Conservancy	Contribution to management of the species
Flying-foxes	Annual	Operational budget	Sustainable reducing human / wildlife conflicts
	2021	DES Flying-fox Management Grants	Flying-fox Roost Management Plans
	2022	Regional Flying-fox Statement of Management intent	Developing a regional approach to sustainable flying-fox management

Table 1: Noosa Council's active involvement in threatened species conservation

It is intended to undertake a consultation program with external stakeholders, including key conservation groups under the implementation of this Road Map (see Section 6). Consultation plans will be developed in accordance with Council's templates and distributed internally for review.

3. Desktop review of supporting information

3.1 Resources

To aid in the nomination of the *Noosa Nine* for management priorities under the *NES*, a comprehensive desktop review was undertaken of supporting information including the *Noosa Biodiversity Assessment Report (NBA)* and the *Noosa Shire Priority Species Assessment (NPSA)*. This process identified regional biodiversity values, fauna species of conservation significance and key threatening processes (e.g. climate change). For context, the background, objectives and outcomes of the two assessment reports are summarised below.

3.1.1 Noosa Biodiversity Assessment Report

The *NBA* was prepared by Eco Logical in 2017 to guide planning and decision-making in the development of the *NES*. The assessment details the scientific understanding of biodiversity values across the Noosa Region to assist in determining the key issues for local conservation management (Eco Logical 2016). The report addresses habitat values, ecological communities and flora in detail, while nominating nine regionally key and iconic fauna species from one hundred and eight-five identified fauna species of national, state or local environmental significance. Threats to biodiversity values are also presented and discussed at general habitat and ecological levels.

3.1.2 Noosa Shire Priority Species Assessment

The *NBA* was prepared by Noosa & District Landcare in 2019 to compliment biodiversity goals (Strategies 1.1, 1.2 & 1.3) of the *NES*. Council identified there had been several independent studies which have contributed to threatened species knowledge in the area, but an overview of practical conservation action relevant at council level had previously not been undertaken (*Noosa & District Landcare 2019*). Thus, the assessment was commissioned to consolidate a list of conservation significance fauna and flora known to occur within the Noosa Region. A total of forty-five (45) conservation significant fauna species were identified under the *Environment Protection and Biodiversity Conservation Act (EPBC)* and the *Nature Conservation Act (NCA)*. In addition, the paper succinctly identifies regional conservation threats and potential management actions.

3.1.3 Desktop review process

To ensure Information presented within this Road Map is current, information extracted from the above sources was cross-checked against the following resources;

- Environmental Protection and Biodiversity Conservation Act 'Protected Matters Search'
- The Nature Conservation Act 'Request a Species List'
- Qld Department of Environment and Science – 'Threatened Species Back on Track Status'

3.2 Findings

Noosa Shire is located within the south-east Queensland Bioregion, an area of exceptionally high biodiversity, lying in the zone where tropical and temperate land zones overlap. This provides for a set of conditions that support a great variety of plants and animals. Noosa has a large variety of all three levels of biodiversity, at the genetic, species and ecosystem level. These are supported by a wide range of ecosystem types, including rainforests, beaches, woodlands, wetlands, lakes, rivers, forests, mountains and marine areas.

3.2.1 Regional habitats

From the evaluation of supporting information, seven (7) key Noosa Regional habitat types were identified from a total of sixty-four regional ecosystems;

- Rainforests and Scrubs
- Eucalypt forests and woodlands
- Ecotones and combined habitats
- Freshwater waterways, wetlands and riparian zones
- Heaths and other coastal communities
- Mangroves and Saltmarsh
- Coastal and Marine

Actions Required under the Road Map

To achieve an integrated approach, key threatened species to be considered as management priorities should proportionally represent each of the regional key habitat types (listed above).

3.2.2 Regional threatened ecological communities

The Noosa Shire contains four (4) threatened ecological communities that are recognised and protected under the Commonwealth legislation (EPBC 1999);

- Critically Endangered Lowland Rainforest of Subtropical Australia (“Lowland rainforest”)
- Vulnerable Subtropical and Temperate Salt Marsh (“Saltmarsh”)
- Endangered Coastal Swamp Oak (*Casuarina glauca*) Forest
- Coastal Swamp Sclerophyll Forests (conservation advice soon to be listed)

Actions Required under the Road Map

To support other Council environment strategies, the nomination of key threatened species for management priorities should prioritise (where justified) fauna species that utilise threatened ecological communities.

