



Bring Back the Koala

JUNE 2020

FUNDING PROSPECTUS

Noosa Biosphere Reserve Foundation



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Acknowledgements

We acknowledge the Traditional Custodians of the Noosa region, the Kabi Kabi people and respect their continuing culture and contribution to our region.

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- Australia Zoo Wildlife Hospital
- Endeavour Veterinary Ecology
- Koala Tracker
- Noosa District Landcare Group
- Noosa Shire Council
- Queensland Koala Crusaders
- Sunshine Coast Regional Council
- University of the Sunshine Coast - Prof Peter Timms
- University of the Sunshine Coast - Dr Celine Frere
- Wildcare

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Executive Summary

We've seen an eighty percent decline in the number of koalas across South East Queensland in the last ten years. We are running out of koalas. And they are running out of time.

In fact, while you are reading this, wild koalas in our region are dying. There is broad, overwhelming public interest (both locally and nationally) in conserving koalas populations, placing increasing pressure on ensuring appropriate management of koalas and its habitats. In 2004, the Queensland Government listed the koala as Vulnerable, however it's widely recognised that reliance on regulatory frameworks alone will not secure the species' future.

That's the sad truth. The next few years are shaping up to be our last opportunity to preserve the koala in the wild in South East Queensland. If not, when future generations ask who let the koala go, the answer will be us.

It must be noted that while there has been much attention and activity aimed at koala preservation in the wild it has not been efficacious – largely because these efforts have been isolated and uncoordinated. Simply put, isolated activities have not and will not succeed in preserving our most iconic animal – certainly not in a scalable manner or over the long term.

The Noosa Biosphere Reserve Foundation (NBRF) is working to bridge the gap between the latest scientific research and common goals and collective effort of koala rescue and land management groups within the Noosa Biosphere Reserve and surrounding regions. In 2019, NBRF sponsored its first Koala Symposium and launched the Bring Back the Koala initiative detailed in this Prospectus.

As a first step, we invited representatives from the major stakeholders and groups active in koala care and conservation in our region including local governments, university researchers, wildlife organisations and community groups to sit down together, share their work, look for gaps in knowledge and/or application and develop a focused plan of action that would make a difference.

In this Prospectus we propose to create a coordinated and comprehensive program that combines a number of initiatives and participating organisations to address the many contributing factors that contribute to the decline of Noosa's koala population. Our aim is that this collaborative effort will allow our local koala to recover and result in a sustainable, disease-free wild koala population in the Noosa Biosphere Reserve; providing substantial and sustainable economic and social value to the Noosa Shire.

There are three priority areas we seek investment in:

- **Reducing the impact** of key threatening processes for both rural and urban koala populations in the Noosa Biosphere Reserve.
- **Map, protect and enhance** koala habitat condition and connectivity.
- **Genetic management** and improved reproductive success.

We invite you to be part of the solution as we work to Bring Back the Koala in the Noosa Biosphere Reserve. **They need us. We need you.**

The Noosa Biosphere Reserve

World Class. It's in our Nature.

The Noosa region is distinct from other, more developed urban areas on the Sunshine Coast and elsewhere in Australia. The Noosa Shire is a unique learning site for sustainable living. The factors that have helped shape the Noosa Biosphere Reserve include its unique natural landscape, social history, cultural traditions, government and regulatory systems as well as its political, social and economic activities. The Noosa Biosphere Reserve boundary, known as the Noosa Shire, extends from Peregian Beach in the south to Kin Kin in the north and from neighbouring townships in the western hinterland to Noosa's eastern beaches plus three kilometres offshore.

Designation as a UNESCO Biosphere Reserve reinforces Noosa's reputation as an environmental success story. Our Biosphere Reserve status helps Noosa demonstrate to communities around the world how environmental protection lies at the heart of a community's prosperity and success.

It is our vision that the Noosa Biosphere Reserve will be a place which demonstrates how communities can live in harmony with nature. We seek to support a vibrant local community that achieves a wise balance of biodiversity conservation and sustainable development—and delivers an experience that is increasingly valued by residents and visitors.



The Noosa Biosphere Reserve Foundation

The Noosa Biosphere Reserve Foundation (NBRF) is a not-for-profit organisation established by the Noosa Shire Council to identify and action 'Big Ideas' aligned with the aims of the UNESCO Man and the Biosphere (MaB) Program.

