



NSW Koala Strategy 2018–19 Annual Report

Stabilising and increasing koala populations in NSW



Foreword



The Hon. Matt Kean, MP

Minister for Energy and Environment

Seeing a koala in the wild in New South Wales is an incredible experience, and one that I want to make sure future generations are also able to share. To achieve this goal, the NSW Government released the NSW Koala Strategy on 6 May 2018, supported by \$44.7 million in funding.

The NSW Koala Strategy sets out a range of conservation actions over three years and is the foundation for the Government's longer-term goal to increase koala populations across the State. It also benefits other native flora and fauna. It is one part of our commitment to ensure our threatened species continue to survive in the wild.

It is exciting to reflect on the progress made over the first year of implementation. When you read through this report, you will see we have already protected more than 6800 hectares of koala habitat.

We are supporting communities to take on-ground action to protect their local koala populations and to connect online using a new koala community website.

We have taken steps to enhance the safety of koalas by constructing koala fencing along a busy road in south west Sydney, and we have established the Australian Museum as the official repository for koala genetic material in New South Wales. We have released the 10-year NSW Koala Research Plan and are funding important koala-focused research.

I am inspired by the tireless conservation efforts of communities working on the ground to protect koalas. Community efforts are fundamental to delivering the NSW Koala Strategy. Over the coming year we will be learning from Aboriginal communities how best to protect koala habitat, we will be implementing a statewide koala monitoring program that will involve citizen scientists, and we will be finding ways to better support koala rehabilitators and veterinarians to continue their vital work looking after our sick and injured koalas.

In addition to the NSW Koala Strategy, the NSW Government continues to direct resources to other koala conservation projects. We are funding a new Koala Park and Education Centre in Gunnedah that will deliver koala conservation, as well as a top-class tourist destination. We are funding construction of a koala holding facility near Pottsville, where koalas can be vaccinated against chlamydia. We are also supporting the community in the Northern Rivers region to build a local wildlife hospital.

Thanks to all who have contributed to our achievements during the first year of implementing the NSW Koala Strategy. We look forward to continuing to work together and delivering on our commitments to protect the koala.

The Hon. Matt Kean, MP

Minister for Energy and Environment



Dr Chris Armstrong
Deputy Chief Scientist & Engineer,
Chair, Koala Strategy Independent Expert
Advisory Panel



Professor Kathy Belov
Professor Comparative Genomics,
Pro Vice-Chancellor Global Engagement,
School of Life and Environmental Sciences,
The University of Sydney



Dr Carolyn Hogg
Research Manager, Australasian Wildlife
Genomics Group,
School of Life and Environmental Sciences,
The University of Sydney



Dr Rebecca Johnson
Director,
Australian Museum Research Institute



Associate Professor Jonathan Rhodes
School of Earth and Environmental Sciences,
The University of Queensland

Statement of the Expert Advisory Panel

An annual meeting was convened with the Office of the NSW Chief Scientist & Engineer and other Independent Expert Advisory Panel members to review the work completed during this first year of implementation of the NSW Koala Strategy. Their commentary on progress to date and priorities for the coming year informed this annual report.

The Koala Strategy Independent Expert Advisory Panel recognises the considerable work undertaken by the former Office of Environment and Heritage (now Department of Planning, Industry and Environment) and its partners in beginning to implement the NSW Koala Strategy over the past year.

Some highlights include the purchase, protection and conservation of around 6830 hectares of koala habitat, 13 community engagement workshops held across New South Wales that have provided localised insights and actions to mitigate threats to koala populations, and the development of the NSW Koala Research Plan that also drew on significant stakeholder and community engagement.

We see priorities over the next year being:

- Completion, public release and use of the koala habitat information base. This will help guide the purchase of koala habitat and enable strategic land-use planning by NSW Government agencies to protect koala habitat.
- Development and implementation of the NSW Koala Monitoring Plan. Monitoring populations across the State is important to measure the effect of the actions of the Koala Strategy, to further grow the information base with data about NSW koala populations, and to identify where urgent intervention is needed.
- Continue to build the Australian Museum’s koala genetic biobank, by encouraging contributions from all researchers, consultants, rehabilitators, vets and community groups. The ongoing collection, archiving and curation of the samples has the potential to improve the monitoring of the genetic diversity of the koala across New South Wales, enhancing the effectiveness of interventions.

The Panel looks forward to seeing the future developments of the strategy and how it will contribute to the objective of stabilising and increasing koala numbers in the wild over the long-term, ensuring genetically diverse and viable populations across New South Wales.

NSW Koala Strategy at a glance



Koala habitat conservation

- Permanently conserve priority koala habitat as national parks
- Protecting koala habitat through new koala reserves
- The Biodiversity Conservation Trust (BCT) to prioritise koala habitat for funding
- Management of crown land, travelling stock reserves and other public land to conserve high-quality koala habitat
- Government agencies will assess koala habitat values to guide the future use of excess land



Conservation through community action

- Deliver local actions to protect koala populations
- Learn from Aboriginal communities on protecting koala habitat
- Develop an online community portal on koalas



Safety and health of koala populations

- Create a network of koala and wildlife hospitals and vet services across NSW
- Research project on chlamydia in koalas
- Fix priority koala road kill hotspots across NSW
- Relocation of koalas to unoccupied koala habitat
- Support koala rehabilitators
- Train vets in native wildlife care
- Develop a best practice planning guideline for koalas
- Australian Museum is designated as the biobank to store koala genetic information in NSW



Building our knowledge

- Create a statewide koala habitat information base to inform koala conservation decisions
- Statewide citizen science koala survey
- Pilot an app to collect information about koalas
- Koala Strategy monitoring program
- Information collected about koalas can be easily accessed by the community
- Supporting priority koala research
- Research on koala responses to native forest harvesting
- Improving our approach to fire management to protect koalas and their habitat

Purpose of this report



The NSW Koala Strategy is the biggest commitment by any state government to secure koalas in the wild. It sets the foundation for the Government's longer-term vision to stabilise and increase koala populations across New South Wales.

The NSW Koala Strategy supports a range of conservation actions delivered over three years under four pillars:

- Koala habitat conservation
- Conservation through community action
- Safety and health of koala populations
- Building our knowledge.

This is the first annual report on progress in implementing the NSW Koala Strategy.

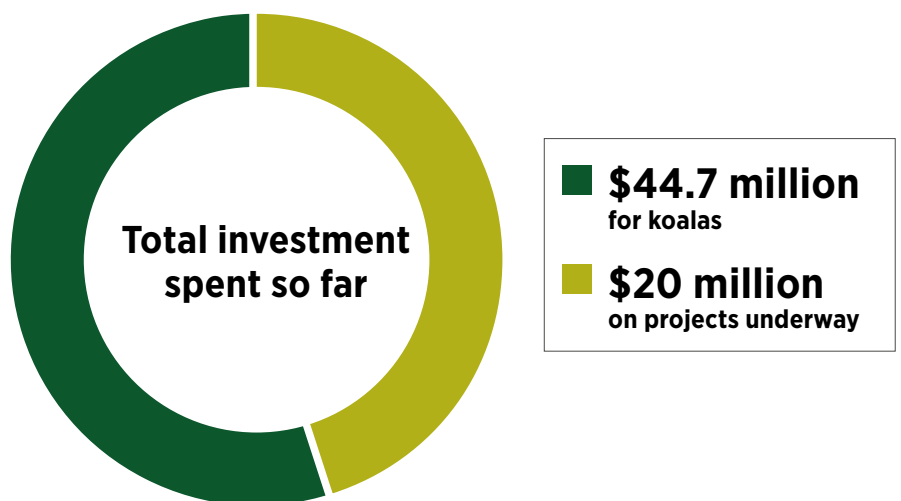
The substantial progress in implementing the NSW Koala Strategy during this first year was made possible by the passion and commitment of the community in partnering with the NSW Government. Together, we have established a strong foundation for the continued successful implementation of the strategy over the next two years, and beyond.

The NSW Koala Strategy is a whole-of-government strategy based on the principles of action, ongoing monitoring and continuous learning. We will continue to consider the advice of the independent Expert Advisory Panel, findings from research and monitoring, and ongoing input from implementation partners and the community, to achieve an adaptive management approach. This will help ensure we maximise outcomes for koalas.

Further information about the NSW Koala Strategy can be found at www.environment.nsw.gov.au/koalas

NSW Koala Strategy inter-agency committee

The Environment, Energy and Science group (EES), which is part of the Department of Planning, Industry and Environment (DPIE), coordinates implementation of the NSW Koala Strategy through an inter-agency committee of senior officers from NSW Government agencies. The committee has met face-to-face three times during the first year of implementation.



How to get involved in helping koalas



There are many opportunities to get involved in helping save our koalas and other native wildlife. You may want to protect koala habitat on your land, report a koala sighting, volunteer as a wildlife carer or join a community conservation group. You can also manage your dog to help stop dog attacks, and drive carefully through koala habitat to reduce the chance of hitting a koala.

As part of the NSW Koala Strategy, the community has worked together with government to develop a koala community website, NSW Koala Country. This website (koala.nsw.gov.au) includes a range of options and opportunities for how you could be involved in protecting our koalas.

You can report koala sightings

You can contribute your wildlife koala sightings to the NSW Government's BioNet Atlas database by visiting www.bionet.nsw.gov.au/

All information in the database is made publicly available through the NSW Government's Sharing and Enabling Environmental Data (SEED) portal (www.seed.nsw.gov.au/).

You can also participate in the Community Wildlife Survey (www.environment.nsw.gov.au/wildlife-survey). Data from the survey can help identify sites for priority action as well as forming part of koala monitoring across the State.



You can protect koala habitat on your land

If you have koala habitat on your property and are interested in selling you can contact the NSW National Parks and Wildlife Service (NPWS).