3.2.3 Regional fauna of conservation significance

Through the comprehensive desktop review process, a total of thirty-four (34) regional conservation significant species were identified from the available resources. That is, regional species that are currently listed of conservation significance (least concern to critically endangered) under either the NCA and or EPBC Acts. Table 2 identifies the regional fauna species of conservation significance shortlisted for management priority under the NES.


Table 2: Identified regional fauna species of conservation significance

Species of National or State Conservation Significance		
Species	Current Conservation Status	
	EPBC	NCA
Mammals		
Central greater glider	Vulnerable	Endangered
Grey-headed flying-fox	Vulnerable	Least Concern
Koala	Endangered	Vulnerable
Water mouse	Vulnerable	Vulnerable
Birds		
Australian painted snipe	Endangered	Endangered
Black-breasted button-quail	Vulnerable	Vulnerable
Coxen's fig-parrot	Endangered	Endangered
Glossy black cockatoo	N/A	Vulnerable
Ground parrot	N/A	Vulnerable
Plumed frogmouth	N/A	Vulnerable
Powerful owl	N/A	Vulnerable
Red goshawk	Vulnerable	Endangered
Reptiles		
Common death adder	N/A	Vulnerable
Great sandy blind snake	N/A	Near threatened
Green turtle	Vulnerable	Vulnerable
Hawksbill turtle	Vulnerable	Endangered
Leatherback turtle	Endangered	Endangered
Loggerhead turtle	Endangered	Endangered
Mary River turtle	Endangered	Endangered
Olive ridley turtle	Endangered	Endangered
Frogs		
Cascade treefrog	N/A	Vulnerable
Giant barred frog	Vulnerable	Vulnerable
Tusked frog	N/A	Vulnerable
Wallum froglet	N/A	Vulnerable
Wallum rocketfrog	N/A	Vulnerable
Wallum sedge frog	Vulnerable	Vulnerable
Fish and Rays		
Australian lungfish	Vulnerable	N/A
Estuary stingray	N/A	Near threatened
Honey blue-eye	Vulnerable	Vulnerable
Mary River cod	Endangered	N/A
Oxleyan pygmy perch	Endangered	Vulnerable
Invertebrates		
Australian fritillary	Critically endangered	Endangered
Pink underwing moth	Endangered	N/A
Richmond birdwing butterfly	N/A	Vulnerable

Exclusions

The primary focus of Strategy 1.3 of the NES is to, 'Ensure populations of key threatened **indicator** species remain viable'. Species that fell under the following categories were excluded from Table 5 (not shortlisted), as the following species attributes do not satisfy the general requirements for an indicator species.

- **Migratory species with no regionally confirmed breeding activity**
Migratory Species (such as some shorebirds) which seasonally occur but do not breed within the Noosa Region, are not suitable indicator species for ecosystem health changes. This is because their regional presence may be a result of external impacts when the species is located outside of the Region.

- ***Species with very few, or no recent verified recordings with the region***

Species which have limited, or no recent recordings within the Noosa LGA (such as the Spotted-tail quoll) are not suitable indicator species. This is due to the inability to develop useful baseline population data monitoring data and indicative longitudinal studies as a measure of species and habitat recovery.

3.2.4 Regional threatening processes

From the desktop review of supporting information, the following threats to biodiversity values (and fauna) within the Noosa Shire Region were identified;

- Climate change impacts (temperature, sea level, fire and weather events)
- Planning and development (vegetation clearing and fragmentation)
- Inappropriate fire regimes (prescribed burning)
- Unsustainable and use practices and water management
- Invasive species (predation, competition, habitat degradation)
- Disease (species specific)
- Human / wildlife interactions and conflicts (vehicle strike, domestic animal predation, human conflict)
- Marine impacts (water quality, debris, boat strike, by-catch)
- Recreational impacts (increasing use of natural areas, four-wheel driving, boating and fishing etc.)

3.3 Summary of findings

The desktop review of supporting information (Section 3) identified the below findings relevant to the planning, development and implementation of threatened fauna conservation within the Noosa Region;

- Seven (7) key regional habitat types were identified
- Four (4) regional threatened ecological communities were identified
- Thirty-four (34) fauna species of either state or Commonwealth conservation significance were shortlisted
- Nine (9) regional threatening processes were nominated as key criteria to determine species success.