Our role is to manage a charitable trust to support projects that enhance biodiversity conservation and promote sustainable living in Noosa. The NBRF skills-based volunteer board of directors has set strategic priorities unique to the Noosa Biosphere Reserve, enabling science-based projects to deliver on-ground actions to meet these objectives.

The Noosa Biosphere Reserve:

- Is the first designated biosphere reserve in Queensland and covers approximately 150,000 hectares of freshwater/tidal and terrestrial areas.
- Is one of two biosphere reserves in Queensland with neighbouring Great Sandy Biosphere Reserve.
- Is located within the MacPherson-Macleay overlap, where temperate and subtropical climate zones meet.
- Has a population of approximately 55,000.
- Has a local economy largely based on tourism, with more than 2 million visitors annually to the Noosa Shire who spent a record \$1.1b in 2019.
- Contains 35% of its area protected in national parks, conservation parks, State forests, and lakes.
- Includes an ocean corridor important to mega marine fauna such as nesting turtles and the annual humpback whale migration.
- Has 61 distinct regional ecosystems, 8 of them are on the endangered list, and 12 are rated as regionally significant.
- Includes a species-rich river and lakes system with 2 nationally important wetlands, the Noosa River and Lake Weyba.
- Is home to 3,023 wildlife species, including 10 iconic species including the koala



The Koala Conservation Dilemma in the Noosa Biosphere Reserve



There is broad, overwhelming interest (both locally and nationally) in conserving koala populations. This support, together with the expectation of seeing koalas in the wild by international visitors, has placed increasing pressure on ensuring appropriate management of koalas and its habitats. In 2004, the Queensland Government listed the koala as Vulnerable and in 2012, the Australian Commonwealth Government listed the koala as Vulnerable in Queensland and New South Wales in recognition of the reduction in the distribution of the species, and more than a 30% decline across its range.

Of particular concern is the recent publication by the Queensland Government of results from long-term koala surveys that highlighted a significant 50-80% decline in koala numbers in key habitat areas across coastal South East Queensland¹—a trend likely to be experienced in the Noosa Biosphere Reserve. In response to those alarming results, the Queensland Government released its *Draft South East Queensland Koala Conservation Strategy 2019-24*². The draft strategy outlines measures to protect koala habitat and address the primary threats impacting South East Queensland's koala population, namely habitat loss, disease management, car strikes and dog attacks. Important populations considered under particular threat are those associated with the ongoing urban development across South East Queensland.

The recognition of increased protection under legislation is an important step in koala conservation efforts, but it is widely regarded that reliance on regulatory frameworks alone will not secure the species' future. In recognition of this, the Noosa Biosphere Reserve Foundation together with the University of Sunshine Coast led the development of an innovative research program aimed at better defining koala distribution and genetic diversity across the Noosa Biosphere Reserve³. The two research projects provided significant insights into the Noosa koala population distribution and structure. These projects, together with *Noosa Council's Noosa Shire Koala Conservation Plan 2016 – a response to the Noosa Council's 2015 Koala Conservation Policy*⁴, support conservation efforts for wild koala populations in the Noosa Biosphere Reserve. In parallel, ongoing efforts from community volunteer care and rescue groups continue to invest significant resources into rescuing, caring and releasing koalas back to the wild delivering an important management outcome.

1 South East Queensland Koala Population Modelling Study (Rhodes et al. 2015)

2 [Draft South East Queensland Koala Conservation Strategy 2019-24](#)

3 Mapping Koala Health - noosabiosphere.org.au/portfolio/mapping-koala-health
Koala Forever Noosa - noosabiosphere.org.au/portfolio/koala-forever-noosa

4 [Noosa Shire Koala Conservation Plan 2016](#)

Despite such efforts, wild koala populations in the Noosa Biosphere Reserve remain under threat.

The Noosa Biosphere Reserve Foundation (together with researchers, regional councils, koala conservation and rescue groups) have identified key Priority Actions that close the gap between existing efforts in place across the Noosa and Sunshine Coast region and provide a research-based plan to support a sustainable wild koala population in the Noosa Biosphere Reserve. This plan aligns with the overarching objectives of the Queensland Government's SEQ Draft Strategy and provides an opportunity for donors to play an integral role in creating an exemplary showcase of a sustainable wild, disease-free koala population.