Contact the Reserve Establishment Team at OEH.ReserveEstablishment@environment.nsw.gov.au

You can get in touch with your Local Land Services office for advice and support about how to manage koala habitat on your land.

More information is available at www.lls.nsw.gov.au

You can enter into a voluntary private land conservation agreement with the Biodiversity Conservation Trust (BCT). There are three types of voluntary private land conservation agreements:

More information about what type of agreement might be right for you is available at www.bct.gov.au

- wildlife refuge agreements
- conservation agreements
- biodiversity stewardship agreements.

The BCT can advise you about the type of agreement that might be right for you.

You can contact us at koala.strategy@environment.nsw.gov.au to learn more about NSW Koala Strategy actions in your area, or to share your thoughts on opportunities for implementing the strategy.





Koala habitat conservation

6914 hectares
of koala habitat protected



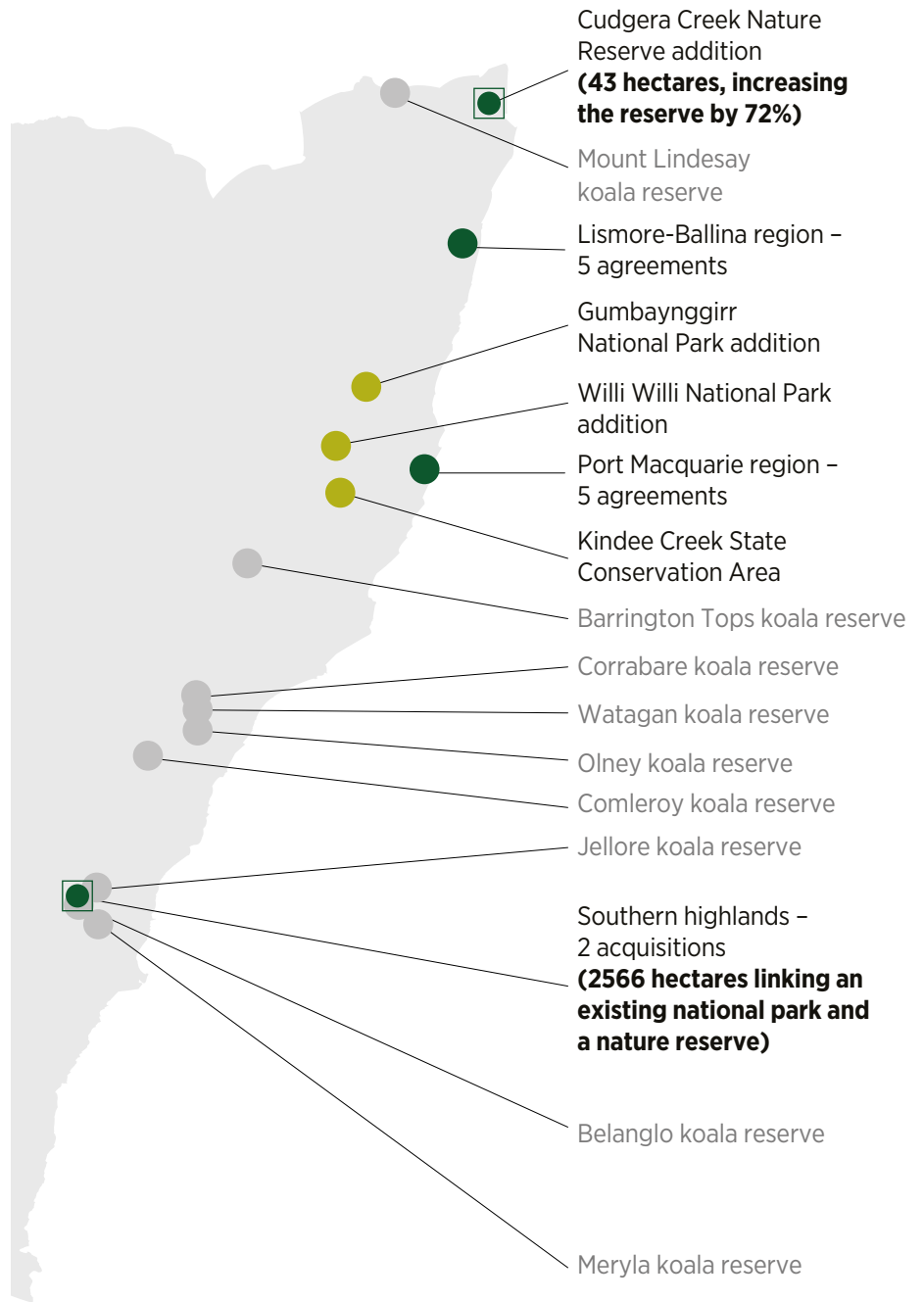
2609 hectares
of land purchased



4051 hectares
of state forest transferred
(and another
20,000 hectares
in progress)



254 hectares
of private land
will be covered
by new conservation
agreements (BCT)



- Land acquisitions
- Private land conservation agreements (BCT)
- State forest transferred to the national park estate
- State forest to be transferred to the care and management of National Parks and Wildlife Service



Koala habitat conservation

Protecting koala habitat will assist the long-term conservation of koala populations across New South Wales, as well as other native plants and animals, and provide safe homes for rehabilitated koalas being returned to the wild.


How are we managing koala habitat on public land?

A working group comprised of NSW Government's agencies with responsibility for managing public land across tenures and local council is piloting a project to improve the management of koala habitat across public lands in the Wingecarribee region. After developing a shared understanding of the distribution of threats faced by koalas across tenures in the region, the group is identifying collaborative approaches for more effective management of public land for koala conservation.

As part of the pilot, University of Melbourne is testing strategies that reduce the risk of wildfire to koala habitat, while not adversely impacting the threat of fire to human life, property or other key assets. The university is applying a methodology previously used in the coastal forests of south east NSW.

The group is also exploring ways to add value to habitat restoration on public lands in the region. We expect this landscape-scale, multi-agency approach to koala habitat conservation will provide useful insights that could be applied elsewhere in the State.





Koala land acquisitions

NPWS adopts a strategic assessment approach to inform koala land acquisitions. For a property to be a high priority for purchase under the NSW Koala Strategy, we consider if the:

- property contains koala habitat and evidence of use by koalas
- property is well-connected to surrounding vegetation
- purchase would enable better management of threats to koalas in that location, to lift the resilience of the region's koalas.

In addition, the property must meet standard requirements for national park acquisition.

For koalas in inland NSW, we are working with koala experts to identify koala refugia. These are areas of koala habitat likely to provide long-term security for koalas in the face of more intense heatwaves and droughts. Once identified, we will consider a range of on-ground options to secure and restore the habitat, by working with landholders and land managers.



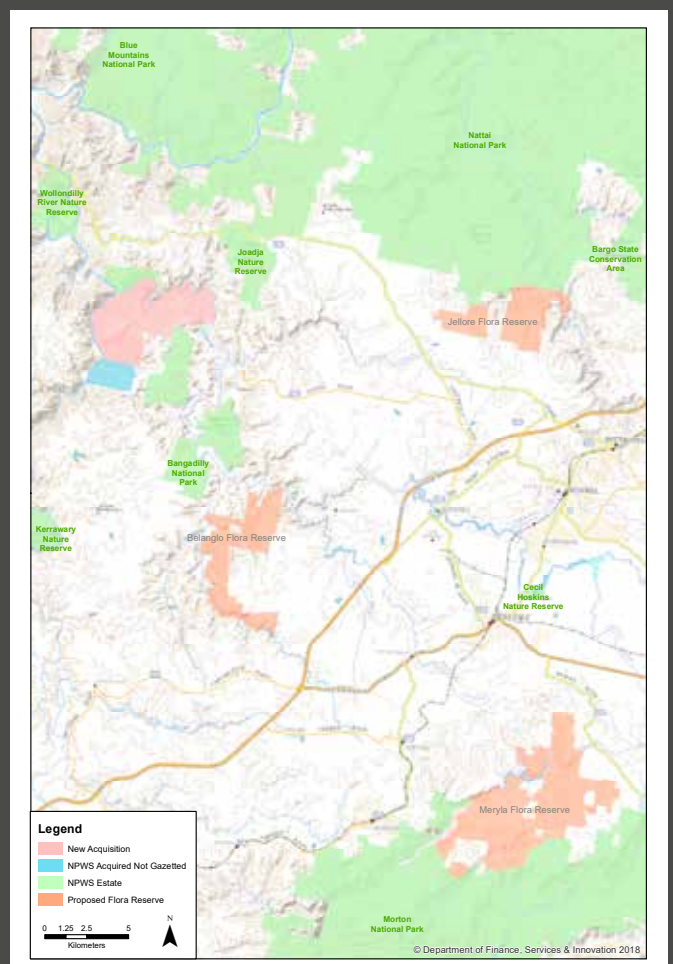
Case study: Over 2000 hectares of land purchased in the Southern Highlands

The \$20 million koala land acquisition program is a key action under the NSW Koala Strategy. Through this program we are purchasing land containing priority koala habitat to add to the national park estate. Already three properties have been purchased. One of these is Tugalong Station, in the Southern Highlands.

Tugalong was purchased on 31 January 2019. It is a 2164-hectare property nestled between an earlier koala land purchase, and sections of Wollondilly River Nature Reserve and Bangadilly National Park.

Tugalong Station contains high-quality koala habitat. The property sits within the Southern Highlands Link, a habitat corridor that supports an estimated koala population of at least 1000 individuals.

The property is also home to 20 threatened fauna species including glossy black-cockatoos, gang-gang cockatoos, flame robins, speckled warblers, squirrel gliders and several species of microbats.





Priorities for 2019-20

We will protect koala habitat by continuing to **purchase land to add to the national park estate**. The National Parks and Wildlife Service (NPWS) is currently reviewing expressions of interest received in 2018 from landholders interested in selling their land.

