

# Koala Habitat Protection Guideline

Implementing State Environmental Planning Policy (Koala Habitat Protection) 2019



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## Introduction

The koala (*Phascolarctos cinereus*) is an iconic Australian marsupial. Koala populations in NSW are declining and vulnerable to extinction. As with many threatened species, koalas and their habitat are managed under a variety of legislation and policy. In 1995, the NSW planning system introduced a dedicated state environmental planning policy to protect koala habitat.

State Environmental Planning Policy (Koala Habitat Protection) 2019 (the SEPP) encourages the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of population decline. The SEPP was made under the *Environmental Planning and Assessment Act 1979* (EP&A Act) and replaces the previous State Environmental Planning Policy No 44 - Koala Habitat Protection (SEPP 44).

This Guideline is made in accordance with the SEPP to guide consent authorities, professionals and the community to understand and implement the SEPP's requirements. The Guideline has two key aims:

- To guide councils on how to prepare Koala Plans of Management (KPoM).
- To standardise processes for applicants and consent authorities when preparing and assessing development applications applicable to the SEPP.

This Guideline has three parts with supporting appendices:

#### Part 1 – Background

Introduces this Guideline and provides background information on how the SEPP is applied.

#### Part 2 – Koala Plans of Management

Provides guidance to councils on preparing a Koala Plan of Management.

#### Part 3 – The Development Assessment Process under the SEPP

Establishes requirements for applicants and councils when preparing and assessing development applications relevant to the SEPP.

# Part 1. Background

## 1.1 Aim of the SEPP

The SEPP is one of a number of NSW Government initiatives that seeks to address the declining population status of koalas in NSW. It does this through conservation and management of koala habitat as part of the planning and development assessment process. The overarching aim of the SEPP is to:

"... encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline." The Guideline supports this aim.

## 1.2 Purpose of this Guideline

The Guideline supports the SEPP's aim by:

- 1. Guiding councils on how to prepare and what to include in their KPoMs.
- 2. Defining criteria and requirements for applicants to follow and councils to implement when preparing and assessing development applications (if a council does not have a KPoM in place for that land).
- 3. Setting out the process for identifying core koala habitat.
- 4. Informing the wider community about the SEPP's role in protecting koalas and their habitat.

## 1.3 Principles of this Guideline

There are seven key planning principles that help define the criteria and requirements set out in this Guideline:

- 1. Understand and identify koala habitat values including landscape connectivity (such as habitat extent and habitat linking areas).
- 2. Avoid inappropriate or intensifying land uses in koala habitat areas through landscape planning and site selection.
- 3. Encourage the conservation and management of areas with natural vegetation that can provide habitat for koalas.
- 4. Minimise potential impacts to koalas and their habitat through appropriate design that maintains the function of core koala habitat and avoids any fragmentation or direct loss.
- 5. Implement best practice measures through the planning system to manage identified threats to koalas and their habitat (such as those listed in Part 3).
- 6. Use compensatory (i.e. offsetting) measures only where they can be shown to meet the aim of the SEPP.
- 7. Use adaptive management strategies to monitor, evaluate and deliver appropriate planning outcomes for koalas in their local setting.

## 1.4 Where does this Guideline apply?

The Guideline applies to the same local government areas listed in Schedule 1 of the SEPP. These are:

Armidale Regional, Ballina, Bathurst Region, Bega Valley, Bellingen, Berrigan, Blayney, Blue Mountains, Bourke, Brewarrina, Byron, Cabonne, Campbelltown, Central Coast, Central Darling, Cessnock, Clarence Valley, Coffs Harbour, Coonamble, Dungog, Edward River, Eurobodalla, Federation, Forbes, Gilgandra, Glen Innes Severn, Goulburn Mulwaree, Greater Hume, Gunnedah, Gwydir Shire, Hawkesbury, Hilltops, Hornsby, Inverell, Kempsey, Ku-ring-gai, Kyogle, Lake Macquarie, Leeton, Lismore, Lithgow, Liverpool, Liverpool Plains, Lockhart, Maitland, Mid-Coast, Mid-Western Regional, Moree Plains, Murray River, Muswellbrook, Nambucca, Narrabri, Narrandera, Narromine, Newcastle, Northern Beaches, Oberon, Parkes, Port Macquarie-Hastings, Queanbeyan-Palerang, Port Stephens, Richmond Valley, Shoalhaven, Singleton, Snowy Monaro Regional, Snowy Valleys, Tamworth Regional, Tenterfield, Tweed, Upper Hunter, Upper Lachlan, Uralla, Wagga Wagga, Walcha, Walgett, Warren, Warrumbungle, Weddin, Wentworth, Wingecarribee, Wollondilly, Wollongong, Yass Valley.

The SEPP does not apply to land dedicated or reserved under the *National Parks and Wildlife Act 1974* (or acquired under Part 11 of that Act), land dedicated under the *Forestry Act 2012* as State forest or a flora reserve or land that has been biodiversity certified.

The Guideline is to be applied in two ways:

- 1. By councils preparing Koala Plans of Management (Part 2 of the Guideline)
- 2. By landholders and councils when preparing and assessing a development application (Part 3 of the Guideline). If a council has an approved Koala Plan of Management that applies to the land, the landholder is required to consider that Plan rather than Part 3 of this Guideline.

Under Clause 8 of the SEPP, the development application must be consistent with the approved koala plan of management that applies to the land. This applies to land of any size, not just land over 1 hectare.

Under Clause 9 of the SEPP i.e. where there is no approved Koala Plan of Management that applies to the land, Part 3 of the Guideline applies if the land:

- a. contains core koala habitat (determined using Appendix C), and
- b. has an area of more than 1 hectare, or
- a. has, together with any adjoining land (meaning in the next cadastre) with the same owner, an area of more than 1 hectare. This is regardless of whether or not the development application applies to the whole, or only part, of the land.

The SEPP only applies to activities requiring development consent from councils under Part 4 of the EP&A Act. Exempt or complying development or other activities like land management which is not associated with a development application are managed under other State policies or other legislation (such as the *Local Land Services Act 2013,* or *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*) and do not need to consider the SEPP or this Guideline.

For more information about the NSW Land Management and Biodiversity Framework visit Local Land Services website www.lls.nsw.gov.au or Environment, Energy and Science website www.environment.nsw.gov.au.

Applications for State Significant Development and State Significant Infrastructure are not assessed by councils under Part 4 of the EP&A Act, therefore the SEPP and Guideline do not apply.

## 1.5 Koala Habitat Definitions

#### Definition of Core Koala Habitat under the SEPP

Clause 4 of the SEPP defines core koala habitat as:

- a) an area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or
- b) area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.

Please see the 'Notes about the definition' box in Appendix C for further information.

### 1.6 SEPP Map

The SEPP includes a map layer, **Site Investigation Area Map for Koala Plans of Management.** The map layer identifies areas that are likely to contain tree species listed under Schedule 2 of the SEPP and excludes areas that have a low probability of containing habitat that may be suitable for koalas.

The purpose of the map is to direct councils to certain areas it **must** focus its surveying effort to identify core koala habitat for the purpose of including in a Koala Plan of Management. Areas outside of the Map cannot be identified core koala habitat.

The Site Investigation Area Map for Koala Plans of Management is part of the SEPP. The map will be updated regularly.

The map can be accessed by the public from councils or the Department.

#### How the Site Investigation Area Map was developed

The Koala Habitat Information Base was used to develop a map that identifies areas that are likely to have koala use trees.

- In 2018, the Department identified 137 koala tree species in 'A review of koala tree use across New South Wales'.
- In 2019, consultation with koala experts led to the list being refined to 123 species in the Koala Habitat Information Base Technical Guide.

These 123 species were categorised into nine distinct regions, according to what koalas prefer to use in various areas. The number of species used by koalas in each region ranges from nine in the Riverina region to 65 in the Central Coast region.

The map was restricted by the application of the SEPP and so only captures land in the LGAs listed in Schedule 1 of the SEPP. The map also excludes the lands that the SEPP does not apply to, such as national parks and state forests.

The Site Investigation Area Map was developed by excluding:

- 1. the LGAs where the SEPP does not apply (consistent with schedule 1 of the SEPP)
- 2. land dedicated or reserved under the *National Parks and Wildlife Act* 1974, or acquired under Part 11 of that Act (as set in clause 5 of the SEPP)
- 3. land dedicated under the *Forestry Act 2012* as a State forest or flora reserve (as set in clause 5 of the SEPP)
- 4. cleared areas using the NSW Native Vegetation Extent 5m Raster v1.2 the NSW Native Vegetation extent map provides a high precision surface that differentiates native tree cover from native grasslands, non-native areas, forestry plantation and water bodies areas that the Koala Habitat Information Base has identified as having a low probability of koala use trees.

#### How core koala habitat is treated under the SEPP

#### Core koala habitat

Core koala habitat identified through the Development Application (DA) or Koala Plan of Management (KPoM) process will influence the way development is determined on that land.

For example, land that is identified and mapped as core koala habitat through an approved KPoM will be a key consideration in determining whether a proposed development (under a DA) reasonably considers impact on core koala habitat. Clause 8(2) of the SEPP requires the determination of the DA to be consistent with the KPoM.

Additionally, core koala habitat identified in an approved KPoM will be used to update the Biodiversity Values Map made under the *Biodiversity Conservation Regulation 2017*.