4. Evaluation

4.1 Decision Matrix

A comprehensive Decision Matrix is presented as Appendix One, which scores and ranks the shortlisted thirty-four fauna species in relation to their conservation status and susceptibility to regional threatening processes (the selection criteria). A total of nine species of conservation significance (the *Noosa Nine*) will be nominated for management priority through the Decision Matrix (Appendix One / Figure 2 below).

Figure 2: Decision Matrix (Refer to Attachment One for full matrix)

Criteria / Threat		Criteria																Total										
		Highly conservation advice listing (EPBC or MCA)	Primary utilisation of threatened ecological communities	Indicator of overall ecosystem change	Iconic status	Climate change	Development, land clearing and habitat fragmentation	Inappropriate fire regimes	Land use practices and water management	Invasive species	Disease	Negative human / wildlife conflicts	Major impacts (dams, boat strikes)	Recreational impacts														
Scoring		N/A = 0, Low = 1, Medium = 2, High = 3																										
Weighting		20%		15%		10%		10%		5%		5%		5%		5%		5%		100%								
Key Habitat Type	Species	Score	Weighted Score	TEC	Zone	Weighted	Score	Weighted	Zone	Weighted	Zone	Weighted	Zone	Weighted	Zone	Weighted	Zone	Weighted	Zone	Weighted	Score	Weighted	Score	Weighted	Max Score = 32			
Riparian and Scarce	Black-breasted Button-quail	2	4	Least Threatened	3	4.5	3	3.0	1	10	1	0.5	2	10	3	15	3	15	2	10	0	0.0	0	0.0	1	0.5	21.5	
	Cook's Frog	3	6	Least Threatened	3	4.5	3	3.0	1	10	1	0.5	1	0.5	2	10	3	15	2	10	0	0.0	0	0.0	1	0.5	20.5	
	Cook's Tree Frog	2	4	Least Threatened	3	4.5	3	3.0	2	20	2	10	1	0.5	3	15	3	15	3	15	0	0.0	0	0.0	1	0.5	21.0	
	Giant Buried Frog	2	4	Least Threatened	3	4.5	3	3.0	3	30	3	15	3	15	3	15	3	15	3	15	0	0.0	0	0.0	1	0.5	22.0	
	Plains Frogmouth	1	2	Least Threatened	3	4.5	3	3.0	1	10	1	0.5	1	0.5	2	10	2	10	2	10	0	0.0	0	0.0	1	0.5	16.0	
	Fish Underwing Moth	3	6	Least Threatened	3	4.5	1	1.0	1	10	0	0.0	1	0.5	3	15	3	15	1	0.5	0	0.0	0	0.0	1	0.5	19.0	
Endemic forests and woodlands	Black-headed Woodswallow	2	4	Least Threatened	3	4.5	1	1.0	3	15	3	15	3	15	3	15	3	15	1	0.5	0	0.0	0	0.0	1	0.5	19.5	
	Cook's Duck	2	4	Least Threatened	2	3	1	1	1	0.5	2	1	2	1	2	1	2	1	0.5	1	0.5	0	0	0	1	0.5	16.5	
	Greater Glider	2	4	Least Threatened	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0	0	0	1	0.5	16.0	
	Kaola	3	6	N/A	4	18	3	3	2	1	3	1.5	3	1.5	2	1	2	1.5	3	1.5	0	0	0	0	2	1	20.0	
	Parrotbill Owl	3	6	Least Threatened	1	1.5	2	2	3	3	1	0.5	3	1.5	2	1	2	1	1	1	0.5	0	0	0	1	0.5	16.5	
	Rufous Whistler	3	6	Least Threatened	1	1.5	2	2	2	2	1	0.5	3	1.5	2	1	2	1	1	0.5	1	0.5	0	0	0	1	0.5	16.0
Coastal Habitats (terrestrial and aquatic that reside across habitats)	Admiral Palmyra Snipe	3	6	Subsistent	4	18	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	4	2.0	31.0	
	Grey Black Duck	3	6	Coastal Subscript	3	4.5	3	3	3	3	1	0.5	3	1.5	3	1.5	3	1.5	3	1.5	0	0	0	0	1	0.5	21.5	
	Grey-headed Flying-fox	3	6	Least Threatened	3	4.5	2	2.0	3	3.0	3	1.5	1	0.5	2	1.0	1	0.5	3	1.5	4	2.0	0	0.0	3	1.5	22.0	
	Tusked Frog	2	4	Least Threatened	3	4.5	3	3.0	1	10	2	10	3	15	2	10	3	15	3	15	3	15	0	0.0	0	0.0	1	0.5

4.2 Selection criteria

Thirteen (13) criteria were used to score and rank species for management priorities. Weighting was applied to criteria critical to delivering Strategy 1.3 of the NES. Table 4 (below) lists the selection criteria and weighting used to nominate the *Noosa Nine*.