The **transfers of state forests** identified in the NSW Koala Strategy to the management of NPWS will continue in 2019–20.

The BCT will continue to enter into **private land conservation** agreements with landholders.

Local Land Services will be developing targeted advice and guidance for landholders who are interested in managing koala habitat on their land.

We will consider lessons from the Wingecarribee public land management pilot (see ‘How are we managing koala habitat on public land?’) to **inform management arrangements for public land** with koala habitat.

We will be working to ensure **koala habitat values of land are considered** when the NSW Government is making decisions about whether to divest land considered to be excess to agencies’ needs.

Case study: Landholders protecting koala habitat in Dunbogan

In 2018, Andrew and Nette McCoubrie signed a conservation agreement with the Biodiversity Conservation Trust to conserve over 30 hectares of koala habitat on their property in Dunbogan (in the Port Macquarie region), in perpetuity.

The property is a great addition to the conservation estate. It supports high-quality koala habitat within a local area that has been, and continues to be, impacted by development pressures including clearing for new subdivisions.

The protection of these habitats will also provide benefits to other important biodiversity entities like the threatened wallum froglet, squirrel glider and brush-tailed phascogale.





Conservation of koala habitat on private land

The Biodiversity Conservation Trust (BCT) supports the conservation of koala habitat on private land. Under its Conservation Management Program, the BCT runs conservation tenders in targeted regions of New South Wales to encourage private landholders with important koala habitat on their property to enter into in perpetuity conservation agreements. Landholders successful in the tender process receive annual payments for implementing conservation actions determined in the agreement.

To date, the BCT is signing five conservation agreements in the Port Macquarie region and five conservation agreements in the Lismore-Ballina region, with a total investment of \$7.9 million.

The BCT also enters into private land conservation agreements and makes grants available to landholders with koala populations on their land, to assist with their conservation activities. This is in addition to the targeted koala conservation investment outlined above.



Additional koala projects

2700 hectares of koala habitat is protected as biodiversity stewardship sites

The Biodiversity Offsets Scheme (BOS) commenced on 25 August 2017 under the *Biodiversity Conservation Act 2016*. The BOS builds on the previous voluntary BioBanking scheme introduced in 2010 and a mandatory offset scheme for major projects introduced in 2014. The new BOS expands offsetting to local development for the first time.

To date, over 2750 hectares of koala habitat is protected through 17 BioBanking agreements across New South Wales including Western Sydney, Lower Hunter, mid and far north coast, and north west NSW.

Activity in the biodiversity offsets market continues to increase. As understanding and confidence in the market grows, the number of offset sites (called biodiversity stewardship sites under the new BOS) secured in perpetuity will continue to increase.

What is a biodiversity offset?

Biodiversity offsetting is a framework to avoid, minimise and offset impacts on biodiversity from development and clearing, and to ensure land that is used to offset impacts is secured in perpetuity.

Proponents generate a biodiversity credit obligation if they impact on biodiversity.

Landholders can establish a biodiversity stewardship site on their land to generate biodiversity credits to sell to proponents. Biodiversity stewardship sites are funded, managed and protected in perpetuity.





Conservation through community action

13

on-ground actions funded by the NSW Koala Strategy

13 workshops



236 participants

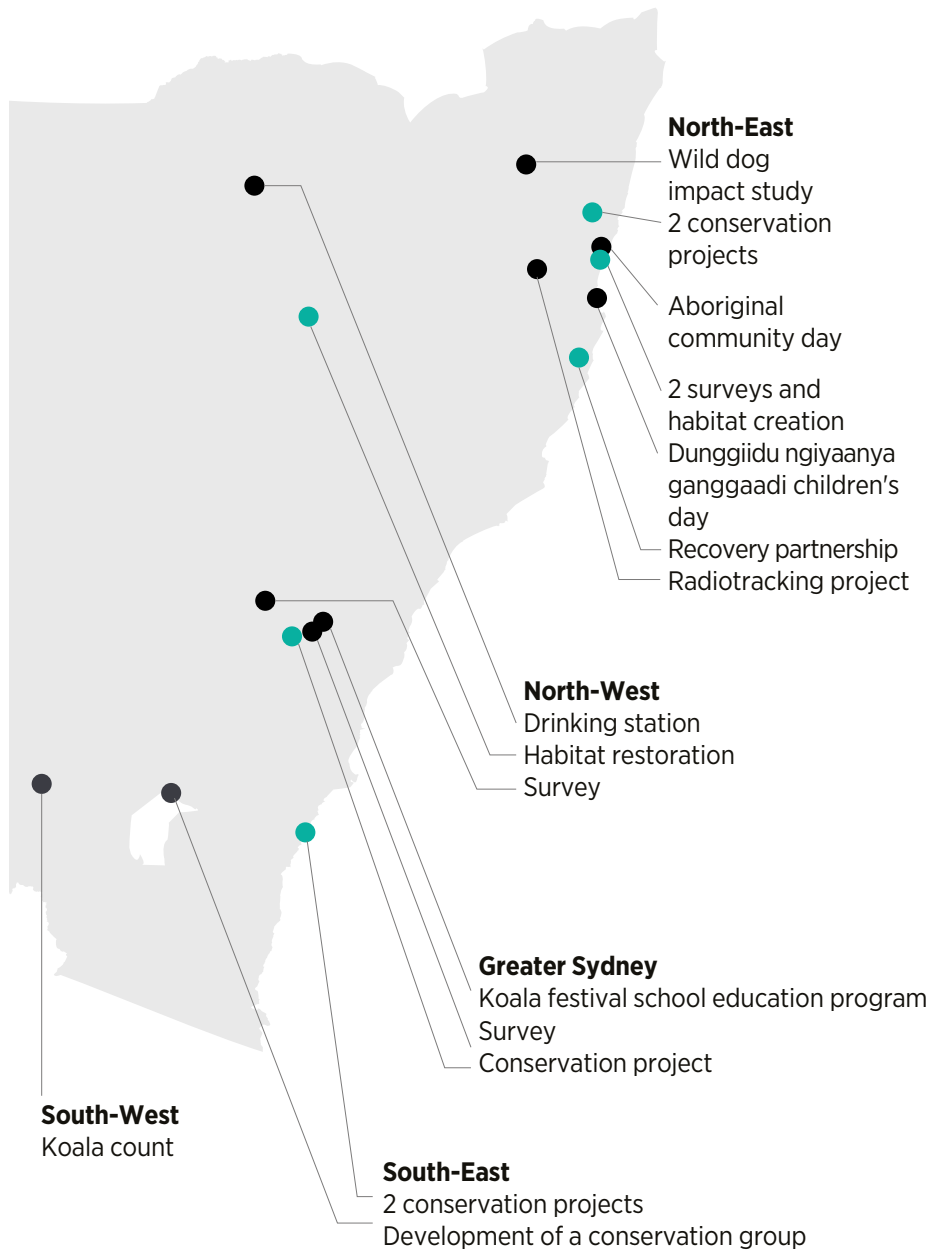


86 local action ideas developed in partnership with the community



Community partnerships will continue to be developed to scope and deliver more on-ground actions

10 extra conservation actions delivered under the Saving our Species (SoS) Iconic Koala Project



Statewide actions

- Fact sheets on mitigating vehicle strike
- Guidance for managing dog attack
- Habitat restoration guidance
- Community engagement and education (SoS)

- On-ground actions funded by the NSW Koala Strategy
- Conservation actions delivered under the SoS Iconic Koala Project



Conservation through community action

Communities across New South Wales love their koalas and are working hard to protect them, using their local information, knowledge and networks.

The NSW Koala Strategy builds on this passion, bringing community groups together to share information and work collaboratively. Actions being delivered by the community will make a difference to koala conservation at the local level.

On-ground actions developed in partnership with the community

Between August 2018 and February 2019, we organised 13 community workshops, bringing together government agencies, community groups, councils and koala experts to identify local priorities for koala conservation.

Participants shared their local experience and ideas for action. Potential priority actions were scoped during each workshop. The table below shows actions being funded under the NSW Koala Strategy. We will continue working with community partners to progress more local actions.



Local actions funded by the NSW Koala Strategy

Narrandera Koala Count	A koala expert has been engaged to improve the scientific design and guide citizen scientists on the day of the koala count.
Windsor koala festival school education program	A koala education program is being rolled out across eight local primary schools in the Hawkesbury area, around Kurrajong.
Blue Mountains koala survey	Science for Wildlife and Blue Mountains City Council are involving community volunteers in koala survey, habitat mapping and collection of community koala sightings to fill priority knowledge gaps.
Warialda drinking station	A drinking station has been installed so koalas no longer need to cross a road to access water. This reduces risk of vehicle strike.
Bathurst and surrounds survey	Koala surveys are addressing priority knowledge gaps about this little studied koala population.
Coffs Harbour Aboriginal community and education day	An Aboriginal community event was held on 24 April 2019 to promote koala conservation in the Coffs Harbour region.
Dunggiidu ngiyaanya ganggaadi (Koala calling us mob) children's days	Aboriginal Elders ran two engagement days on 25 May 2019, where children learn from and with Dunggirr (the koala), to increase Aboriginal youth participation in local koala conservation.
Armidale radio tracking project	New koala radio tracking collars have been purchased to boost an existing koala monitoring program.
North East wild dog impact study	The movements of 15 koalas will be tracked with GPS technology to better understand their interactions with wild dogs.
Far South Coast koala conservation group	A koala conservation group is being established to bring community, agency and other stakeholders together to deliver local koala conservation actions.
Guidance for managing dog attack	Dog attack guidance will be developed to support local management.
Fact sheets for managing vehicle strike	A series of vehicle strike fact sheets are being developed to support local management.
Guidance for habitat restoration	Habitat restoration guidance is being developed to support local management.