Alternatively, DAs **must** consider this Guideline if they are:

- in an LGA covered by the SEPP, and
- the landholding is more than 1 hectare, and
- on land without an approved KPoM.

If all three criteria are met, the development proponent must engage a suitably qualified person to survey the land affected by the development proposal for core koala habitat in accordance with Appendix C. Core koala habitat identified through this process has no effect on other legislation or mapping, unlike core koala habitat identified in an approved KPoM.

## 1.7 Legislative Framework

In addition to the SEPP, koalas and their habitat are protected by an interrelated framework of legislation. Compliance with this Guideline and the SEPP does not affect a person's obligation to separately consider the requirements of other related legislation.

#### **Environment Protection and Biodiversity Conservation Act 1999**

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act), the Australian Government's central piece of environmental legislation, lists the NSW, Queensland and ACT populations of koalas as vulnerable species. This means that approval is needed under this Act for proposed actions that will have, or are likely to have, significant impact on koalas. According to the 'EPBC Act referral guidelines for the vulnerable koala,' the loss of 20 hectares or more of high-quality habitat critical to the survival of the species is highly likely to have a significant impact for the purposes of the EPBC Act.

#### Environmental Planning and Assessment Act 1979

The EP&A Act provides the framework for the NSW planning system, including the creation of policies for specific matters of state or regional significance through State Environmental Planning Policies (SEPPs). The Act also requires consent authorities such as councils to take into consideration a range of factors when determining whether to approve a development, including the likely environmental impacts of a development on natural and built environments. The EP&A Act interacts with Part 7 of the *Biodiversity Conservation Act 2016* (BC Act) (outlined below) in relation to biodiversity assessment and approvals under the EP&A Act.

#### **Biodiversity Conservation Act 2016**

The purpose of the BC Act is to maintain a healthy, productive and resilient environment, consistent with the principles of ecologically sustainable development. The Act provides a range of protection measures for threatened species in NSW, including koalas.

The *Biodiversity Conservations Regulation 2017* (BC Regulation) (made under the BC Act) makes provision for a Biodiversity Values (BV) Map that is published by the NSW Environment Agency Head. Core koala habitat identified in an approved KPOM is one type of land that is included on the BV Map. The BV Map can be viewed in the Biodiversity Values Map and Threshold (BMAT) Tool.

The BC Act requires the applicant to undertake a biodiversity impact assessment in accordance with a methodology known as a Biodiversity Assessment Method (BAM) for a range of development proposals including any development proposal that:

- involves clearing any native vegetation on land mapped as having biodiversity values (on the BV map).
- exceeds the clearing area thresholds (cl. 7.2 BC Regulation) on any land.
- is otherwise likely to significantly affect threatened species (or their habitats).

This assessment must set out measures to (preferentially) avoid, minimise, or (lastly) offset any impacts to biodiversity value (any offsets are measured as credits and managed through the Biodiversity Offsets Scheme). Development approvals must include a condition that requires the offsets to be met prior to the development proceeding. Where the impacts of a proposal are 'serious and irreversible', a consent or determining authority must refuse consent for development

(except for state significant projects where it is a consideration before determining the proposal). The requirements under the BC Act are in addition to those required under the SEPP.

#### Local Land Services Act 2013

The LLS Act provides the regulatory framework for the management of native vegetation in NSW. It applies to rural land outside the Sydney metropolitan area and Newcastle LGA.

The amendment to the LLS Act in 2017 also introduced a Land Management Code which enables code-based clearing of vegetation on regulated land. Where code-based clearing is not allowed, an approval is required from the Native Vegetation Panel.

#### State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

The State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP) establishes a framework for the clearing of vegetation not associated with a development application in certain areas. It generally applies to non-rural areas of the State - the Sydney metropolitan area and Newcastle LGA, as well as all other land in NSW that is zoned for urban or environmental purposes. The Vegetation SEPP does not apply to National Parks or State Forests.

The Vegetation SEPP and the LLS Act perform comparable functions in relation to regulating native vegetation clearing. Where the clearing of native vegetation is not associated with a development application, the Vegetation SEPP requires that clearing above specified thresholds, known as the Biodiversity Offset Scheme threshold) is approved by the Native Vegetation Panel constituted under the LLS Act. Below these thresholds, the Vegetation SEPP allows councils to regulate clearing through a permit system.

#### Rural Fires Act 1997

#### Clearing that does not require consent

The *Rural Fires Act 1997* (RF Act) provides the regulatory framework for the management of native vegetation in NSW for bushfire hazard reduction. Bushfire hazard reduction work can be carried out despite any requirement for a license, approval, consent or authorisation made by any Act or instrument under any other Act (including the BC Act and EP&A Act) if:

- The work is undertaken in accordance with a bushfire risk management plan for the land, and
- There is a bushfire hazard reduction certificate for the work and the work is undertaken in accordance with conditions specified in the certificate, and
- The work is carried out in accordance with the provisions of any bushfire code applying to the land specified in the certificate.

The 10/50 Code contains some restrictions to hazard reduction clearing on core koala habitat identified in a council Koala Plan of Management, e.g., only Low intensity fire can be used, and no trees can be cleared. Unless the land is identified as core koala habitat, clearing in line with a Hazard Reduction Certificate does not need to consider the Koala SEPP.

#### Clearing requiring development consent

A consent authority is required to consider bush fire protection measures for development applications in accordance with the legislated document *Planning for Bush Fire Protection 2019*. This document is used to determine the construction requirements for a single dwelling and its associated Asset Protection Zone.

On bushfire-prone land consent authorities will generally undertake a site-specific assessment in accordance with Planning for Bushfire Protection to determine the extent of any Asset Protection Zone.

## 1.8 Monitoring and Review

This Guideline will be reviewed within 24 months of publication on the Department's website and may be updated if necessary. The SEPP map may also be occasionally updated as new information becomes available.

# Part 2. Koala Plans of Management

A plan of management for koalas that covers an entire LGA (or part of an LGA) is referred to as a Koala Plan of Management (KPoM). The purpose of KPoMs is to enable councils to take a strategic approach in identifying and protecting koala habitat, including core koala habitat.

There are several key assumptions underpinning this part's approach:

- Priority should be given to protecting areas defined as core koala habitat. These areas are known to be used by koalas and are therefore considered the most important to the SEPP's goals. Core koala habitat **must** only be identified in areas on the SEPP's Site Investigation Area for Koala Plans of Management Map (SIA for KPoMs Map).
- Consideration of areas with other habitat values may still be important. These areas may
  serve certain functions necessary for the long-term survival of koala populations e.g. habitat
  linkages, or sites that contribute to population expansion and recovery. These areas can be
  identified anywhere in the local government area, and do not have to correspond with land
  identified on the SIA for KPoMs Map. However, they do not have the same regulatory
  implications as land identified as core koala habitat.
- Development controls should be tightest within areas of core koala habitat, with a focus on avoiding direct loss of habitat, corridors and other refugia.

#### Effect of Koala Plans of Management

Clause 8 of the SEPP specifies that where there is an approved KPoM that applies to the land to which a development application has been made, the council's determination of the DA **must** be consistent with the approved KPoM. This includes all land, not only land over 1 hectare within core koala habitat.

Land identified as 'core koala habitat' in the KPoM, consistent with the definition in the SEPP will also be included on the Biodiversity Values Map under the *Biodiversity Conservation Regulation 2017*. This means that a development proposal on core koala habitat or the clearing of native vegetation in areas where SEPP (Vegetation in Non-Rural Areas) 2017 applies will trigger the Biodiversity Offset Scheme Threshold and will require Native Vegetation Panel approval.

The approval of a KPoM does not affect the applicant's or council's responsibility to consider the requirements of any other related legislation. This was also the case under the now repealed SEPP 44.

## 2.1 Process for Koala Plans of Management

KPoMs are prepared under Part 3 of the SEPP and **must** be developed in accordance with this Guideline. Council **must** consult with the Coordinator General of the Environment, Energy and Science Division of the Department of Planning, Industry and Environment, and the Chief Executive Officer of Local Land Services during the process of developing a KPoM (see clause 12 of the SEPP). Council **must** also identify and consult with key stakeholders, such as affected landholders, community groups and other relevant agencies while developing the KPoM.

Council **must also** exhibit the proposed KPoM for a minimum period of 90 days and allow a landholder affected by the proposed designation an additional 60 days to prepare a submission against the proposed core koala habitat designation. A letter or email **must** be sent to all landholders in proposed core koala habitat, outlining any impacts such a designation would have on their ability to undertake activity on their land and the exhibition period during which they may make a submission.

The council endorsed plan, and all required documents (as outlined under Part 2 of this Guideline), **must** then be submitted to the Department for the Secretary's approval. Before determining the

plan, the Secretary must refer it to the Chief Executive Officer of Local Land Services and the Coordinator General of the Environment, Energy and Science Division of the Department of Planning, Industry and Environment in line with clause 14(3) of the SEPP. The plan must be approved by the Secretary of the Department of Planning, Industry and Environment (DPIE) before it takes effect.

In some cases, the Secretary may issue a **conditional approval** for the KPoM, subject to certain changes being made. Council **must** make these changes before the KPOM is published and takes effect.