Vision

A sustainable wild koala population in the Noosa Biosphere Reserve that is supported by a coordinated regional task force of koala conservation, care and research groups, and local government

The Noosa Biosphere Reserve is an exemplary showcase of a thriving, disease-free koala population.

Aim of this Prospectus

Recognising the community will for action, and the importance of iconic species such as koalas to local industry, the NBRF took an important initiative to bring together a group of recognised koala specialists to define critical management priorities for koalas in the Noosa Biosphere Reserve at the 2019 Koala Symposium.

The outcomes of the Symposium are captured in this Prospectus – considered to be a “call to arms” for which the NBRF remains a promoter and advocate for investment to Bring Back The Koala in the Noosa Biosphere Reserve.

Collaborative Opportunities

How you can be involved

The NBRF is seeking investment from industry, philanthropists and other interested individuals or organisations who recognise the importance of investing in on-ground initiatives to support the conservation and recovery of koalas in the Noosa Biosphere Reserve.

It is our aim to ensure the outcomes of the Koala Symposium are fully funded, to provide the best chance for future generations and international visitors to enjoy seeing koalas in the wild in Noosa.



Priority Actions

Our recognised koala specialists who participated at the Koala Symposium worked collaboratively to identify the priority actions to support the development of koala conservation priorities across the Noosa Biosphere Reserve.

A key outcome of the Symposium was the need to focus only on those actions that were additive, and did not duplicate the excellent work being undertaken by a variety of organisations in the region – including industry, research institutions, Noosa Shire Council and the community.

To this end, the graphic below summarises the priority actions.



1.

Priority Actions

Reduce the impact of key threatening processes for rural and urban koala populations.

Wild koala populations in most areas are declining due largely to the impact of widespread disease, dog attacks (wild and domestic) and vehicle strikes - in addition to development and deforestation. The proportion and specifics of these threats vary from region to region as well as between urban and more rural segments of each region.

As there are a variety of organisations involved in koala care and research this information is often segregated and thus not utilised to plan more specific solutions by region or area. We would propose to create a koala task force to collect and, working with relevant organisations, apply this knowledge.

Focus areas would include:

- **Commence a full-scale vaccination program** starting with key koala care facilities for all koalas that come into care, participate in research and/or are health assessed in the field. Monitoring and follow up testing to be conducted to validate results. Potential to extend program geographically and also shift from passive to pro-active in field application if warranted.
- **Create a central “hub”** with inputs on existing and ongoing data from all sources (ex. Australia Zoo Wildlife Hospital, Eumundi Wildlife Centre, Endeavour Vet Ecology etc) to collate and review numbers and ratios relating to koala injury, illness and mortality to identify the nature and proportional threats by region (segmenting largely rural from urban populations as relevant).
- **Create an expertise based team** to consult with state and local organisations and communities as applicable in mitigating the threats identified above by offering best practice solutions tailored for each region. Areas of focus would include wild dog control, education and enforcement relating to domestic dogs, signage/fencing/vegetation management and other road vehicle strike reduction tactics.

2.

Priority Actions

Map, protect and enhance koala habitat condition and connectivity.

It has long been argued that appropriate mechanisms to protect the most important areas for koalas, and connect important populations, requires the identification and mapping of koala habitats. Specifically across south-east Queensland, with important koala populations in the Gold Coast, Koala Coast (the Redlands), Pine Rivers and the Sunshine Coast, koala habitat has been mapped using a variety of techniques and at various scales over the last two decades.

In 2010, the Queensland Government released koala habitat values mapping which identified bushland habitat areas, potential rehabilitation areas and urban areas with koala habitat value. This mapping is applicable under the Planning Act 2016 (and previously applied to the South East Queensland Koala Conservation State Planning Regulatory Provisions (Koala SPRP)) with the aim of improving koala habitat protection and regulation in Koala Priority Areas in south-east Queensland.