Local actions delivered under the SoS Iconic Koala Project ¹

Southern Highlands Koala Conservation Project	A three-year partnership between Wingecarribee Shire Council and Saving our Species (SoS) is delivering habitat restoration, reduction of vehicle strikes, landholder and community engagement, and koala monitoring.
Hastings-Macleay Koala Recovery Partnership	A three-year partnership between Port Macquarie-Hastings and Kempsey Councils, Mid North Coast Joint Organisation, Port Macquarie Koala Hospital and SoS. The project is delivering habitat restoration, veterinary care, reduction of vehicle strikes, landholder and community engagement and koala monitoring.
North East Hinterland Koala Conservation Project	A three-year partnership between Tweed, Byron, Ballina and Lismore Councils, Friends of the Koala and SoS. The project is delivering private land conservation, veterinary care, habitat restoration, landholder and community engagement and koala monitoring.
Koala habitat creation in Bongil Bongil National Park	Maintenance of newly planted koala habitat to improve connectivity.
Koala habitat restoration in Gunnedah	Funding is supporting koala habitat restoration on private land to increase habitat connectivity. Funding also supports upgrade and maintenance of koala water stations.
Koala conservation in the Southern Tablelands	Koala surveys, fire risk modelling, and a bush fire risk management plan is being developed for the region to reduce wild fire risk for koalas.
Koala conservation in the Southern Coastal Forests	Koala habitat restoration is being trialled, fire risk modelling is being undertaken, and koala surveys are being delivered.
Koala conservation in the Blue Mountains	Funding is supporting koala conservation in the Blue Mountains and Hawkesbury regions led by Science for Wildlife.
Koala conservation in Nambucca	Koala habitat management field days are being delivered. A source of koala feed trees is being established – these trees will be provided to landholders to enhance koala habitat on their properties. This project is also supporting Nambucca Council to develop a Koala Management Strategy.
Koala conservation in Bellinger	On-ground habitat restoration is being delivered for priority koala habitat areas by Bellinger Landcare. A local source of koala feed tree stock, for conservation projects across the region, is being developed.
Koala community engagement and education	SoS has supported or developed a range of materials and activities that promote koala conservation with a wide audience. This includes development of materials for the NSW Koala Country website, and support for the Koala Smart schools project in the Hastings region.

¹ Details about actions delivered under the Saving our Species program are covered in the SoS annual reports available on the website at www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/saving-our-species-program/saving-our-species-reports



Case study: NSW Koala Country is connecting koala conservation activities across the State

This year we launched NSW Koala Country (koala.nsw.gov.au), a community website co-designed with a range of stakeholders involved in koala conservation. The site shines a spotlight on koalas in New South Wales and the areas where they are found – NSW Koala Country.

The NSW Koala Country website provides a platform to celebrate koala conservation across the State. It is helping to build a virtual community of koala conservationists and share information about what local koala conservation organisations are doing. The website also shares opportunities for the community to get involved in koala conservation, provides educational reference materials, and provides updates on key NSW Government initiatives.

This is a website for the community, developed by the community. If you have a story or key message to share, please use the Contacts page. The website will be regularly updated to keep content current and relevant.





Priorities for 2019-20

Over the next year we will be engaging and partnering with **Aboriginal communities** and stakeholders to learn about koala habitat protection, with a focus on enabling cultural burning activities to promote regeneration of koala habitat and to jointly manage koala habitat on public land.

We will also continue to partner with the community to deliver local **koala conservation actions**.

Case study: Establishing partnerships with Aboriginal communities to support koala conservation in the Coffs Harbour region

More than 40 people attended a community event organised by the Coffs Harbour and District Local Aboriginal Land Council in April 2019. The community day showcased koala conservation on Aboriginal lands at Mylestom, adjoining the Bongil Bongil National Park.

This event supported local community education and promoted involvement in protecting koala populations. It is one of the local action projects being implemented under the NSW Koala Strategy.

The event highlighted existing koala conservation work by the Coffs Harbour Aboriginal community, Gumbaymgirr. The day included traditional dance, sharing knowledge, and Dreamtime stories about koalas. It also showcased traditional cultural burning activities that benefit koalas and other threatened species, and provided opportunities for future conservation activities.

Building community awareness helps the Coffs Harbour and District Local Aboriginal Land Council in their ongoing koala conservation work. Community involvement is particularly helpful for delivering koala surveys and habitat creation in key areas.





Safety and health of koala populations

Fix priority vehicle strike hotspots

9km

of fencing installed by

Roads and Maritime Services on Picton Road



Support koala rehabilitators

17

wildlife rehabilitation groups and koala carers received funding to purchase wildlife rescue and safety equipment



Australian Museum is the genetic biobank for koalas

1500

genetic samples received, including 1129 from NSW



51

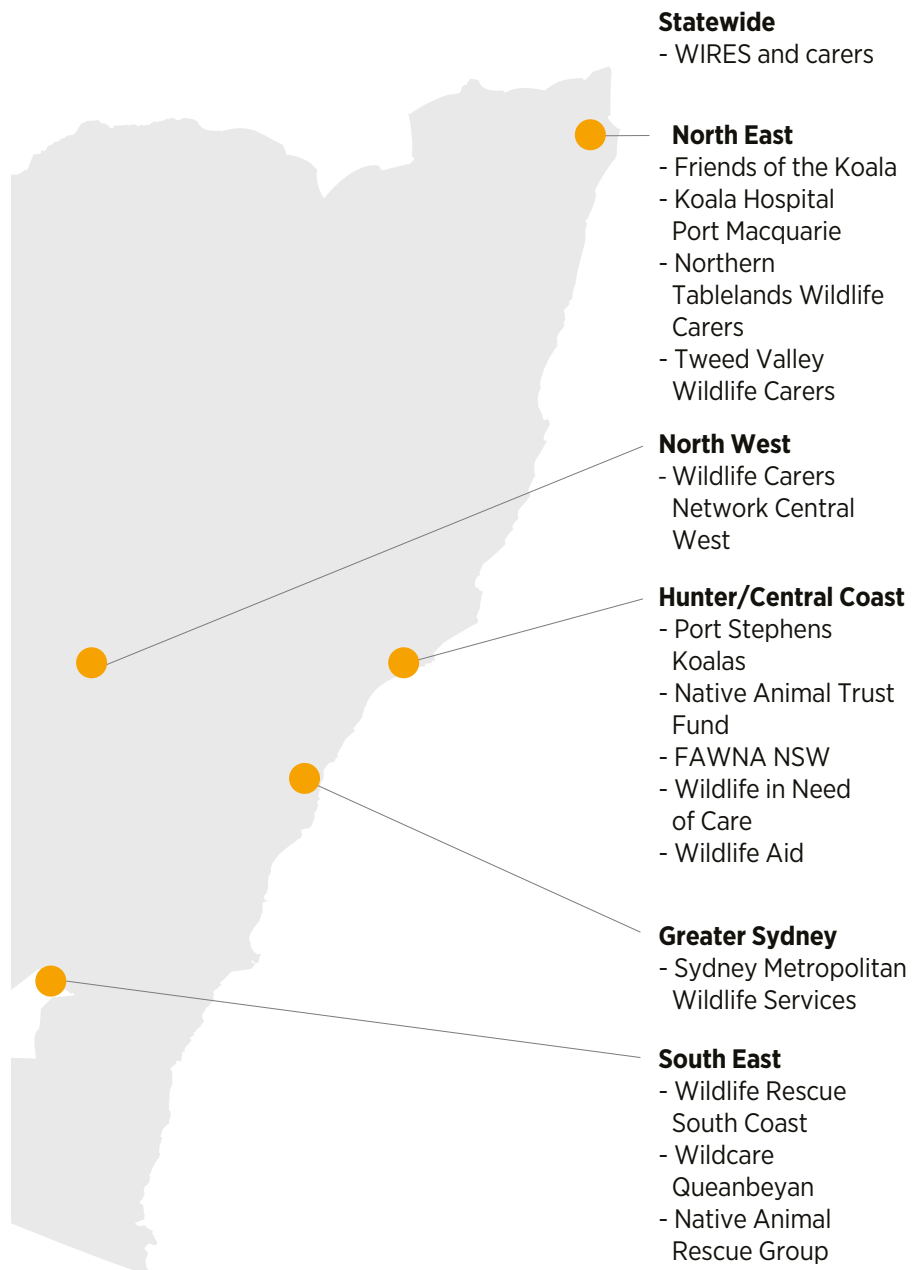
institutions have contributed



Create a network of wildlife hospitals

June 2019

start of the construction of the Port Stephens koala hospital





Safety and health of koala populations

Improving the safety and health of koala populations means reducing the number of koalas that need care, as well as increasing the proportion of sick and injured koalas that are successfully rehabilitated and returned to the wild.

This year, we progressed some key actions that will help achieve these outcomes:

- We allocated funding to 17 wildlife rehabilitation providers to help replenish their koala rescue equipment (rescue poles, cages, bags and suitable work, health and safety gear).
- We transferred over 8500 koala records collected by the wildlife rehabilitation sector into NSW BioNet. This data will be used to better inform planning, conservation and wildlife management decisions.
- We published the draft *NSW Volunteer Wildlife Rehabilitation Sector Strategy* for public comment. This strategy will strengthen the capacity of the sector to support its volunteers and continue to deliver on-ground services.
- Taronga Zoo has been working in partnership with the Department of Planning, Industry and Environment, tertiary institutions, vets and wildlife rehabilitators to design a professional development training course for vets and vet nurses in native wildlife care.
- Roads and Maritime Services (RMS) is fixing a priority vehicle strike hotspot on Picton Road (see case study on providing safe koala crossings on Picton Road).
- The Australian Museum is now the designated biobank for storing koala genetic information in New South Wales. We delivered training on genetic sampling and data collection protocols to support koala rehabilitators to contribute vital materials to the biobank.