If a council is interested in preparing a KPoM, it **must** contact the relevant DPIE Local and Regional Planning team or Greater Sydney Place and Infrastructure team and the Environment, Energy and Science Group. Councils **must** also consult with the Environment, Energy and Science division of the DPIE and Local Land Services while developing the KPoM (in line with clause 12 of the SEPP), particularly with respect to the adequacy of studies and survey, prior to proceeding to developing management strategies.

A summary of the KPoM preparation process is illustrated on the following page.

	Koala Plans of Management (KPOM) Process
	Council resolves to prepare a Koala Plan of Management (KPOM) and publishes intent to prepare a KPOM and Site Investigation Area for Koala Plans of Management Map (blue) from SEPP on its website.
C	ouncil engages a suitably qualified person to prepare KPOM in line with Koala Guideline, including conducting surveys for core koala habitat, in areas identified on the Site Investigation Area for Koala Plans of Management Map (blue). Council combines survey results with best available data to inform proposed core koala habitat.
	Ahead of public exhibition, council advertises the exhibition dates on its website and in a local newspaper.
D	raft KPOM exhibited by council for 90 days and individual landholders notified of proposed core koala habitat on thei land. Note affected landholders have an extra 60 days to prepare a submission against proposed core koala habitat designation, if requested.
	Council considers submissions and finalises KPOM.
)	Council submits draft KPoM, including submissions report and any other documentation to the Department of Planning, Industry and Environment to seek Secretary's approval of the Plan.
	The Department consults with Local Land Services and the Environment, Energy and Science Group of the Department on the proposed KPOM package.
	Once feedback is obtained from Local Land Services and the Environment, Energy and Science Group, the Department prepares a report with recommendations for the Secretary to consider in determining the Plan.
Tł	he Secretary can: Approve the KPOM unchanged; Approve the KPOM with conditions; Refuse the KPOM.

## 2.2 Definitions of Koala Habitat in Broader Landscape Terms

Councils may identify core koala habitat consistent with the definition in the SEPP. While councils can also identify other types of koala habitat, only core koala habitat has regulatory impact in other parts of the NSW legislative framework.

These other types of koala habitat can be identified outside the bounds of the Site Investigation Area for Koala Plans of Management Map. This is important since the definition of core koala habitat may be limiting at a landscape level, where the following issues arise:

- Identifying habitat at a landscape level generally requires different types of data available at a scale that can be reasonably gathered and applied to broad-scale areas. The state-wide Koala Habitat Information Base provides data to help councils identify koala habitat in their local government area and guide their local mapping.
- KPoMs aim to deliver strategic outcomes requiring attributes broader than species
  presence (noting that some areas which may not currently be occupied by koalas may be
  important in terms of connectivity, dispersal, seasonal movement, drought or fire refuge, or
  recovery). KPoMs are most effective in preventing contributors to population decline from
  site-based, incremental or cumulative impacts.

At a landscape scale, habitat assessments **should** identify all habitats important or potentially important to koalas with regard to several factors, not limited to those used to define core koala habitat in the SEPP.

Further discussion on habitat mapping for KPoMs is provided in Appendix B.

## 2.3 Part LGA Koala Plans of Management

In some circumstances it may be appropriate for councils to prepare a KPoM for only a portion of an LGA. As a priority, these plans should focus on areas where threats to koalas and their habitat are greatest, e.g. where land uses are expanding or intensifying rapidly. Accordingly, while councils are **encouraged** to consider the entire LGA when developing a KPoM, part LGA plans may be appropriate where the study area:

- is of a sufficient size to identify core koala habitat, threats, management recommendations and habitat protection mechanisms in a regional context.
- incorporates known koala populations in their entirety.
- utilises both ecological and physical characteristics to determine an appropriate study area boundary rather than relying on cadastral boundaries.
- enables a strategic planning approach to be developed for managing and restoring koala habitat and the abatement of threats, which meet the aim of the SEPP.

Council **must** seek advice from DPIE, and the Coordinator General of the Environment, Energy and Science Division of the Department of Planning, Industry and Environment well as the Chief Executive Officer of Local Land Services to determine if a part LGA KPoM is appropriate for the proposed area. The procedures for preparing a part LGA KPoM are the same as those detailed for a whole LGA Plan.

The Coordinator General of the Environment, Energy and Science Division of the Department as well as the Chief Executive Officer of Local Land Services **must** be consulted when preparing a KPoM for part of an LGA. The remaining part of the LGA would remain subject to any other legislative requirements for individual development applications under the SEPP.

#### Using a KPoM to streamline DAs

There may be circumstances where a council is able to determine there is known koala habitat and presence in a part of its LGA. It may seek to protect this habitat through a KPoM, while also switching off consideration of the SEPP in the rest of the LGA.

In this instance, it may be appropriate to develop a KPoM for the entire LGA but specify that land outside of the priority mapped areas (these priority areas might include core koala habitat or other regionally relevant koala habitat), still forms the area considered to be covered by an approved KPoM. This will allow many DAs in the council area to not have to consider the SEPP.

## 2.4 What **must** be included in a Koala Plan of Management

KPoMs must (at a minimum):

- 1. Identify and map present koala populations and (if possible) past populations from historical records (i.e. BioNet). Note BioNet records from Dan Lunney's 2006 community survey and any records with a locational accuracy of more than 1,000 metres are **not** to be considered.
- 2. Identify and map koala habitat based on the principles in this Guideline (outlined in section 1.3). 'Core koala habitat' **must** be mapped consistent with the definition in the SEPP to ensure protection in the broader legislative framework. For KPoMs this means the area **must** also be identified on the Site Investigation Area for Koala Plans of Management Map (other types of habitat such as regionally relevant habitat capable of sustaining koalas or 'corridors' can occur outside of the mapped area).
- 3. Identify threatening processes and aim for no net loss of core koala habitat within the area covered by the plan over the long-term.
- 4. Establish procedures to secure and manage koala populations into the future.

- 5. Specify any requirements additional to those required by the Biodiversity Assessment Method for development applications in core koala habitat, and in areas with other habitat types and values.
- 6. Specify requirements for activity assessments and planning proposals (rezoning proposals) in core koala habitat, and in areas with other habitat types and values.

In meeting the requirements listed above, a KPoM **should** address the seven key planning principles identified in Section 1.3 of this Guideline.

When a council provides the KPoM for the Secretary's approval, it **must** submit Geographic Information System (GIS) data of any core koala habitat identified in the plan. This is so the core koala habitat can be mapped on the Biodiversity Values Map under the Biodiversity Conservation Regulation 2017 if it is approved. Data must be supplied in accordance with the GIS data requirements of the DPIE as published on its website (<u>https://www.planning.nsw.gov.au/Plans-for-your-area/Local-Planning-and-Zoning/Mapping-standards-and-requirements</u>).

In addition to GIS data, council **must** also provide the Department with the submissions report, the results of any surveys, and any other documents that informed the preparation of the KPoM, including any relevant information provided by impacted landholders.

Appendix B contains more detail on the information that should be included in a KPoM. Councils **can** set out development application criteria in the KPoM or **choose** to apply the development application criteria in Part 3 to mapped areas of koala habitat in the KPoM. Councils **must** specify in their KPoMs if they choose to follow the criteria in Part 3 of the Guideline.

#### What not to include - clearing for bushfire protection / managing vegetation

Clearing for bushfire hazard reduction is managed under other legislation including the *Rural Fires Act 1997* and the 10/50 Code. Councils **must** not include provisions to manage clearing for bushfire hazard reduction in their KPoMs to avoid potential conflicts with other legislation.

The Rural Fire Service may consider any core koala habitat in an approved Koala Plan of Management when undertaking or approving hazard reduction clearing under the Rural Fires Act. Councils **must** provide GIS data for all areas of core koala habitat identified in an approved KPoM to the Rural Fire Service to help determine where restrictions relating to bushfire hazard reduction might apply.

Likewise, a KPoM **must** not introduce provisions designed to manage vegetation in the LGA that would otherwise be managed through other legislation (such as the council's development control plan or other SEPPs). Any provisions relating to the management of vegetation should only be considered where they directly relate to koala habitat and the koala tree species listed in Schedule 2 of the SEPP.

Clause 6A of the Koala SEPP allows clearing to form an asset protection zone if this occurs as part of a DA for a dwelling damaged or destroyed in bushfire. Clearing of vegetation to the minimum extent necessary for the purposes of forming an asset protection zone required to rebuild a bushfire damaged or destroyed home does not need to consider the SEPP or address this Guideline. For more information, see Part 3 of this Guideline.

## 2.5 Consultation requirements for KPoMs

#### **Public exhibition**

Council **must** exhibit the proposed KPoM for a minimum period of 90 days. This is a requirement under clause 13 of the SEPP. During this time, government agencies, local residents and members of the public can comment on the proposed KPoM.

#### Writing to landholders

Council **must** notify by post or email, all landholders within proposed core koala habitat in the draft KPoM and clearly detail the implications for land identified as core koala habitat if the KPoM is approved. Councils **must** consult with Local Land Services on preparing such correspondence in engaging with landholders.

The correspondence to landholders **must** clearly state the procedure for contesting the proposed core koala habitat designation. The process that allows landholders to contest the proposed designation of core koala habitat on their land was introduced by the Koala SEPP and was not previously available under SEPP 44. Landholders who wish to contest proposed core koala habitat on their land must provide evidence that the land does not contain core koala habitat, using the survey method in Appendix C. Alternatively, the landholder can request council use its suitably qualified and experienced person to conduct a survey in accordance with Appendix C at no cost to the landholder.