Table 4: Selection criteria and weighting

Criteria	Weighting
From Strategy 1.3	
Conservation advice	20%
Species utilisation of regional threatened ecological communities	15%
Sensitivity to overall ecosystem change (indicator species)	10%
Iconic status	10%
Threatening Processes	
Climate change impacts	5%
Development, land clearing and habitat fragmentation	5%
Inappropriate fire regimes	5%
Land use practices and water management	5%
Invasive species	5%
Disease	5%
Negative human / wildlife conflicts	5%

Marine impacts	5%
Recreational impacts	5%
Total	100%

4.3 Analysis

The thirty-four regional fauna species of conservation significance were scientifically scored and ranked against the selection criteria. This was undertaken through reference to the supporting information identifies in Section 3, particularly the DES *'Threatened Species Back on Track Status'* resource. Where information was absent or required interpolation (in the application of some selection criteria), evaluation was carried out by a suitably qualified person (Noosa Council Fauna Project Officer). Furthermore, the Decision Matrix (and this Road Map) has undergone an internal review process by suitably qualified Noosa Environmental Services staff members. Expert review is recommended prior to delivery of the final document.

External Review

It is intended to undertake a consultation program with external stakeholders, including key conservation groups to review the content of this Draft Road Map. A consultation plan will be developed in accordance with Council's templates and distributed internally for further review (see Section 6, Delivery).

Please refer to Attachment One for the Decision Matrix used to nominate the *Noosa Nine*.

4.4 Species representation across habitats

To deliver an integrated approach, the distribution of the *Noosa Nine* (where justifiable) should proportionally represent each of the region's seven key habitat types. Attachment One (Decision Matrix) identifies species primary use of each of the key habitat types. Table 3 summarises this breakdown, and then indicates an optimum spread of the *Noosa Nine* across the seven key habitats. Given the range of some species cross between habitats, it is preferable to select two species from *'Ecotones and combined habitats'* to ensure overall representation and conservation of regional biodiversity values.

Table 3: Optimal spread of the *Noosa Nine* across key habitat types

Major Habitat Type	Shortlisted Species	Suggested spread of the <i>Noosa Nine</i>	Proposed Species
Rainforests and Scrubs	7	2	Giant barred frog Richmond birdwing butterfly
Eucalypt forests and woodlands	5	1	Koala
Ecotones and combined habitats	4	2	Glossy black cockatoo
Freshwater waterways, wetlands and riparian zones	5	1	Mary River cod
Heaths and other coastal communities	6	1	Wallum sedge frog
Mangroves and Saltmarsh	1	1	Water mouse
Coastal and Marine	7	1	Loggerhead turtle
Totals	35	9	<i>Noosa Nine</i>

5. Results

5.1 The Noosa Nine

Under the identified selection criteria, the Decision Matrix scored the following species (in alphabetical order) as most suitable to deliver Strategy 1.3 of the *NES*;

- Giant barred frog
- Glossy-black cockatoo
- Grey-headed flying fox
- Koala
- Loggerhead turtle
- Mary River cod
- Water mouse
- Richmond birdwing butterfly
- Wallam sedge frog

5.2 Management priorities

The more threatened a species is, the higher susceptibility it may be to regional or national extinction. Therefore, it is appropriate and justifiable to prioritise resources to these more vulnerable species. For some species (koalas), Council already has active monitoring and management programs in place. However, this should not impact species prioritisation over the ten-year life of the *NES* (see Section 6 - Delivery). In relation to conservation advice, Table 5 proposes the temporal prioritisation for threatened fauna conservation for the remainder of the *NES* (to 2029).