In 2019, a new set of koala habitat maps have been released for public comment, with the view of improving mapping accuracy and habitat protection mechanisms via the draft South-east Queensland Koala Conservation Strategy 2019-2024. While this initiative is to be commended, there is a perceived issue of scale and the potential exclusion of important local data to underpin the mapping product. Indeed, the focus of koala habitat protection under the draft Conservation Strategy is restricted to Koala Priority Areas (KPA's), which includes already protected habitat within the conservation estate and excludes large areas of important koala habitat that occur outside of the KPA's.

The efforts of Noosa Shire Council and Noosa Parks Association have successfully received funding from the Queensland Government for restoration of koala habitat in the Yurol/Ringtall corridor, linking important koala habitat outside of the urban footprint. Such an important investment has highlighted the need to continue to invest in increasing the quality and quantity of connectivity. Indeed, the NBRF has commissioned the University of the Sunshine Coast (USC) to define important koala corridors across the Noosa Biosphere Reserve, to support future investment in corridor protection, connection and restoration. This work is due to be complete in mid-2020⁵.

2. continued

With this background, it is the purpose of this Action to compile data from a variety of data sources (local and State) to refine and increase the accuracy of koala habitat mapping in the Noosa Biosphere Reserve. It is the intent to define koala habitat in a single mapping product to support the:

- **Identification** of regulatory change that will provide better protection to important koala habitat areas outside of the conservation estate and KPA's, including both State and Local.
- **Government regulatory provisions.**
- **Investigate** the use and implementation of conservation agreements and other incentives for private landowners who protect koala habitat.
- **Define** areas that see the Noosa Biosphere Reserve become a receiving site for koala offsets/funding, particularly in important koala corridors and vegetation linkages.
- **Invest** community efforts in a planned and strategic habitat restoration campaign, targeting important koala corridors and vegetation linkages.

3.

Priority Actions

Genetic management and improved reproductive success.

Understanding the role of genetics in koala populations, both at the individual and landscape scale, is an emerging area of science. While environmental change (habitat clearing, degradation, isolation) is occurring faster than genetic change in populations, increased relatedness of koalas within a population (inbreeding) increases the risk of a reduction in reproductive success. There is little understanding of the mechanics of inbreeding on koalas, but the potential of reduced reproductive success in combination with environmental change may have significant detrimental impact on populations.

Genetically robust individual koalas that have the ability to adapt quickly to a changing landscape may have an important evolutionary advantage over others. While there is a widely held view that the stresses caused by environmental change can increase the susceptibility of koalas to chlamydial infection, outcomes from recent research provides evidence to suggest that some koalas, due to their genetic make-up, are less susceptible to chlamydial infection. Significant potential exists if the adaptive genes could be located, then our understanding of how to manage individuals and populations with the genes that provide resistance could reduce the susceptibility of koalas to disease and in-turn increase reproductive success.

It is proposed that to achieve a greater understanding of koala genetics and improving reproductive success, the following key actions require investment:

- **Conduct a feasibility study**, through review of existing data on koala genetics in the Noosa Biosphere Region, the potential for a large-scale study of koala genetics. The aim would be to determine the potential for a landscape scale research program and the positive effect on reproductive success that would result from a better understanding of koala population genetics.
- **Deliver a detailed field based research program**, with an unprecedented focused sampling program of koala genetic material, to determine what genes provide improved resistance to disease and management of inbreeding, ultimately improving reproductive success in wild populations and improving disease resistance.

Return on Investment

The NBRF is excited by the prospect of collaborating with potential donors from industry, philanthropists and other interested individuals or organisations who recognise the importance of investing in on-ground initiatives to support the conservation and recovery of koalas in the Noosa Biosphere Reserve.

The “Bring Back the Koala” campaign provides a unique opportunity to secure the future of wild koalas in Noosa. This includes:

- The potential to create a disease free koala population;
- To secure important koala habitat outside of the current reserve network; and
- Shift the balance that returns the Noosa koala population to a healthy breeding population, from its current declining status.

It is our intention to work in close collaboration with our funding partner/s to fully cost and fund the “Bring Back the Koala” campaign. To do so, we envisage a range of investment as summarised below.