In some cases, it may be adequate for the landholder to provide evidence such as photographs that the land is clearly not core koala habitat and a survey is not required to be conducted at all (e.g. because the site has been completely cleared of vegetation, or the only vegetation is a monoculture plantation such as a macadamia farm). This process is also detailed in Appendix C.

#### Extending the exhibition period

In some cases, landholders in areas of proposed core koala habitat may need more than 90 days to gather and present evidence to council that their land does not contain core koala habitat (e.g. if they have been unable to find a suitably qualified person to conduct a survey). In this case, the landholder must write to the council within the 90 day exhibition period and request an extension of up to 60 days to facilitate lodgement of their objection. Council **must** provide the landholder with 60 days but may provide a longer extension if appropriate.

#### Using stakeholder feedback

It may be appropriate for council to make changes to the KPoM in response to feedback to the exhibition. These changes **must** be detailed and justified in the submissions report.

The objections and any evidence submitted by a landholder **must** be detailed in the submissions report, along with council's response which clearly details the action taken (e.g. removing or maintaining the core koala habitat designation) and a justification for the decision.

The submissions report **must** be provided when the draft KPoM is submitted for the Secretary's determination, along with any other documents relevant to the plan (such as survey results or local koala studies).

The consultation process is summarised in the flow chart below:

## **Consultation Process for Koala Plans of Management**

1	Council <b>must</b> exhibit the KPOM for a <b>minimum</b> of 90 days.
2	Council <b>must</b> write to <b>all</b> landholders in proposed core koala habitat detailing how to make a submission. Council <b>must</b> also advise the landholders of the impact of core koala habitat designation, including on their ability to carry out activities.
3	Landholders in proposed core koala habitat can object using survey method in Appendix C of the Guideline and request to 'stop the clock' on the KPOM for 60 days to provide evidence. Council <b>must</b> stop the clock if asked to do so.
4	Landholders in proposed core koala habitat can request council to conduct an on-ground survey, or hire their own suitably qualified person to conduct a survey at their own expense. If requested, council <b>must</b> conduct the survey at council expense.
5	Council <b>must</b> prepare a submissions report detailing <b>all</b> objections and the decisions made.
6	Council <b>must</b> submit the KPOM and submissions report to the DPIE Secretary.
2	The DPIE Secretary <b>must</b> refer the KPOM and submissions report to LLS and EES.
8	The DPIE Secretary can approve the KPOM (with or without conditions), or refuse it.

## 2.6 Amending a KPoM

Councils may occasionally amend an approved KPoM (e.g. to incorporate new evidence or information about the distribution of koala populations in the local government area). Clause 14A of the SEPP allows a KPoM to be amended or replaced by a subsequent koala plan of management.

Depending on the scope and scale of the changes, an amended KPoM may require re-exhibition following the consultation procedures outlined in the SEPP. For example, if a council wishes to update outdated references to legislation or make minor editing changes (such as spelling, grammar and punctuation), it is likely the KPoM will not require re-exhibition.

However, re-exhibition will likely be necessary if a council proposes to change development application provisions or change areas of identified core koala habitat. Councils are **encouraged** to discuss proposed amendments with the Department prior to finalising any changes to a KPoM. Amending KPoMs **must** be approved by the Secretary of the Department. Re-exhibition of the KPoM is at the discretion of the Secretary.

## Part 3. The Development Assessment Process Under the SEPP

This part of the Guideline outlines the development assessment requirements for any development application to which the SEPP applies and where there is no approved KPoM in place. This includes all land:

- a. with an area of at least 1 hectare, including adjoining land (meaning land the next cadastre over) within the same ownership, and
- b. that is within an LGA to which the SEPP applies.

This guidance is intended to assist both:

- Applicants in understanding how the SEPP applies to their development, the level of information that is needed to support their development application, and the criteria that needs to be addressed.
- Councils in assessing the adequacy of information supporting a development application and the considerations relevant to their determination.

**Note**: If a KPoM applies to the land that is subject to a DA, the DA **must** consider the requirements outlined in the KPoM instead of this Guideline (this applies to land of any size, not just land over 1 hectare).

The requirements of this section are structured into two parts.

- Tier 1 is for low or no direct impact development proposals and **does not require any surveys or reports**, and
- Tier 2 is for development proposals that are not able to demonstrate that the development has a low or no direct impact on koalas or koala habitat. Tier 2 requires a suitably qualified and experienced person to undertake a survey for core koala habitat and prepare a Koala Assessment Report to be provided with the development application.

#### Rebuilding after bushfire

Clause 6A of the Koala SEPP allows clearing to form an asset protection zone if this occurs as part of a development application to rebuild a dwelling damaged or destroyed in bushfires. Clearing to the minimum extent necessary for the purpose of forming an asset protection zone for the rebuilding of a bushfire damaged or destroyed home does not need to consider the SEPP or address this Guideline.

The objective of this clause is to enable the replacement of a lawfully erected dwelling house that has been damaged or destroyed by a bush fire to be rebuilt without having to consider the SEPP.

The SEPP **does not apply** to land forming part of an asset protection zone cleared for a dwelling house if—

- (a) the dwelling house is replacing a lawfully erected dwelling house damaged or destroyed by a bush fire, and
- (b) the development application for the replacement dwelling house is made to the consent authority no later than 5 years after the day the bush fire caused the damage or destruction, and
- (c) the asset protection zone is cleared in accordance with *Planning for Bush Fire Protection*.

The flowchart below provides an overview of the development application pathway.

## Koala SEPP Development Assessment Pathways



## 3.1 Tier 1 - Low or no direct impact development

The Tier 1 process is for development which can be demonstrated to have low or no impact on koalas or koala habitat as follows:

- 1. onsite or aerial photography is sufficient evidence to demonstrate that the development does not involve and will not result in clearing of regionally relevant trees of the species listed in Schedule 2 of the Koala SEPP, and
- 2. the development is below the Biodiversity Offsets Scheme threshold under the BC Act, or
- 3. council agrees the proposed development will have low or no impact on koalas or koala habitat on a case by case basis.

If the development cannot either meet **the first two criteria OR criteria 3** above, it must progress as a Tier 2 development application.

Tier 1 development does not require the landholder to engage a suitably qualified and experienced person to prepare any reports or conduct any surveys. This differentiates the Tier 1 process from the Tier 2 process which requires a suitably qualified and experienced person to conduct a survey for core koala habitat and prepare a Koala Assessment Report.

#### Management measures to address key risks

Development issues **must** be assessed on a case-by-case basis and different councils may apply prescriptions that align with broader considerations relevant to their council area.

Councils are **encouraged** to develop requirements within their development control plans that specifically deal with koala habitat management issues as this will provide more detailed and tailored information around what is expected in the local area.

# 3.2 Tier 2 - Development applications impacting koalas and/or core koala habitat

Development applications which are likely to impact koalas and/or koala habitat and do not meet the Tier 1 criteria **must** address the following criteria summarised below against each of the seven planning principles. Tier 2 development applications require a suitably qualified and experienced person (as defined in the SEPP and detailed in this Guideline) to conduct a survey for core koala habitat, in accordance with Appendix C of this Guideline.

A Koala Assessment Report addressing the criteria **must** accompany any development application to which Tier 2 applies. A suggested template for a Koala Assessment Report is provided in section 3.3 below. The Koala Assessment Report **must** be prepared by a suitably qualified and experienced person, defined in the SEPP.

The level of detail required in the Koala Assessment Report must be commensurate with the likely impact the development application is likely to have on koala habitat including habitat connectivity. For example, a Koala Assessment Report supporting a development application that may impact a small number of koala use trees will not need to be as extensive as one that may impact on a large number of trees and/or are critical to habitat connectivity.

Principle 1. Understand koala habitat values

Criteria 1. The site is established as containing core koala habitat if a site area survey undertaken by a suitably qualified and experienced person in accordance with Appendix C has identified the presence of core koala habitat.

Criteria 2. Further analysis is undertaken in order to understand the broader values of the core koala habitat, including information about the koala population using the habitat and any specific ecological functions the habitat might serve.

Key questions which need to be addressed in meeting this criterion include:

- What is known about the size, health and viability of the koala population?
- What is known about the generational persistence of the local koala populations? This should be informed by a record analysis to determine population trends and persistence over time.
- What is the broader landscape context of the habitat within the site area? For instance, is it contiguous with broader areas of habitat or relatively isolated, and what are the likely regional movement patterns of koalas using the site area?
- Does the site area contain particular values likely to serve an important ecological function for koalas? For instance, does it provide linkage between other habitats or serve as a habitat buffer to broader areas?
- Could the habitat area and/or koala population using the site area be important to the recovery of the koala? For instance, does the habitat contain features that might provide refuge during droughts, extreme heat, or fire? Or is the population considered to be healthy, robust or showing relatively low incidence of disease?
- Drawing on evidence presented, what significance are the values of the site to preserving the existing koala population and supporting recovering and expanding populations?

Principle 2. Avoid intensifying land use in koala habitat areas through appropriate landscape planning and site selection

#### Criteria 3. Site selection for development takes into account koala habitat values.

- In addressing this criterion, the development application needs to answer:
- How has the development footprint avoided core koala habitat?
- What feasible alternative site selections were assessed as part of the process?