Case study: Building a new koala hospital in Port Stephens

The construction of the Port Stephens Koala Sanctuary started in June 2019. The sanctuary will include a clinic to care for and rehabilitate sick, injured or orphaned koalas. The sanctuary will also support scientific research and education, to help build knowledge about the local koala population. Once complete, visitors and locals will be able to see koalas up close and stay overnight in unique ecotourism accommodation.

The sanctuary is jointly funded by the NSW Koala Strategy and Port Stephens Council, and is being delivered in partnership with the local koala rehabilitation group, Port Stephens Koalas.

You can read more about the Port Stephens Koala Sanctuary at: www.portstephens.nsw.gov.au/live/environment-and-sustainability/wildlife/koalas-in-port-stephens



**Case study:
Providing safe koala crossing on
Picton Road, south west Sydney**

Roads and Maritime Services (RMS) is constructing about nine kilometres of koala fencing along Picton Road, in the Wollondilly Shire. The fencing is addressing two known koala vehicle strike hotspots: Allen's Creek and Cascade Creek. Picton Road bisects primary habitat corridors at this location. At least 28 koalas have been reported hit by vehicles at these hotspots since the first record in 1999, with the majority of reports being in the last three years.

The fencing will channel koalas to existing crossings under the road, where they can use concrete arches, pipes and culverts, including a dedicated koala culvert, to cross safely.

RMS used motion-activated cameras during the spring of 2018 (the koala dispersal season) to record how koalas are using the culverts and other structures to pass under the road. No koalas were recorded using the structures, which was expected as they continued to travel overground across the road before the fencing installation.

Once the fencing is in place, we expect more koalas will be using the structures to safely move through the landscape. RMS will undertake further monitoring for the 2019, 2020 and 2021 dispersal seasons to assess the effectiveness of the fencing in reducing vehicle strike and promoting connectivity via the under-road structures.





Additional koala projects

In addition to the \$44.7 million under the NSW Koala Strategy, the NSW Government continues to direct resources to other important koala conservation projects across the State.

Pottsville koala holding facility

Tweed Shire Council will be constructing a holding facility near Pottsville, where koalas in rehabilitation can be vaccinated for chlamydia before being returned to the wild. The NSW Government is contributing \$370,000 towards constructing the facility.

Chlamydia is a key threat to health of koalas across NSW. Infection can cause a range of debilitating health issues, including blindness, severe bladder infections, infertility and death. By working with the nearby Currumbin Wildlife Hospital, in Queensland, Council hopes to reduce the levels of chlamydia in northern rivers koalas.

Council is finalising detailed planning and will start construction later in 2019.





Northern Rivers wildlife hospital

The NSW Government has committed \$100,000 to support the establishment of a wildlife hospital in the Northern Rivers region, and \$35,000 for new equipment for the Friends of the Koala care and research centre at Lismore.

Gunnedah Koala Park and Education Centre

The NSW Government has allocated an extra \$6.48 million for a new koala park facility and education centre in Gunnedah.

Gunnedah Shire Council is providing the land for the facility and has funded the feasibility assessments. Council is hopeful construction could start later this year.

In addition to supporting tourism in the region, the facility will deliver koala education, research and conservation. Council is excited to be providing this facility. Although Gunnedah is affectionately known as the 'koala capital of the world', in recent years the local populations are thought to be in decline.

Koala conservation is a key consideration in the design of the facility.

'We want to have the ability for sick and injured koalas to be taken in and cared for as well as providing a top-class koala park experience to visitors, that raises awareness about koala conservation', says Councillor Chaffey, Gunnedah's mayor.

Case study:
**Australian Museum is the biobank
for koala genetic information**

Under the NSW Koala Strategy, the Australian Museum Koala Tissue biobank has been established as the preferred repository for koala genetic samples in New South Wales. The biobank currently holds over 1500 koala genetic samples sourced from around Australia, including over 1000 from New South Wales.

The biobank continues to grow, with regular donations from veterinarians and wildlife rehabilitators. Over time, as high-quality samples from locations across the State are incorporated, the biobank will become an unparalleled resource of koala genetic information for New South Wales.

Having access to properly curated and stored high quality genetic samples provides researchers with exciting opportunities to better understand our koala populations, including factors driving genetic diversity, local adaptation, and genetic health. The recent sequencing of the koala genome is an example of the ground-breaking research that access to this type of genetic information can support.

In 2018, the Koala Genome Consortium² published the findings of their successful sequencing of genomes of three koala specimens, one of which was from New South Wales. Scientists have identified 26,558 genes, including those associated with the detoxification of eucalypt leaves and responses to chlamydial infection. This type of research provides unprecedented insights into the unique biology and evolutionary history of this iconic Australian marsupial.

We look forward to scientists continuing their research, drawing on the biobank. This will help us fill critical knowledge gaps to help us better target koala conservation management responses.

² The Koala Genome Consortium includes 54 scientists from 29 different institutions across seven countries. The Consortium is led by Dr Rebecca Johnson, Director of the Australian Museum Research Institute, and Professor Katherine Belov, University of Sydney. The resulting data is publicly available on global genetic databases.





Our priorities for 2019–20

During the coming year we will develop a **best practice planning guideline** to help limit impacts of development on koalas. We will also identify and progress mitigation measures to address the **next priority vehicle strike hotspot**.

We will finalise the *NSW Volunteer Wildlife Rehabilitation Sector Strategy* to guide support for koala rehabilitators.

As set out in the Building our knowledge section of this report, research projects on **chlamydia** in koalas, as well as koala translocation, will be progressing.

Taronga Zoo will be finalising the **professional development training** program for vets and vet nurses, in wildlife care. The first cohort will be trained from mid-2020.

We will also continue to encourage the storing of koala genetic information in the **Australian Museum biobank**, to build a comprehensive resource for scientists to learn more about our koalas.





Building our knowledge

NSW koala research plan



86

koala experts collaborated to identify knowledge gaps



10-year

research plan published



10

koala research projects selected for funding in 2019

Koala habitat Information base

30,900 trees



at **1030 sites** surveyed for koalas and their scats

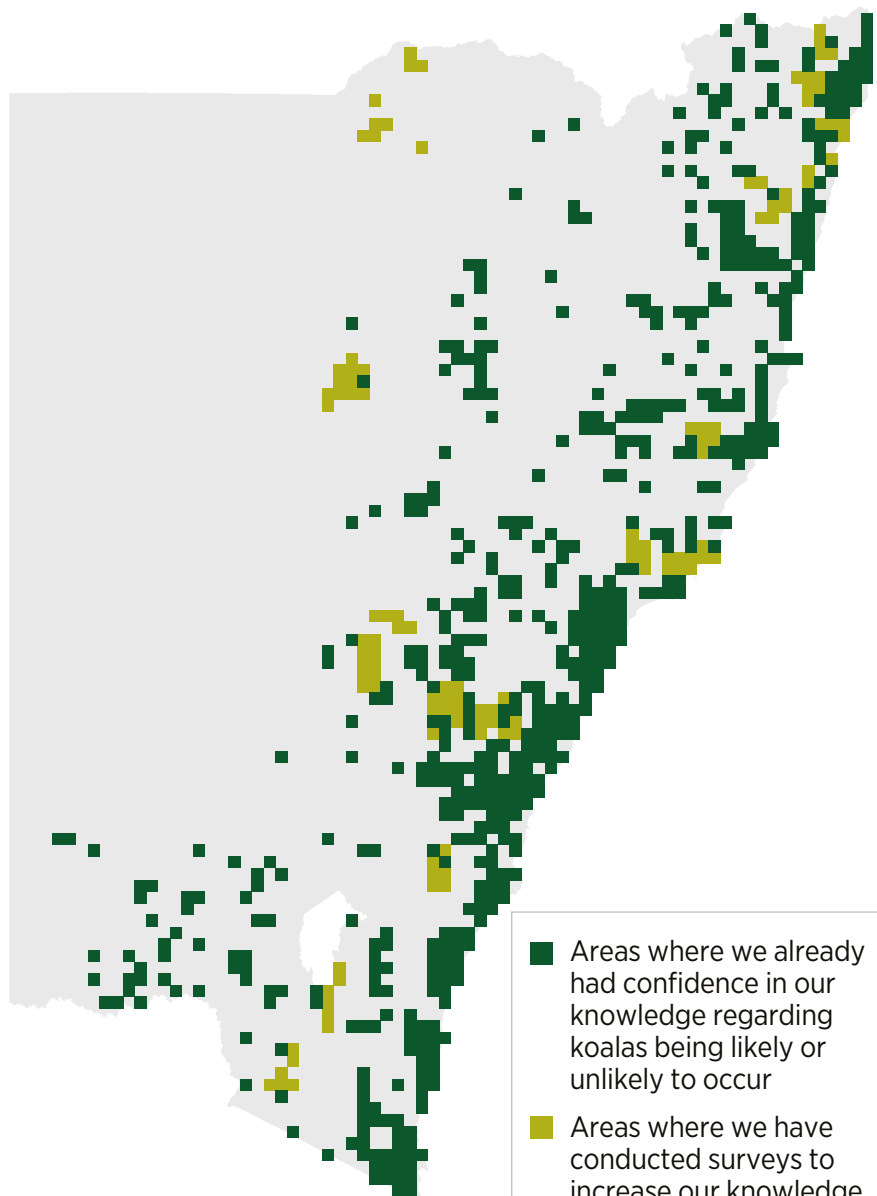
'A review of koala tree use across New South Wales' published



Koala habitat information pilot undertaken in the Southern Highlands



Statewide koala habitat information base in final production stage



- Areas where we already had confidence in our knowledge regarding koalas being likely or unlikely to occur
- Areas where we have conducted surveys to increase our knowledge regarding koalas being likely or unlikely to occur



Building our knowledge

There is still a lot to learn about koalas in New South Wales. Improving our knowledge is key to identifying how to protect them. In parallel with taking action, a number of research and citizen science initiatives are setting the foundation for future conservation decisions.