ACTION	INDICATIVE FUNDING
1. Reduce key threatening processes	\$350,000 - \$400,000
2. Map, protect and enhance koala habitat	\$200,000 - \$250,000
3. Genetic management and breeding success	\$350,000 - \$450,000

In essence, our collaborating funding partner will lay claim to a return on investment that secures the koala’s future in Noosa, returning the population from dozens of individuals to a healthy and thriving population to be enjoyed by future generations.



Participation and Action

Noosa Shire actions in progress

The Noosa Biosphere Reserve Foundation together with the University of Sunshine Coast has led the development of an innovative research program aimed at better defining koala distribution and genetic diversity across the Noosa Biosphere. The two projects are providing significant insights into the local koala population distribution and structure. These projects, together with Noosa Council's Noosa Shire Koala Conservation Plan (2016), support conservation efforts for wild koala populations in the Noosa Biosphere Reserve. In parallel, ongoing efforts from community volunteer care and rescue groups continue to invest significant resources into rescuing, caring and releasing koalas back into the wild delivering an important management outcome.

Despite ongoing efforts from researchers, councils, conservation and land management, and wildlife rescue groups, wild koala populations in the Noosa Biosphere Reserve remain under threat. The 2019 Koala Symposium brought together regional councils and recognised koala specialists from across the Noosa and Sunshine Coast regions to define critical management priorities for koalas in the Noosa Biosphere Reserve. The collective knowledge, expertise and transfer of ideas were met with a commitment to robust discussion and promotion of innovation across industry groups. The outcomes from the Symposium are the identified Priority Actions outlined in this Prospectus—a community call to arms—to achieve a shared goal to save and protect Noosa's iconic koala species.

What needs to be done?

As there are a variety of organisations involved in koala care and research, information is often segregated and thus not utilised to plan more specific solutions by region or area. Participants of the Koala Symposium identified that what was needed from the Bring Back the Koala program were Priority Actions that focus only on those actions that are additive, and do not duplicate the excellent work already being undertaken by a variety of organisations in the region – such as industry, research institutions, Noosa Shire Council and the community. The three broad

Priorities identified at the Symposium include: reducing the impact of key threatening processes for rural and urban koala populations; map, protect and enhance koala habitat condition and connectivity; and implement genetic management and improved reproductive success.

Our solution to saving Noosa's koala population is to close the gap between organisations and harness the collective energy from local expertise and resources into shared Priority Actions for the region with a common goal: to establish

an environment where Noosa koala populations can be well understood, better managed and thrive well into the future. This plan of actions will require significant investment from

a group of like-minded investors, philanthropists and organisations who are committed to working together for the benefit of the koala.

The opportunity

The NBRF is seeking investment from industry, philanthropists and other interested individuals or organisations to support the conservation and recovery of koalas in the Noosa Biosphere Reserve. Funding would be used to activate the delivery of the Priority Actions identified in this Prospectus. It is our aim to ensure the outcomes of the Koala Symposium are fully funded,

to provide the best chance for future generations and international visitors to enjoy seeing koalas in the wild in Noosa. Noosa has the community will, a common goal and the resource and capability to achieve the vision of the Bring Back the Koala program, if we work together, cohesively as a region with project partners and investors.

Working together

The Noosa and Sunshine Coast regions have a strong network of conservation, research and management groups dedicated to the future of Noosa's koala population. The NBRF is committed to promoting and advocating for the Bring Back the Koala project to achieve its aims by working cohesively with investors, partners and stakeholders. It is envisaged that participant groups from the Koala Symposium continue to be actively engaged once funding is secured, for their local expertise and involvement in implementing on-ground actions. These groups with early interest in collaborative engagement include:

- Australia Zoo Wildlife Hospital
- Endeavour Veterinary Ecology
- Koala Tracker
- Noosa District Landcare Group
- Noosa Shire Council
- Queensland Koala Crusaders
- Sunshine Coast Regional Council
- University of the Sunshine Coast - Prof Peter Timms
- University of the Sunshine Coast - Dr Celine Frere
- Wildcare



Contacts

Get in touch with the NBRF

To enquire about investment and collaborative opportunities, or how you can be involved in the future of the Noosa koala, contact the Noosa Biosphere Reserve Foundation.



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Visit our website for more information about the Noosa Biosphere Reserve, the NBRF and its projects.



www.noosabiosphere.org.au