Principle 3. Encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas

Criteria 4. Development avoids the direct loss of core koala habitat within the site area and avoids fragmentation

#### Criteria 5. Core koala habitat is excluded from the development footprint

Principle 4. Minimise potential direct impacts to koalas through koala sensitive design

#### *Criteria 6.* Development avoids direct impacts to core koala habitat within the site area. In addressing this criterion, the development application needs to show:

 How direct impacts to core koala habitat are minimised so as to not fragment existing core koala habitat. This includes the ability for koalas to move across the landscape or impact the recovery and expansion of koala populations.

# Criteria 7. Where some loss of core koala habitat cannot be avoided (and provided it is consistent with all other criteria), development is designed in a way that retains higher value areas across the site and avoids fragmentation of habitat within the site area and more broadly within the region.

For instance, this might mean prioritising the retention of koala trees with a diameter at breast height over bark (DBHOB) greater than 250 mm, or areas of core koala habitat that are in better condition, show signs of koala tree recruitment, are better connected with habitat more broadly, or contain features that might be important for refuge.

Note: a "tree" is taken to be a plant with a DBHOB of 10 cm or greater.

# Criteria 8. Development is undertaken in a way that maintains the potential function of the core koala habitat.

For instance, if the koala habitat within the site area has been identified as an important linkage corridor, development should be undertaken in a way that enables the continued movement of koalas.

Principle 5. Implement best practice measures for the management of identified risks to koalas.

# Criteria 9. All relevant indirect impacts to koalas and koala habitat associated with the development are identified.

Potential indirect impacts which may be relevant include (but are not limited to): dog attacks, vehicle strikes, drowning in pools, increased risk of fire, introduction or spread of disease, disturbance, and impediments to movement.

When considering potential indirect impacts, it is important to look at areas beyond the site that are likely to be affected by the proposal.

#### Criteria 10. Development uses best practice management measures to address the potential impacts considered likely to pose an increased risk to koalas or their habitat.

The types of measures or controls used to address impacts will vary depending on the nature of the development, the relative importance of the site area to koalas, and the extent and magnitude of impacts.

The specific requirements may be guided by development control plans relevant to each council area. See Table 1 above for examples of the types of measures that might be used to address the indirect impacts.

Principle 6. Use compensatory measures only where they can be shown to better promote the aim of the SEPP

# Criteria 11. Compensatory measures are only used once it has been demonstrated that options to avoid, minimise and manage impacts to core koala habitat have been exhausted.

# Criteria 12. Where there is any direct loss of habitat or compromise in the potential function of a koala habitat area (and provided it is consistent with all other criteria outlined here), suitable compensatory measures are provided.

Determining the suitability of any proposed compensatory measures should be guided by the overall aim of the SEPP. Advice from the Department's Environment, Energy and Science division or from a suitably qualified person, may be called on.

Principle 7. Use adaptive management strategies to monitor, evaluate and deliver appropriate planning outcomes for koalas

# Criteria 13. The development application includes a monitoring, adaptive management and reporting component against the key outcomes.

## 3.3 Template for Koala Assessment Reports

Koala Assessment Reports **must** include the following information for a standard approach across NSW. These reports **must** accompany a development application subject to the SEPP.

Please note that the level of detail required in a Koala Assessment Report needs to be commensurate with the amount of impact a development application is likely to have on koala use trees and habitat. For example, a Koala Assessment Report supporting a development application that may impact a small number of koala use trees will not need to be as extensive as one that may impact on a large number of trees and/or are critical to habitat connectivity.

#### Introduction

Describe the nature of the proposed development.

Define how the SEPP applies to the proposed development.

#### Koala habitat values – addressing criteria 1 and 2

Describe the site area, including the general environment and condition, location and extent of the development area and any other areas that may be directly or indirectly impacted by the proposed development.

Provide details of koala survey as undertaken in accordance with Appendix C. This should include details of the results of the koala surveys, including how the site area meets the definition of core koala habitat and mapping that shows habitat areas and koala records within the site area and adjoining areas.

Describe the site context (including mapping showing habitat that might be associated with vegetation in the adjoining landscape and records within the vicinity of the site area) and provide an analysis of the koala habitat values (including how koalas might use the site area and the relative importance of the site area to a local koala population).

#### Measures taken to avoid impacts to koalas – addressing criteria 3, 4, 5, 6, 7 and 8

Describe the site selection process, including how koala habitat was taken into account and any avoidance outcomes achieved through this process.

Describe how the proposed development avoids or minimises direct impacts to koala habitat and habitat function within the site area.

#### Analysis of potential impacts – addressing criteria 9

Identify the residual direct impacts to koalas and koala habitat within the site area, including the nature and extent of impacts and the likely implications for the viability of a local koala population.

Identify the relevant potential indirect impacts to koalas and koala habitat within the site area and adjacent habitat areas, including the nature and extent of potential indirect impacts and the likely implications for the viability of a local koala population.

#### Plan to manage and protect koalas and their habitat – addressing criteria 10, 11, 12 and 13

Describe the management measures that will be implemented as part of proposed construction and operations to manage the direct and indirect impacts identified. These measures should be outcomes focussed and include performance targets.

Describe any compensatory measures that will be delivered, including an analysis of the suitability of these measures against criteria 9 and 10.

Outline a plan for monitoring, adaptive management and reporting against the key outcomes and performance targets.

#### 6. References

Include a list of all references cited in the report.

#### 7. Appendices

Include any additional information or supplementary material relevant to the DA proposal.

# Appendix A: Koala Use Tree Species List (as per Schedule 2 of the SEPP)

#### KOALA MANAGEMENT AREAS



#### Central and Southern Tablelands koala management area

Scientific name Common name	
Eucalyptus agglomerata	Blue-leaved Stringybark
Eucalyptus albens	White Box
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus blakelyi	Blakely's Red Gum
Eucalyptus bosistoana	Coast Grey Box
Eucalyptus bridgesiana	Apple Box
Eucalyptus camaldulensis	River Red Gum
Eucalyptus conica	Fuzzy Box

Eucalyptus cypellocarpa	Monkey Gum
Eucalyptus dalrympleana	Mountain Gum
Eucalyptus dealbata	Tumbledown Red Gum
Eucalyptus dives	Broad-leaved Peppermint
Eucalyptus elata	River Peppermint
Eucalyptus eugenioides	Narrow-leaved Stringybark
Eucalyptus fibrosa	Broad-leaved Red Ironbark
Eucalyptus globoidea	White Stringybark
Eucalyptus goniocalyx	Bundy
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus maidenii	Maiden's Blue Gum
Eucalyptus mannifera	Brittle Gum
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Western Grey Box
Eucalyptus nortonii	Large-flowered Bundy
Eucalyptus obliqua	Messmate
Eucalyptus oblonga	Stringybark
Eucalyptus paniculata	Grey Ironbark
Eucalyptus pauciflora	White Sally, Snow Gum
Eucalyptus piperita	Sydney Peppermint
Eucalyptus polyanthemos	Red Box
Eucalyptus punctata	Grey Gum

Eucalyptus quadrangulata	White-topped Box
Eucalyptus radiata	Narrow leaved Peppermint
Eucalyptus rossii	Inland Scribbly Gum
Eucalyptus rubida	Candlebark
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus sieberi	Silvertop Ash
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus viminalis	Ribbon Gum

#### Central Coast koala management area

Scientific name Common name	
Allocasuarina littoralis	Black She-oak
Allocasuarina torulosa	Forest Oak
Angophora bakeri	Narrow-leaved Apple
Angophora costata	Smooth-barked Apple
Angophora floribunda	Rough-barked Apple
Casuarina glauca	Swamp Oak
Corymbia eximia	Yellow Bloodwood
Corymbia gummifera	Red Bloodwood
Corymbia maculata	Spotted Gum
Eucalyptus acmenoides	White Mahogany
Eucalyptus agglomerata	Blue-leaved Stringybark
Eucalyptus albens	White Box
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus beyeriana	Beyer's Ironbark

Eucalyptus blakelyi	Blakely's Red Gum
Eucalyptus bosistoana	Coast Grey Box
Eucalyptus botryoides	Bangalay
Eucalyptus camaldulensis	River Red Gum
Eucalyptus camfieldii	Camfield's Stringybark
Eucalyptus canaliculata	Large-fruited Grey Gum
Eucalyptus capitellata	Brown Stringybark
Eucalyptus carnea	Thick-leaved Mahogany
Eucalyptus consideniana	Yertchuk
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus cypellocarpa	Monkey Gum
Eucalyptus deanei	Mountain Blue Gum
Eucalyptus eugenioides	Narrow-leaved Stringybark
Eucalyptus fibrosa	Broad-leaved Red Ironbark
Eucalyptus glaucina	Slaty Red Gum
Eucalyptus globoidea	White Stringybark
Eucalyptus grandis	Flooded Gum
Eucalyptus haemastoma	Broad-leaved Scribbly Gum
Eucalyptus imitans	Eucalyptus imitans
Eucalyptus largeana	Craven Grey Box
Eucalyptus longifolia	Woollybutt
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus melliodora	Yellow Box
Eucalyptus michaeliana	Brittle Gum
Eucalyptus microcorys	Tallowwood
Eucalyptus moluccana	Grey Box
Eucalyptus oblonga	Stringybark