A 10-year plan to coordinate research on koalas

The *NSW Koala Research Plan* sets out clear priorities for research on koalas over the next 10 years.

The key research priorities are grouped under the broad themes of disease, habitat, extreme weather events and other issues including fire and cumulative threats.

The research plan includes specific research streams for investigating the impacts of chlamydia, chlamydia vaccine trials and translocation and relocation of koalas.

Information about research grant recipients is available at:
www.environment.nsw.gov.au/nsw-koala-research-plan

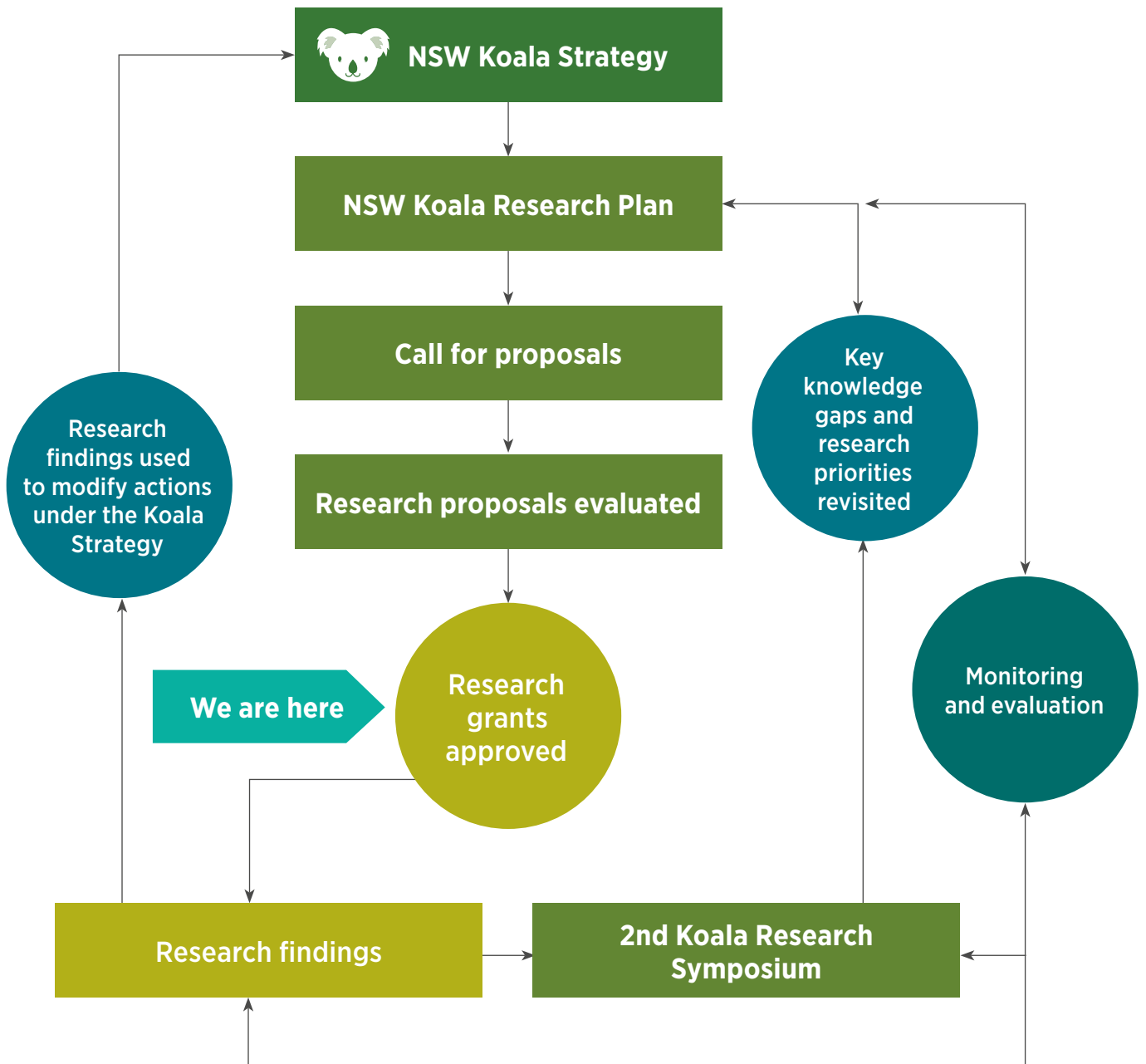


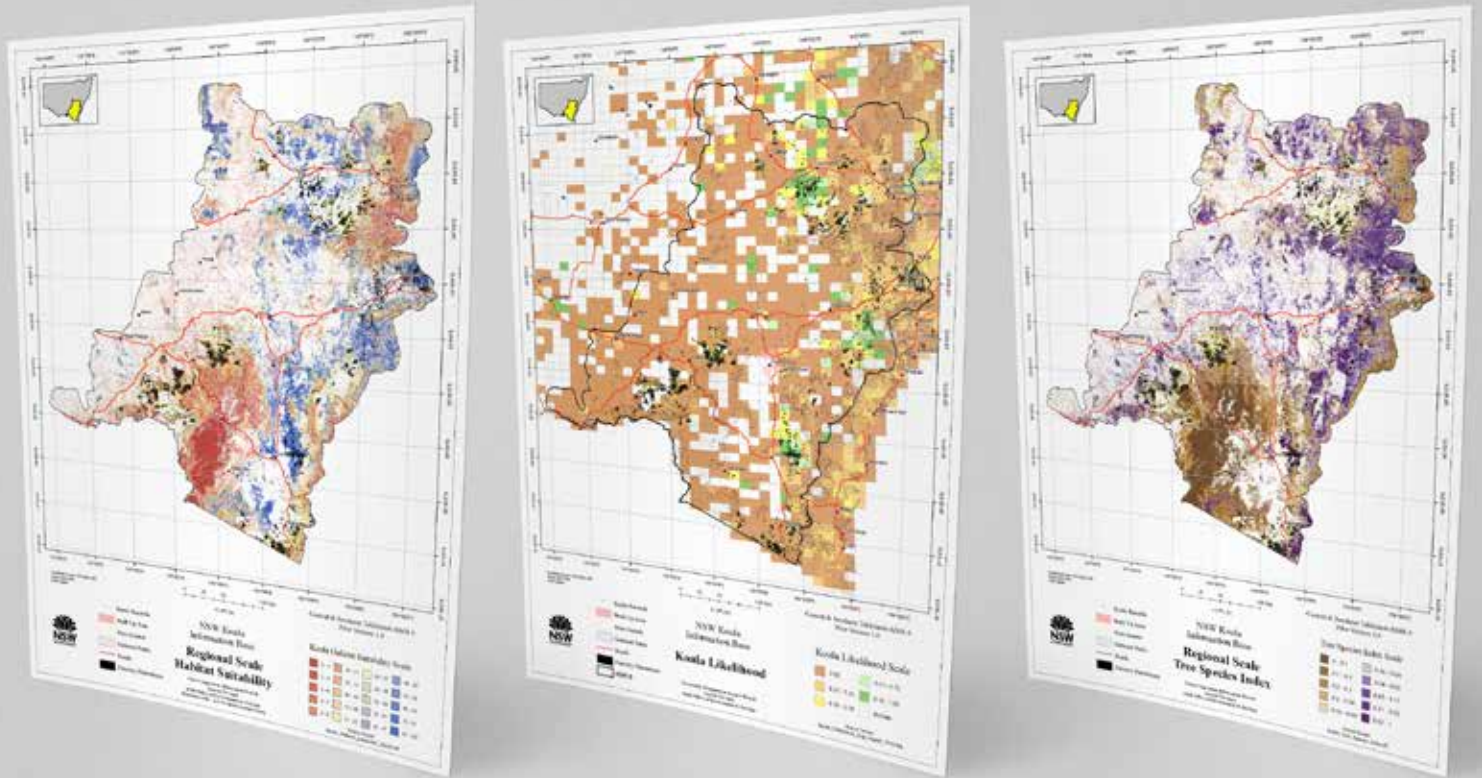
**Case study:
Developing the NSW Koala Research Plan**

In February 2019 we released a 10-year research plan that sets out a targeted and coordinated way to increase our knowledge of koalas. This research plan will be regularly reviewed and updated throughout its life.

The NSW Koala Research Plan was informed by detailed input from some of the most well-respected koala experts and practitioners in Australia. Building on the findings from the independent review conducted by the NSW Chief Scientist & Engineer, and commitments made in the NSW Koala Strategy, the following two key steps informed the research plan:

- **Expert elicitation workshop:** In July 2018, 25 koala experts participated in an elicitation workshop. This workshop helped identify and prioritise key knowledge gaps and identify priority research areas.
- **Koala Research Symposium:** In November 2018, a Koala Research Symposium was held at the Taronga Institute for Science and Learning. Attended by 82 koala stakeholders involved with koala research, management and care, the symposium provided these experts with the opportunity to discuss research priorities, building on the elicitation process.





Case study: Piloting the koala habitat information base

We are developing a statewide koala habitat information base that will be finalised mid-2019. Landholders and land managers, as well as councils, government agencies, scientists, koala conservation organisations and other stakeholders, will be able to use the information base to inform conservation decisions.

The information base will be available through the NSW Government's Sharing and Enabling Environmental Data (SEED) portal later this year.

The information base is a regionalised product. It presents information on the probability of finding koala habitat within each of the nine koala modelling regions. It calculates this probability by considering a range of data sources including the type of vegetation in the area, environmental variables, and koala records.