Table 5: Proposed temporal prioritisation for threatened fauna conservation

Habitat	Species	Species Conservation Status		Priority	Significant Beneficiaries
		EPBC	NCA		
Coastal and marine	Loggerhead turtle	Endangered	Endangered	Medium	Green and other marine turtles
Eucalypt forests and woodlands	Koala	Endangered	Vulnerable	High	-
Freshwater waterways, wetlands and lakes	Mary River cod	Endangered	-	Medium	Mary River turtle
Mangroves and saltmarsh	Water mouse	Vulnerable	Vulnerable	Low	Saltmarsh
Rainforests and Scrubs	Giant barred frog	Vulnerable	Vulnerable	Low	Lowland Rainforest
Heaths and other coastal communities	Wallum sedge frog	Vulnerable	Vulnerable	Low	Acid Frogs
Ecotones and combined habitats	Glossy black cockatoo	-	Vulnerable	High	-
	Grey headed flying-fox	Vulnerable	Least Concern	High	Other Flying-foxes
Rainforests and Scrubs	Richmond birdwing butterfly	-	Vulnerable	High	Lowland Rainforest

6. Delivery

This Road Map now places Council in a position where the appropriate scientific justification, planning and consultation mechanisms are in place to implement Strategy 1.3 of the NES. Council's foremost organisational commitments to Strategy 1.3 are;

- 'Significant implementation actions for the first 3 years'
- 'Ensure populations of key threatened indicator species remain viable'

6.1 Threatened species recovery and conservation strategies

6.1.1 Case Study – Noosa Council Koala Conservation Plan

As an example, Noosa Council has been pro-active in ensuring regional populations koalas remain viable into the future through the development and implementation of the Noosa Shire Koala Conservation Plan 2016. The twenty-seven point action plan works together with community and various stakeholders to ensure that koalas remain an essential component of Noosa's biodiversity.

6.1.2 Approach - species recovery and conservation plans

The development of species recovery and conservation plans are a scientifically accepted, and widely adopted method to implement threatened species conservation (DES 2021). As well as habitat conservation at the broad landscape level, some species will also require interventions at the site level to address threatening processes (e.g. climate change). Threatened species recovery and conservation plans will be developed and implemented for the *Noosa Nine*.

6.2 Development and implementation

Typical elements within a species recovery and conservation plan include;

- Review of species biology, ecology, and distribution
- Consolidation of available population baseline monitoring data
- Identification of key habitat requirements of the species
- Identify the current and future threatening processes likely to impact species viability
- Review of previous and current management strategies
- Consultation with relevant stakeholders (external agencies and community groups)
 - *It is intended to undertake a consultation program with external stakeholders, including key conservation groups. Consultation plans will be developed in accordance with Council's templates and distributed internally for review.*
- The identification of any social or economic considerations
- Joint development and implementation of monitoring programs and management actions
- Development and measurement of key performance indicators (longitudinal monitoring programs).
- The periodic review (and potential improvement) of the recovery and conservation plan.

6.3 Periodic review

Threatened species recovery and conservation plans must be periodically reviewed to ensure their effectiveness under changing funding opportunities, evolving threats, and as new population data becomes available. Review may also be required when longitudinal studies indicate notable changes in a species population or distribution.

Pre-determine key performance indicators (KPIs) will be used annually to evaluate species and habitat recovery progress, and to identify when management or monitoring actions need to be reviewed. Metrics used will be species specific, however examples of KPIs that will be used for the *Noosa Nine* will likely include are;

- Annual (census) population trends
- Breeding effort and success
- Habitat and ecosystem condition
- Type and quantity of human / wildlife interactions
- Active community and stakeholder involvement
- Longitudinal population and distribution monitoring data

6.4 Anticipated delivery and resources

A staged implementation approach is recommended to deliver Strategy 1.3, this will promote;

- Maximum outcomes for minimal investment
- Allow for any potential project risks to be identified and mitigated
- Opportunity for increased stakeholder involvement

Provided below is an Anticipated Delivery Schedule and Budget, which identifies the key milestones and deliverables of the program. A budget estimate (per financial year) has been proposed to deliver Strategy 1.3 over the remaining seven years of the *NES*.