Eucalyptus paniculata	Grey Ironbark
Eucalyptus parramattensis	Parramatta Red Gum
Eucalyptus pilularis	Blackbutt
Eucalyptus piperita	Sydney Peppermint
Eucalyptus propinqua	Small-fruited Grey Gum
Eucalyptus punctata	Grey Gum
Eucalyptus quadrangulata	White-topped Box
Eucalyptus racemosa	Narrow-leaved Scribbly Gum
Eucalyptus resinifera	Red Mahogany
Eucalyptus robusta	Swamp Mahogany
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus scias	Large-fruited Red Mahogany
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum
Eucalyptus siderophloia	Grey Ironbark
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus sieberi	Silvertop Ash
Eucalyptus signata	Scribbly Gum
Eucalyptus sparsifolia	Narrow-leaved Stringybark
Eucalyptus squamosa	Scaly Bark
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus umbra	Bastard White Mahogany
Eucalyptus viminalis	Ribbon Gum
Melaleuca quinquenervia	Broad-leaved Paperbark
Syncarpia glomulifera	Turpentine

### Darling Riverine Plains koala management area

Scientific name Common name	
Callitris glaucophylla	White Cypress Pine

Eucalyptus albens	White Box
Eucalyptus camaldulensis	River Red Gum
Eucalyptus chloroclada	Dirty Gum
Eucalyptus conica	Fuzzy Box
Eucalyptus coolabah	Coolibah
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus dealbata	Tumbledown Red Gum
Eucalyptus dwyeri	Dwyer's Red Gum
Eucalyptus largiflorens	Black Box
Eucalyptus melanophloia	Silver-leaved Ironbark
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Western Grey Box
Eucalyptus pilligaensis	Narrow-leaved Grey Box
Eucalyptus populnea	Bimble Box, Poplar Box
Eucalyptus sideroxylon	Mugga Ironbark

### Far West koala management area

Scientific name	vientific name Common name	
Angophora floribunda		Rough-barked Apple
Callitris glaucophylla		White Cypress Pine
Casuarina cristata		Belah
Eucalyptus albens		White Box
Eucalyptus blakelyi		Blakely's Red Gum
Eucalyptus camaldulensis		River Red Gum
Eucalyptus chloroclada		Dirty Gum
Eucalyptus coolabah		Coolibah
Eucalyptus crebra		Narrow-leaved Ironbark
Eucalyptus dealbata		Tumbledown Red Gum

Eucalyptus intertexta	Gum Coolibah
Eucalyptus largiflorens	Black Box
Eucalyptus melanophloia	Silver-leaved Ironbark
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Western Grey Box
Eucalyptus moluccana	Grey Box
Eucalyptus pilligaensis	Narrow-leaved Grey Box
Eucalyptus populnea	Bimble Box
Eucalyptus sideroxylon	Mugga Ironbark
Geijera parviflora	Wilga

### North Coast koala management area

Scientific name Common name	
Allocasuarina torulosa	Forest Oak
Angophora floribunda	Rough-barked Apple
Corymbia gummifera	Red Bloodwood
Corymbia henryi	Large-leaved Spotted Gum
Corymbia intermedia	Pink Bloodwood
Corymbia maculata	Spotted Gum
Eucalyptus acmenoides	White Mahogany
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus bancroftii	Orange Gum
Eucalyptus biturbinata	Grey Gum
Eucalyptus campanulata	New England Blackbutt
Eucalyptus canaliculata	Large-fruited Grey Gum
Eucalyptus carnea	Thick-leaved Mahogany
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus eugenoides	Naroow-leaved stringybark

Eucalyptus fibrosa	Broad-leaved Red Ironbark
Eucalyptus glaucina	Slaty Red Gum
Eucalyptus globoidea	White Stringybark
Eucalyptus grandis	Flooded Gum
Eucalyptus laevopinea	Silver-top Stringybark
Eucalyptus largeana	Craven Grey Box
Eucalyptus microcorys	Tallowwood
Eucalyptus moluccana	Grey Box
Eucalyptus nobilis	Forest Ribbon Gum
Eucalyptus pilularis	Blackbutt
Eucalyptus placita	Grey Ironbark
Eucalyptus planchoniana	Bastard Tallowwood
Eucalyptus propinqua	Small-fruited Grey Gum
Eucalyptus psammitica	Bastard White Mahogany
Eucalyptus punctata	Grey Gum
Eucalyptus resinifera	Red Mahogany
Eucalyptus robusta	Swamp Mahogany
Eucalyptus rummeryi	Steel Box
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus scias	Large-fruited Red Mahogany
Eucalyptus seeana	Narrow-leaved Red Gum
Eucalyptus siderophloia	Grey Ironbark
Eucalyptus signata/Eucalyptus racemosa	Scribbly Gum/Narrow-leaved Scribbly Gum
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus tindaliae	Stringybark
Eucalyptus umbra	Bastard White Mahogany
Melaleuca quinquenervia	Broad-leaved Paperbark

#### Northwest Slopes koala management area

Scientific name Common name	
Angophora floribunda	Rough-barked Apple
Callitris glaucophylla	White Cypress Pine
Casuarina cristata	Belah
Eucalyptus albens	White Box
Eucalyptus blakelyi	Blakely's Red Gum
Eucalyptus bridgesiana	Apple Box
Eucalyptus caleyi	Drooping Ironbark
Eucalyptus caliginosa	Broad-leaved Stringybark
Eucalyptus camaldulensis	River Red Gum
Eucalyptus canaliculata	Large-fruited Grey Gum
Eucalyptus chloroclada	Dirty Gum
Eucalyptus conica	Fuzzy Box
Eucalyptus coolabah	Coolibah
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus dalrympleana	Mountain Gum
Eucalyptus dealbata	Tumbledown Red Gum
Eucalyptus dwyeri	Dwyer's Red Gum
Eucalyptus exserta	Peppermint
Eucalyptus fibrosa	Broad-leaved Red Ironbark
Eucalyptus goniocalyx	Bundy
Eucalyptus laevopinea	Silver-top Stringybark
Eucalyptus largiflorens	Black Box
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus mannifera	Brittle Gum
Eucalyptus melanophloia	Silver-leaved Ironbark
Eucalyptus melliodora	Yellow Box

Eucalyptus microcarpa	Western Grey Box
Eucalyptus moluccana	Grey Box
Eucalyptus nobilis	Forest Ribbon Gum
Eucalyptus parramattensis	Parramatta Red Gum
Eucalyptus pauciflora	White Sally, Snow Gum
Eucalyptus pilligaensis	Narrow-leaved Grey Box
Eucalyptus polyanthemos	Red Box
Eucalyptus populnea	Bimble Box/Poplar Box
Eucalyptus prava	Orange Gum
Eucalyptus punctata	Grey Gum
Eucalyptus quadrangulata	White-topped Box
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus viminalis	Ribbon Gum

#### Northern Tablelands koala management area

Scientific name Common name	
Allocasuarina littoralis	Black She-oak
Angophora floribunda	Rough-barked Apple
Callitris glaucophylla	White Cypress Pine
Eucalyptus acaciiformis	Wattle-leaved Peppermint
Eucalyptus albens	White Box
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus biturbinata	Grey Gum
Eucalyptus blakelyi	Blakely's Red Gum
Eucalyptus bridgesiana	Apple Box
Eucalyptus brunnea	Mountain Blue Gum
Eucalyptus caleyi	Drooping Ironbark
Eucalyptus caliginosa	Broad-leaved Stringybark

Eucalyptus camaldulensis	River Red Gum
Eucalyptus campanulata	New England Blackbutt
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus dalrympleana	Mountain Gum
Eucalyptus dealbata	Tumbledown Red Gum
Eucalyptus eugenioides	Narrow-leaved Stringybark
Eucalyptus laevopinea	Silver-top Stringybark
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus melanophloia	Silver-leaved Ironbark
Eucalyptus melliodora	Yellow Box
Eucalyptus michaeliana	Brittle Gum
Eucalyptus microcorys	Tallowwood
Eucalyptus moluccana	Grey Box
Eucalyptus nicholii	Narrow-leaved Black Peppermint
Eucalyptus nobilis	Forest Ribbon Gum
Eucalyptus nova-anglica	New England Peppermint
Eucalyptus obliqua	Messmate
Eucalyptus pauciflora	White Sally, Snow Gum
Eucalyptus prava	Orange Gum
Eucalyptus radiata	Narrow leaved Peppermint
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus stellulata	Black Sally
Eucalyptus subvelutina	Broad-leaved Apple
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus viminalis	Ribbon Gum
Eucalyptus williamsiana	Eucalyptus williamsiana

#### Riverina koala management area

Scientific name Common name	
Callitris glaucophylla	White Cypress Pine
Casuarina cristata	Belah
Eucalyptus albens	White Box
Eucalyptus camaldulensis	River Red Gum
Eucalyptus intertexta	Gum Coolibah
Eucalyptus largiflorens	Black Box
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Western Grey Box
Eucalyptus populnea	Bimble Box

#### South Coast koala management area

Scientific name Common name	
Allocasuarina littoralis	Black She-oak
Angophora floribunda	Rough-barked Apple
Corymbia gummifera	Red Bloodwood
Corymbia maculata	Spotted Gum
Eucalyptus agglomerata	Blue-leaved Stringybark
Eucalyptus baueriana	Blue Box
Eucalyptus bosistoana	Coast Grey Box
Eucalyptus consideniana	Yertchuk
Eucalyptus cypellocarpa	Monkey Gum
Eucalyptus elata	River Peppermint
Eucalyptus eugenioides	Narrow-leaved Stringybark
Eucalyptus fastigata	Brown Barrel

Eucalyptus globoidea	White Stringybark
Eucalyptus longifolia	Woollybutt
Eucalyptus maidenii	Maiden's Blue Gum
Eucalyptus muelleriana	Yellow Stringybark
Eucalyptus obliqua	Messmate
Eucalyptus paniculata	Grey Ironbark
Eucalyptus pilularis	Blackbutt
Eucalyptus piperita	Sydney Peppermint
Eucalyptus punctata	Grey Gum
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sclerophylla	Hard-leaved Scribbly Gum
Eucalyptus sieberi	Silvertop Ash
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus tricarpa	Mugga (Red) Ironbark
Eucalyptus viminalis	Ribbon Gum

# Appendix B: Detailed Criteria for Preparing Koala Plans of Management

This appendix:

- Outlines the steps councils are **encouraged** to follow when developing a KPoM.
- Provides guidance about the methodology for identifying and mapping koala habitat including core koala habitat across the plan area.
- Provides a standard structure for KPoMs that **must** be followed to ensure Plans are robust and consistent across NSW.