A pilot version of the information base has been developed for the Southern Highlands and Southern and Central Tablelands region.

Some of the key data layers included in the pilot version include:

- Koala Habitat Suitability Model – the probability of finding koala habitat at any location.
- Koala Tree Suitability Index – the probability of finding a tree species that koalas are known to use for food or shelter.
- Koala Likelihood Map – the chances of finding a koala at a location.

Department of Planning, Industry and Environment piloted the information base during the second half of 2018 and the first half of 2019, to trial ways of using it and seek feedback from potential users of the information.

State government agencies and local councils in the pilot area participated. We also provided an overview of the information base at the local community action workshops delivered across New South Wales in 2018 and early 2019.

Feedback from the pilot is informing the final statewide product.



Case study: Improving our understanding of koala responses to native forest harvesting

Separate to, but aligned with the NSW Koala Research Plan, the Natural Resources Commission is overseeing a \$300,000 independent research program under the NSW Koala Strategy. The goal is to investigate koalas' responses to intensive harvesting³ in north coast state forests.

The Commission has selected the following three research projects:

- Nutritional value of koala habitat – led by researchers at the Australian National University.
- Koala diet composition and quality – led by researchers at the Western Sydney University.

- Koala population density using acoustic sensors and DNA – led by researchers at the Forest Science Unit in the NSW Department of Primary Industries.

The Commission will convene an annual forum with program researchers to share and discuss findings and address issues.

For more information about these projects please visit: www.nrc.nsw.gov.au/koala-research

³The term 'regeneration harvesting' used in the NSW Koala Strategy has been replaced by the term 'intensive harvesting' in this report for consistency with the legally-defined terminology used in the *Coastal Integrated Forestry Operations Approval* (Coastal IFOA). The Coastal IFOA was released in November 2018 and is available at: <https://www.epa.nsw.gov.au/your-environment/native-forestry/integratedforestry-operations-approvals/coastal-ifoa>



Our priorities for 2019-20

Over the coming months we will finalise and start implementing the statewide, cross-tenure **NSW Koala Monitoring Plan**. Monitoring will help us understand the impact of management actions, respond to urgent threats, and understand more about koala populations across New South Wales.

Sites are currently being selected and monitoring is scheduled to start in the spring-summer of 2019, during the next dispersal season. The first stage of the monitoring program kicked off with the launch of the statewide community wildlife survey in May 2019.

The statewide **koala habitat information base** will be completed in mid-2019. This information base will contain the best available data on koala habitat and koala occurrence throughout New South Wales. This comprehensive information base will be an important resource for informing koala conservation decisions.

We will continue to **fund research** to fill priority knowledge gaps identified in the NSW Koala Research Plan.

We will continue to improve our approach to **fire management**, to protect koalas and koala habitat. We will build on work initiated during the drafting of the NSW Koala Strategy as well as lessons from the Wingecarribee public land pilot (see 'How are we managing koala habitat on public land?').

We will also release a new app, I Spy Koala, making it easy for NSW communities to record where they have seen koalas in the wild.



How can I find out more?

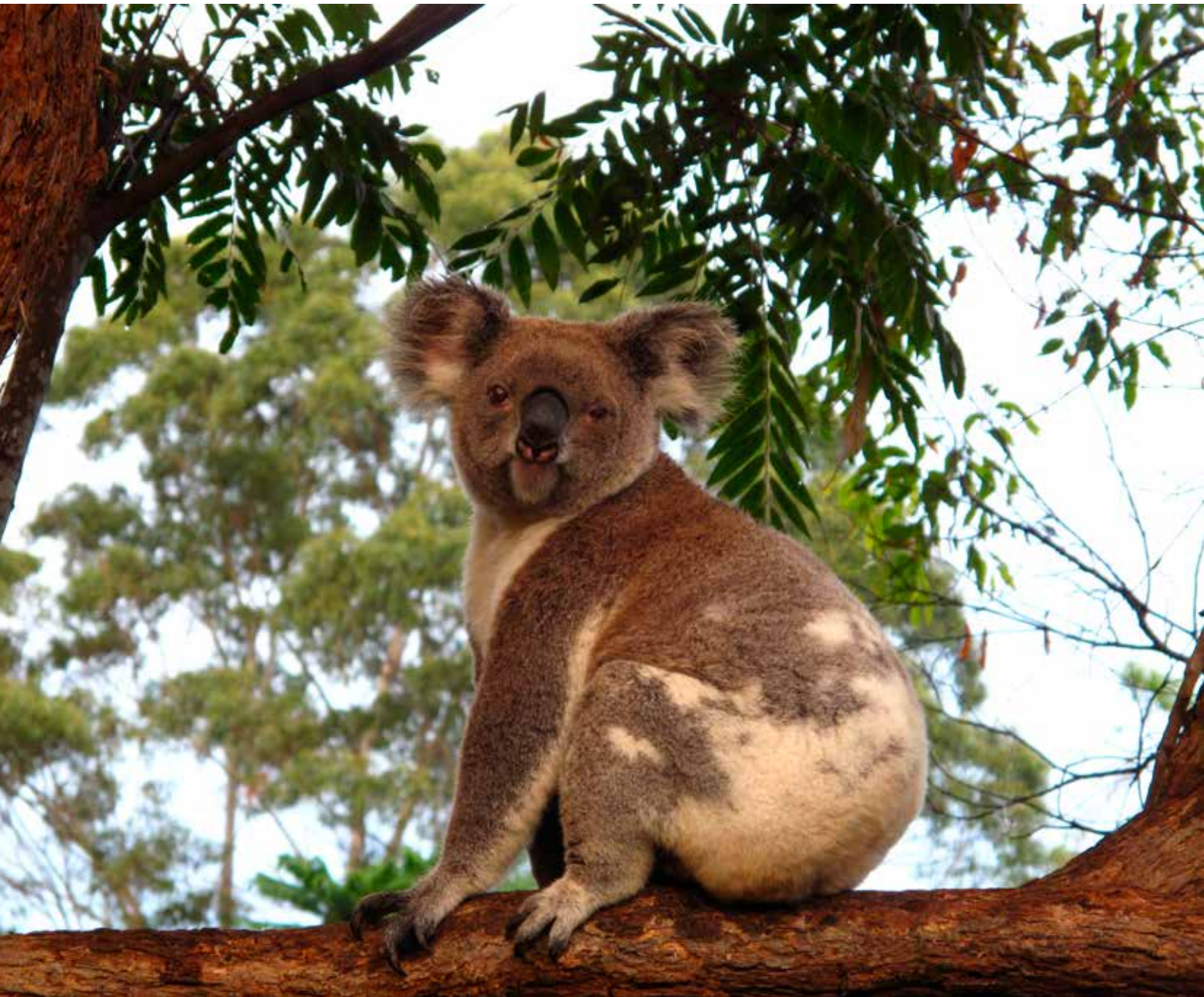


We look forward to continuing to work with the community and other project partners to implement the NSW Koala Strategy over the coming year. Together we can make a real difference, and help our treasured koalas survive in the wild.

Further information about the NSW Koala Strategy can be found at www.environment.nsw.gov.au/koalas

To learn more about NSW koalas, share information, and find ways to get involved in koala conservation, please visit the NSW Koala Country community website available at www.koala.nsw.gov.au

If you want to learn more about how the NSW Government is working to secure other threatened species in the wild, please visit www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species



Koala Strategy actions: status update

This table provides a consolidated summary on the status of all the 24 strategy actions. As at July 2019:

- 20 actions are complete or in progress
- the remaining actions will be progressed during the coming year, building on existing partnerships and projects that are underway.



Koala habitat conservation

Action and progress	Description	Status
Permanently conserve priority koala habitat as national parks	Three properties purchased, totalling 2609 hectares: two properties are in the Southern Highlands and one is on the Tweed Coast. Expressions of interest (EOIs) for offers from Far North Coast, Port Macquarie, Port Stephens, and Southern Highlands closed in December 2018. Assessment of the EOIs is underway.	IN PROGRESS
Protecting koala habitat through new koala reserves	Over 4000 hectares of koala habitat has been added to the national park estate: <ul style="list-style-type: none"> • 589 hectares of the Oakes State Forest were added to Gumbaynggirr National Park, 35 kilometres west of Nambucca Heads • 1382 hectares of the Mount Boss State Forest, near Wauchope, were transferred as the newly created Kindee Creek State Conservation Area • 2080 hectares of Carrai State Forest, north west of Kempsey, were added to Willi Willi National Park. More information about new areas for conservation in New South Wales is available at: www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/establishing-new-parks-and-protected-areas/new-parks-and-changes-to-parks/new-areas-for-conservation-in-nsw	IN PROGRESS
The Biodiversity Conservation Trust to prioritise koala habitat for funding	173 hectares of regionally important koala habitat is protected on five private properties in the Port Macquarie region, with another 81 hectares to be protected on five properties in the Lismore-Ballina area. These are being delivered under the BCT's Conservation Management Program from tender processes in these areas.	IN PROGRESS
Management of crown land, travelling stock reserves and other public land to conserve high-quality koala habitat	A 12-month pilot project is nearing completion. This pilot is developing a collaborative, cross-tenure approach to koala habitat management on public land in the Wingecarribee region.	IN PROGRESS
Government agencies will assess koala habitat values to guide the future use of excess land	This action will be progressed during year two of the NSW Koala Strategy.	STARTING IN YEAR TWO