Table 6: Draft Anticipated Delivery Schedule and Budget Estimates

Milestone	Items	Financial Year															Funding Totals	
		2021/2022			2022 / 2023			2023 / 2024			2024 / 2025			26 / 27	27 / 28	28 / 29		
		April	May	June	Oct	Feb	June	Oct	Feb	June	Oct	Feb	June					
Project Development	Review of supporting information																	
	Analysis																	
	Draft Implementation Plan																	
Funding, Consultation and Finalise Plan	Draft Implementation Plan to Council				Oct													
	Funding approval					Feb	June	Oct	Feb	June	Oct	Feb	June					
	Community consultation and expert review																	
	Final Implementation Plan to Council																	
Species Recovery Plans	Consolidate baseline data				Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7	Species 8	Species 9					
	Stakeholder consultation																	
	Development of monitoring / management programs																	
Implementation	Implementation of Recovery Plan - Priority Species 1						\$10,000			\$5,000		\$5,000		\$5,000	\$5,000	\$5,000	\$5,000	\$ 35,000
	Implementation of Recovery Plan - Priority Species 2						\$7,500			\$7,500		\$5,000		\$5,000	\$5,000	\$5,000	\$5,000	\$ 35,000
	Implementation of Recovery Plan - Priority Species 3									\$10,000		\$5,000		\$5,000	\$5,000	\$5,000	\$5,000	\$ 30,000
	Implementation of Recovery Plan - Priority Species 4									\$10,000		\$5,000		\$5,000	\$5,000	\$5,000	\$5,000	\$ 30,000
	Implementation of Recovery Plan - Priority Species 5									\$7,500		\$7,500		\$5,000	\$5,000	\$5,000	\$5,000	\$ 30,000
	Implementation of Recovery Plan - Priority Species 6											\$10,000		\$5,000	\$5,000	\$5,000	\$5,000	\$ 25,000
	Implementation of Recovery Plan - Priority Species 7												\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$ 25,000
	Implementation of Recovery Plan - Priority Species 8													\$7,500	\$5,000	\$5,000	\$5,000	\$ 22,500
	Implementation of Recovery Plan - Priority Species 9														\$10,000	\$5,000	\$5,000	\$ 20,000
Funding	Yearly Funding Totals (ex. GST)						\$17,500			\$40,000			\$55,000	\$50,000	\$45,000	\$45,000	\$ 207,500	
Review	Periodic progress review of all species Recovery Plans (using pre-determine metrics)						x			x			x	x	x	x	x	-
Staffing	Annual staffing effort to implement the Noosa Threatened Fauna Recovery Road Map						1.0 FTE			1.0 FTE			1.0 FTE	1.0 FTE	1.0 FTE	1.0 FTE	1.0 FTE	-

7. Priority Recommendations

To deliver Council's commitment to significant implementation of Strategy 1.3 of the *Noosa Environment Strategy* by 2022, the following priority recommendations require action for the 22/23 financial year.

1) Staff funding to implement year one deliverables of the Road Map

Item 1: Funding for 1.0 FTE Council Officer to implement;

- Community consultation and expert review of the Road Map
- Finalisation of the Noosa Threatened Species Recovery Road Map
- The development of three (3) priority threatened species recovery and conservation plans
- The implementation of two (2) priority threatened species recovery and conservation plans

2) Funding contribution for the progressive implementation of two (2) threatened species recovery and conservation plans

Item 2: \$17,500 in funding to deliver;

- Priority Species One - Recovery and Conservation Plan Implementation (year one) = **\$10,000**
- Priority Species Two - Recovery and Conservation Plan Implementation (year one) = **\$7,500**

8. Conclusion

As of 23rd March 2022, Council appointed a Fauna Management Project Officer to develop a Threatened Fauna Recovery Road Map (this document). With the appropriate scientific justification, planning and consultation mechanisms now in place, Council is in a timely position to deliver the following organisational commitments under Section 1.3 of the *Noosa Environment Strategy*;

- 1) *'Significant implementation actions for the first 3 years'*
- 2) *'Ensure populations of key threatened indicator species remain viable'*

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10. References

- Australian Government (1999) *Environmental Protection and Biodiversity Conservation Act*
- Australian Government (1999) *Environmental Protection and Biodiversity Conservation Act 'Protected Matters Search'*
- Eco Logical (2016) *Noosa Biodiversity Assessment Report*
- Noosa & District Landcare (2019) *Noosa Shire Priority Species Assessment*
- Queensland Department of Environment and Science (2022) *Threatened Species Back on Track Status*
- Queensland Government (2022) *Nature Conservation Act*
- Queensland Government (2022) *Nature Conservation Act 'Request a Species List'*
- Noosa Shire Council (2019) *Noosa Environment Strategy*
- Noosa Shire Council (2016) *Noosa Shire Koala Conservation Plan*