#### Steps for Developing KPoMs

The following steps provide a **suggested** process for initiating and developing a KPoM. They don't necessarily need to be taken in the same order but doing so will help efficiently finalise a KPoM.

The steps are:

- 1. Scope and project plan:
  - a. Determine the need for a KPoM
  - b. Define the proposed plan area and available data/mapping to inform identification of core koala habitat
  - c. Identify key issues and risks
  - d. Project plan to include tasks, resourcing and timeframes
- 2. Discuss the proposed KPoM with DPIE (Planning and Assessments Group and Environment, Energy and Science Group as early as possible and continue throughout the development of the Plan. Formal consultation during development of the plan with Local Land Services and the Environment, Energy and Science Group of the Department of Planning, Industry and Environment **must** occur and is a requirement of the SEPP (Clause 12).
- 3. Prepare background studies and surveys to establish habitat and presence of koalas within the plan area. This is discussed further below.
- 4. Establish a koala working group to engage with key stakeholders including the local community, researchers and other organisations. This is a critical part of the process and provides the opportunity to gather further information about koalas, and test and develop management approaches. Early engagement with impacted landholders and land managers is required since they may be able to advise on the presence of koalas and/or koala habitat on their land.
- 5. Draft the plan by building on the technical background information and input from key stakeholders. A standard structure for KPoMs is provided below.
- 6. Consult with DPIE regarding the draft plan and its consistency with the SEPP so that any major issues can be resolved before public exhibition.
- 7. Give the community an opportunity to have their say. Public consultation **must** include:
  - a. informing landholders in all areas of proposed core koala habitat.
  - b. prior to the exhibition period commencing Councils **must** contact impacted landholders by letter or email and outline the process for contesting the proposed designation (i.e., the landholder can commission a suitably qualified person to undertake a survey for core koala habitat on their land or by requiring council access the land to verify survey results).

The SEPP also requires the draft KPoM to be publicly exhibited for at least 90 days. A submissions report detailing results of the exhibition must be submitted to the Secretary with the KPoM. Any comments received during public consultation must be considered in finalising the Plan.

- 8. Finalise the plan and seek approval from the Secretary of DPIE. This includes supplying GIS data for any core koala habitat identified in the plan, and all other documents relevant to the plan (including a report on any surveys).
- 9. Implement the plan once approved by the Secretary. This should include monitoring and review.

#### Identifying and Mapping Core Koala Habitat

Identifying and mapping core koala habitat are the critical foundations of KPoMs (see step 3 above). The use of scientific survey, research and current imagery in existing maps allows for the most reliable identification of core koala habitat. This provides a strong base for making informed planning decisions.

As Part 2 of this Guideline mentions, the definition of core koala habitat under the SEPP is limiting at a landscape level. It is therefore appropriate for KPoMs to identify important or potentially important habitat to koalas with regard to several factors outside of those used to define core koala habitat. These should include:

- the presence of koala trees (the SEPP's Site Investigation Area for Koala Plans of Management Map can be used).
- the presence of highly suitable habitat.
- past and present koala records.
- dispersal or seasonal movement requirements.
- corridors important for maintaining connectivity.
- drought or fire refuges.

The Koala Habitat Information Base provides information on koala habitat suitability across a region, the likelihood of koala tree presence, the likelihood of koala occurrence in an area, information on areas of regional koala significance and for historical records of koala sightings in NSW. The Information Base can also assist in identifying and mapping core koala habitat in a KPoM.

#### What mapping is required?

A KPoM **must** include a map (or a series of maps) that identifies core koala habitat. Where possible, it must also categorise that habitat and identify corridors and other important areas such as drought refuge areas. High quality mapping will facilitate the analysis of koala habitat categories against other factors, such as land tenure and land use zones. This can greatly contribute to identifying potential areas of conflicting land use (e.g. core koala habitat identified on land zoned or proposed to be zoned to permit intensified development).

#### How should mapping be done?

The methods used for mapping must be fit for purpose and tailored to the region where the plan is being prepared. This is critical so that the approach to mapping accommodates regional variation in koala populations and habitat throughout NSW. The methods in Appendix C **must** be used when identifying land which contains core koala habitat.

However, it is necessary that a KPoM specify a range of habitat types based on tree species identified in the SEPP as well as the findings of field surveys and record analysis. In order to identify core koala habitat for the purpose of a KPoM, the following general procedures **must** be followed:

- 1. Production of a vegetation map identifying plant community types (PCTs) at a suitable scale and accuracy. The vegetation map should include both floristic and structural characteristics.
- 2. Analysis of existing BioNet (excluding any of Dan Lunney's 2006 community survey records and any records with a locational accuracy of more than 1,000 metres) records providing both recent and historical locations of koalas.
- 3. Field survey (consistent with Appendix C, where core koala habitat is concerned) to determine koala presence and activity and identify which tree species and associated plant community types koalas use in the study area.

Mapping can then be produced which identifies categories of koala habitat and identifies corridors and other areas of importance such as drought refuge areas.

# Principles to guide the identification of koala habitat (including habitat other than core koala habitat)

There is no one size fits all approach to the definition of koala habitat at a landscape scale. As for the mapping method, the categories should be tailored to the KPoM region.

#### Guiding principles

- Given the impact of bushfires to koala populations and their habitat across NSW, a precautionary approach should be taken in identifying core koala habitat as:
  - post fire, occupied areas may not be re-occupied until the habitat recovers and provides suitable structure and browse, regardless of survey methods.
  - in terms of historical records, the lack of NSW BioNet records does not mean koalas have not been there, just not recorded.
- The Koala Habitat Information Base (https://datasets.seed.nsw.gov.au/dataset/koalahabitat-information-base) should be used to identify which areas are likely to have suitable koala habitat, koala use trees and which areas are likely occupied by koalas. The information base can also guide where to focus local surveys efforts.
- Koala habitat mapping should be informed by local surveys and fine scale mapping to identify vegetation communities that contain trees that koalas are known to use in that region (see Appendix C).
- Survey sites and effort should be informed by the variability of vegetation communities in the local government area and across all land tenures.
- Survey design must be based on scientifically rigorous methods suitable to the study area (see Appendix C).
- Categories of mapped koala habitat should use classes appropriate to the region that is informed by recent studies.
- Historical and recent distribution of koalas in the local government area should be identified through an analysis of NSW BioNet records and local field survey of areas that have had low to no survey effort in the past.
- Identify and map habitat that connects areas that are occupied by koalas.
- Identify and map suitable habitat that is currently unoccupied (areas for population expansion or recolonisation).
- Identify and map areas of koala habitat other than core koala habitat important for providing refuge in a changing climate (i.e. drought and bushfire).
- Identify what is known about the generational persistence of the local koala populations through an analysis of records to determine population trends and persistence over time. The assessment of historical koala records can provide an indication of where koalas are distributed throughout the landscape, where koala populations have persisted over time, and where koalas are no longer being recorded.

#### Core koala habitat

The final element of the mapping process is to identify areas of core koala habitat (as defined by the SEPP) based on evidence of koala presence or historical records and the presence of highly suitable koala habitat. Any areas of core koala habitat in a KPoM **must** occur within the SEPP's Site Investigation Area for Koala Plans of Management Map. Councils are required to publish the SEPP's Site Investigation Area for Koala Plans of Management Map on their website when they commence the preparation of a KPoM.

Any surveys conducted at the time of preparing the KPoM **must** be undertaken using the methods outlined in Appendix C of this Guideline. Council can use the best available data where it is unable to gain access to land for a physical survey.

# Identifying requirements for planning proposals, development applications and activities affecting koala habitat

The KPoM must outline the requirements for:

- 1. planning proposals in core koala habitat and other koala habitat <u>important for maintaining</u> <u>connectivity and function of core koala habitat</u>.
- 2. development assessment for a development application on land to which the KPoM applies. For development applications in mapped core koala habitat, the Biodiversity Offsets Scheme will automatically apply. For developments in other mapped koala habitat, these requirements should consider the criteria in section 3.2 of this Guideline.