Conservation through community action

Action and progress	Description	Status
Deliver local actions to protect koala populations	<p>All 12 local community workshops set out under the NSW Koala Strategy are complete. An additional workshop was also held in Bega.</p> <p>13 local actions have been identified for funding in the 2018–19 financial year. Some are complete, some are in progress, and others are in the final stages of scoping with project partners.</p> <p>This is in addition to 10 local action koala conservation projects, as well as education and engagement initiatives, being progressed under the <i>Saving our Species</i> program.</p>	IN PROGRESS
Learn from Aboriginal communities on protecting koala habitat	This action will be progressed during year two of the NSW Koala Strategy. Two Aboriginal community days have been supported through the strategy's local actions funding.	STARTING IN YEAR TWO
Develop an online community portal on koalas	The NSW Koala Country community website was released in May. The website is available at www.koala.nsw.gov.au	COMPLETE



Safety and health of koala populations

Action and progress	Description	Status
Create a network of koala and wildlife hospitals and vet services across NSW	<p>Port Stephens Council is progressing construction of a koala sanctuary at One Mile Beach. Construction started in June 2019. In partnership with Port Stephens Koalas, council is on track to have the facility operating by December 2019.</p> <p>You can read more about the Port Stephens Koala Sanctuary at: www.portstephens.nsw.gov.au/live/environment-and-sustainability/wildlife/koalas-in-port-stephens</p>	IN PROGRESS

Action and progress	Description	Status
Research project on chlamydia in koalas	<p>This is identified as a priority for research under the Koala Research Plan. Four research proposals are currently being funded under the NSW Koala Strategy:</p> <ul style="list-style-type: none"> • Impacts and drivers of chlamydial disease in the koala: relationships between the host, pathogen and environment (University of Sydney). • Vaccination against chlamydiosis: an effective disease management tool in wild populations (University of Sydney). • Improving anti-chlamydial responses in NSW koalas with a chlamydia–koala retrovirus combination vaccine (University of the Sunshine Coast). • New and improved chlamydial treatment to reduce disease burden (University of Technology Sydney). 	IN PROGRESS
Fix priority koala road kill hotspots across NSW	<p>RMS started constructing koala fencing on Picton Road, in south west Sydney on 30 April 2019. The fencing is due to be completed in mid-2019.</p>	IN PROGRESS
Relocation of koalas to unoccupied koala habitat	<p>This is identified as a priority for research under the Koala Research Plan. Endeavour Veterinary Ecology Pty Ltd is currently delivering a research project under the NSW Koala Strategy, titled ‘Koala Translocation Review and Recommendations’.</p>	IN PROGRESS
Support koala rehabilitators	<p>Two workshops with rehabilitators were held in the first half of 2018 about koala training standards, and triage and treatment protocols. A draft three-year <i>NSW Volunteer Wildlife Rehabilitation Sector Strategy</i> was released for consultation on 28 February 2019. Funds have been allocated to 17 wildlife rehabilitation providers to improve and replenish their koala rescue equipment.</p>	IN PROGRESS
Train vets in native wildlife care	<p>Taronga Zoo is leading the creation of a professional development training course for vets and vet nurses in native wildlife care. Taronga Zoo has completed a review of related courses to identify gaps and inform scope. In February 2019, Taronga Zoo hosted a forum with koala and other wildlife stakeholders to test the initial scope of the proposed course materials. The first two modules of the course (covering an introduction to wildlife treatment and koala care) are ready to pilot over the coming months.</p>	IN PROGRESS
Develop a best practice planning guideline for koalas	<p>This action will be progressed during year two of the NSW Koala Strategy. The koala habitat information base, which will be finalised mid-2019, will be a helpful resource to inform the guidelines.</p>	STARTING IN YEAR TWO
Australian Museum is designated as the biobank to store koala genetic information in NSW	<p>This action has been delivered – the Australian Museum is now the designated biobank. NPWS provided a training workshop to wildlife rehabilitators on the protocol for collecting genetic material. The focus now is on growing the biobank through donations of samples.</p>	COMPLETE



Building our knowledge

Action and progress	Description	Status
Create a statewide koala habitat information base to inform koala conservation decisions	The pilot version of the information base has been developed for the Southern Highlands region and Southern and Central Tablelands. Testing the pilot product with stakeholders is almost complete. The information base for the remainder of New South Wales is being developed, taking account of lessons from the pilot. The statewide product will be complete in mid-2019.	IN PROGRESS
Statewide citizen science koala survey	The community wildlife survey was launched in May 2019. You can complete the survey by visiting: www.environment.nsw.gov.au/wildlife-survey	IN PROGRESS
Pilot an app to collect information about koalas	The app is under development and will be ready for release in 2019.	IN PROGRESS
Koala Strategy monitoring program	The monitoring program is being developed and monitoring sites are being selected. Initial site-based monitoring will commence in spring-summer of 2019, when koalas are dispersing and most active.	IN PROGRESS
Information collected about koalas can be easily accessed by the community	Over 8500 koala records collected by the wildlife rehabilitation sector were transferred into NSW BioNet during the first year of implementation of the strategy. Other koala data will continue to be added, as it is collected.	IN PROGRESS
Supporting priority koala research	A research symposium was held in November 2018. The Koala Research Plan and initial call for proposals was released on 28 February 2019. Grants have been awarded to 10 projects this year. Visit www.environment.nsw.gov.au/nsw-koala-research-plan to see the list of research projects being funded.	IN PROGRESS
Research on koala responses to native forest harvesting	The Natural Resources Commission (NRC) has selected three research proposals for funding. These were announced on 22 February 2019 as part of the NRC research plan. For more information about these projects please visit: www.nrc.nsw.gov.au/koala-research	IN PROGRESS
Improving our approach to fire management to protect koalas and koala habitat	This action will be progressed during year two of the NSW Koala Strategy, building on work that was initiated during the drafting of the Strategy, as well as the fire management work being progressed as part of the Wingecarribee public land pilot.	STARTING IN YEAR TWO



Photos:

Cover photo, Koala (*Phascolarctos cinereus*), John Turbill/DPIE

Page 5, Young Koala in Red Gum Forest, Lismore, John Turbill/DPIE

Page 6, Southern Highlands Koala Conservation Project, Stuart Cohen/Bottlebrush Media

Page 7, Koala sculpture trail on the boardwalk at Sea Acres National Park, Lindsay Moller/DPIE

Page 9, Koala (*Phascolarctos cinereus*), Dan Lunney/DPIE

Page 10, Narrandera Nature Reserve on the banks of Murrumbidgee River. Koala Reserve and locally known as Koala Park, Gavin Hansford/DPIE

Page 11, North rugged section of Tugalong, Karen Eardley/DPIE

Page 12, Koala (*Phascolarctos cinereus*), Dan Lunney/DPIE; Andrew and Nette McCoubrie, Stuart Cohen/BCT

Page 13, Koala (*Phascolarctos cinereus*), John Turbill/DPIE

Page 14, Koala at the Koala Hospital, Port Macquarie, David Finnegan/DPIE

Page 16, Warialda koala drinking station, Nikki Adams

Page 19, Volunteers and staff, Nature Nomads, Bundjalung National Park, Nick Cubbin/DPIE

Page 20, Face painting at the community event in April 2019 organised by the Coffs Harbour and District Local Aboriginal Land Council, Nathan Brennan/CEO Coffs Harbour Aboriginal Land Council

Page 22, Artist impression of Port Stephens Koala Sanctuary, Jackson Teece

Page 23, Koala fencing is being installed on Picton Road, near Wollondilly, David Chenery/RMS

Page 24-25, Koala (*Phascolarctos cinereus*), John Turbill/DPIE

Page 26, Koala (*Phascolarctos cinereus*), Sarah Pulling/DPIE

Page 27, Adult Koala in Red Gum Tree, John Turbill/DPIE; Jemma Lemmon/DPIE

Page 29, Koala (*Phascolarctos cinereus*), Sharon Wormleaton/DPIE

Page 33, Narrandera Nature Reserve on the banks of Murrumbidgee River, Gavin Hansford/DPIE; Koala (*Phascolarctos cinereus*), John Turbill/DPIE

Page 34, Jemma Lemmon/DPIE; Koala (*Phascolarctos cinereus*), Justin Mallee/DPIE

Page 39, Narrandera Nature Reserve, Gavin Hansford/DPIE

Find out more about your environment at:

www.environment.nsw.gov.au

© 2019 State of NSW

With the exception of photographs, the State of NSW is pleased to allow this material to be reproduced in whole or in part for educational and non-commercial use, provided the meaning is unchanged and its source, publisher and authorship are acknowledged. Specific permission is required for the reproduction of photographs.

The State of NSW has compiled this report in good faith, exercising all due care and attention. No representation is made about the accuracy, completeness or suitability of the information in this publication for any particular purpose. The State of NSW shall not be liable for any damage which may occur to any person or organisation taking action or not on the basis of this publication. Readers should seek appropriate advice when applying the information to their specific needs.

All content in this publication is owned by the State of NSW and is protected by Crown Copyright, unless credited otherwise. It is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0), subject to the exemptions contained in the licence. The legal code for the licence is available at Creative Commons.

The State of NSW asserts the right to be attributed as author of the original material in the following manner:

© State of New South Wales 2019.

Published by:

Environment, Energy and Science (in Department of Planning, Industry and Science) on behalf of the NSW Government
59 Goulburn Street, Sydney NSW 2000

PO Box A290, Sydney South NSW 1232

Phone: +61 2 9995 5000 (switchboard)

Phone: 131 555 (environment information and publications requests)

Phone: 1300 361 967 (national parks, general environmental enquiries, and publications requests)

Fax: +61 2 9995 5999

TTY users: phone 133 677, then ask for 131 555

Speak and listen users: phone 1300 555 727, then ask for 131 555

Email: info@environment.nsw.gov.au

Website: www.environment.nsw.gov.au

Report pollution and environmental incidents

Environment Line: 131 555 (NSW only)

or info@environment.nsw.gov.au

See also www.environment.nsw.gov.au

ISBN 978-1-925974-40-9

EES 2019/0294

August 2019