#### Standard Structure for KPoMs

A standard structure for KPoMs is provided below (Table 1). KPoMs **must** at least include the following information to ensure a standard approach across NSW. Other additional information specific to the Plan area can also be included as needed.

#### Table 1: Standard structure for KPoMs

Standard Structure for KPoMs	
Section 1	
Purpose	Defines the purpose of the KPoM.
	In particular this must include meeting the aims of the SEPP which are to "encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline".
	The secondary purpose of a KPoM should relate to the seven planning principles outlined in this Guideline.

Standard Structure for KPoMs	
Objectives	<ul> <li>Defines the objectives of the KPoM.</li> <li>In the interests of consistency, the following objectives are recommended: <ul> <li>Manage the long-term sustainability and recovery of koalas and their habitat.</li> <li>Identify and list the preferred koala food tree species likely to be found in the plan area and map koala habitat.</li> <li>Ensure that there is no net loss of koala habitat at a bioregional scale and (where appropriate) create, manage and/or restore koala habitat linkages to allow for safe koala movement across the landscape.</li> <li>Minimise and manage threats affecting koalas and their habitat.</li> <li>Provide consistent assessment criteria for the processing of development applications, including guidelines for koala habitat assessment and food tree and koala habitat retention. Additional objectives may be added so long as they are not inconsistent with the above.</li> </ul> </li> </ul>
Legislative context	Describes the main legislation and planning instruments which are relevant to the operation of the Plan and which relate to the management and conservation of koalas and their habitats.
Who is affected by the plan	Clearly describes who is affected by the plan. For example, landholders in areas of core koala habitat, local environment and conservation groups, etc.
What is the status of koalas in the plan area	Summarises the status of the koala population in the plan area. Detailed technical information supporting this summary can be provided as appendices.
What are the threats to koalas in the plan area	Identifies and describes the threatening processes affecting koalas and koala habitat within the plan area. For example, habitat clearing, fragmentation and degradation, feral predators, roads and traffic, disease and natural disasters.
Section 2 – General prov	visions

••••••••	
Land to which the plan applies	Clearly describes the land to which the plan applies.
Land to which the plan does not apply	Clearly describes the land to which the plan does not apply.
Koala habitat mapping	Summarises the koala habitat mapping undertaken as part of developing the plan.
	Clearly describes that areas mapped as core koala habitat have been mapped consistent with the definition in the SEPP and includes maps of other habitat categories (where appropriate). Detailed technical information supporting this summary should be provided as appendices.
Relationship to other koala plans of management	Describes the relationship of the plan to other koala plans of management that may be in place.
Duration of the plan	Defines the duration of this version of the plan. Must include provisions for review as appropriate.

Section 3 – Management and monitoring activities

Management / monitoring activities and actionsProvides a non-regulatory framework for management activities that complement the development assessment framework outlined in Section 4 of the Plan. These management activities help: <ul><li>minimise threats to koalas and their habitat that are not related to development activity.</li><li>increase the amount of koala habitat in the KPoM area.</li><li>maintain and, where possible, improve the quality of koala habitat in the plan area.</li><li>ensure effective implementation and monitoring of the Plan.</li><li>community and landholders to manage and increase koala habitat corridors and habitat.</li></ul> <li>Koala management in the plan area should not be limited to forested areas. It should extend over areas of fragmented habitat which support a koala population and identified links between koala habitats.</li> <li>Specific actions should be defined in table format across the following management activities:</li> <li>Implementation and monitoring</li> <li>Regulatory processes</li> <li>Restoration and management</li>	Standard Structure for KP	oMs
<ul> <li>corridors and habitat.</li> <li>Koala management in the plan area should not be limited to forested areas. It should extend over areas of fragmented habitat which support a koala population and identified links between koala habitats.</li> <li>Specific actions should be defined in table format across the following management activities:         <ul> <li>Implementation and monitoring</li> <li>Regulatory processes</li> <li>Restoration and management</li> </ul> </li> </ul>	Management / monitoring activities and actions	<ul> <li>Provides a non-regulatory framework for management activities that complement the development assessment framework outlined in Section 4 of the Plan. These management activities help: <ul> <li>minimise threats to koalas and their habitat that are not related to development activity.</li> <li>increase the amount of koala habitat in the KPoM area.</li> <li>maintain and, where possible, improve the quality of koala habitat in the plan area.</li> <li>ensure effective implementation and monitoring of the Plan.</li> <li>community and landholders to manage and increase koala habitat</li> </ul> </li> </ul>
<ul> <li>Communication and education</li> <li>Road and traffic management</li> <li>Dog management</li> <li>Koala health and welfare</li> <li>Bushfire management</li> <li>Funding</li> <li>Research</li> <li>For each specific action, the following information should be provided:</li> <li>Clear description of the action</li> <li>Priority (high, medium, low)</li> <li>Target start date</li> <li>Indicative duration of the action</li> <li>Indicative budget</li> <li>Funding source</li> </ul>		corridors and habitat. Koala management in the plan area should not be limited to forested areas. It should extend over areas of fragmented habitat which support a koala population and identified links between koala habitats. Specific actions should be defined in table format across the following management activities: Implementation and monitoring Regulatory processes Restoration and management Communication and education Road and traffic management Dog management Koala health and welfare Bushfire management Funding Research For each specific action, the following information should be provided: Clear description of the action Priority (high, medium, low) Target start date Indicative budget Funding source

### Section 4 – Development assessment framework

When is the	Defines when the development assessment framework is triggered. This must
development	be for any areas identified as core koala habitat in the KPoM and is
assessment	recommended for other koala habitat important for maintaining habitat
framework triggered?	connectivity and function.
Assessment pathways	Defines the assessment pathways that are relevant to the development application. These may be different in different council areas. For development applications in mapped core koala habitat, the Biodiversity Offsets Scheme will automatically apply. Councils should also consider identifying assessment pathways for other categories of koala habitat to help meet the objectives of the KPoM.

Standard Structure for KPoMs	
Koala Habitat development applications	Describes the information that needs to be included with development applications.
Development design measures for the protection of koalas	<ul> <li>Describes the measures that can be put in place during the design of proposed developments to protect koalas and core koala habitat. It must include descriptions of measures to: <ul> <li>protect koalas from the impacts of development.</li> <li>avoid direct impacts to koala habitat including core koala habitat.</li> <li>mitigate and manage potential indirect impacts to core koala habitat.</li> <li>offset any unavoidable, residual impacts.</li> </ul> </li> <li>These measures should also be consistent with the best practice koala planning guideline being developed under the NSW Koala Strategy.</li> </ul>
Assessment criteria	Defines the criteria that council will consider in assessing development applications. This could take into consideration the criteria in 3.2 of this Guideline.
Section 5– Planning pro	posals that affect mapped koala habitat
Planning proposal in mapped koala habitat	Defines requirements for planning proposals in core koala habitat and other koala habitat important for maintaining connectivity and function.
Other	

Other	
Glossary	Defines important terms used in the KPoM.
Technical appendices	Technical appendices should be included as appropriate. For example, the detailed methodology and results of the koala habitat mapping.
Identification of authors	The plan should list the authors of the plan as well as any field personnel that worked on the plan. The qualifications of these people should be stated in the document.

# Appendix C: Survey Methods for Identifying Core Koala Habitat

The following survey methods **must** be applied to identify the presence of core koala habitat for Tier 2 development application proponents, landholders objecting to core koala habitat in draft KPoMs, and for councils preparing KPoMs.

For development applications, this survey process is relevant:

- on land to which the SEPP applies, which is 1 hectare or more, and
- where there is no approved KPoM applying to the land, and
- where the development is a Tier 2 development because it cannot be demonstrated to have low or no impact on koalas or koala habitat using the Tier 1 criteria.

However, in some instances it may be appropriate for a Tier 2 development application proponent to provide evidence to council that a survey is not required since the land clearly does not contain core koala habitat (e.g. because it has been cleared of all trees or contains only monoculture plantations such as a macadamia farm). This is detailed below.

The survey process is relevant to landholders who wish to make an objection to a draft KPoM:

• Where a landholder wishes to dispute their land forming part of core koala habitat in a draft KPoM which is on exhibition for public submissions.

**Note**: The landholder can commission their own suitably qualified person at their expense, or request council conducts the survey for core koala habitat. Council can use the suitably qualified person who prepared the KPoM, or another suitably qualified person at their discretion. This is only relevant for the KPoM process – when proposing core koala habitat in a draft KPOM, councils **must** undertake on-ground surveys if requested by the landholder at council's expense but are not required to do so for the development application process.

The survey process is relevant to **councils** wishing to identify core koala habitat in a KPoM where the land is also identified on the Site Investigation Area for Koala Plans of Management Map.

Councils do **not** need to physically survey every landholding in their LGA they propose to identify as core koala habitat. However a physical survey in one or more areas of the LGA in accordance with this appendix must inform the KPoM. In accordance with the SEPP, councils are able to use the best available data to identify core koala habitat where they are unable to gain access to land they would otherwise seek to survey.

In all of the above instances (apart from where a survey is not required as evidence has been provided the land clearly does not contain core koala habitat), the flora and fauna survey **must** be conducted by a **suitably qualified and experienced person** (see below).

The survey **must** be undertaken in accordance with the below procedure to determine if the area meets the definition of core koala habitat in the SEPP.

#### core koala habitat means:

- a) an area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or
- b) area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.

#### Notes about the definition:

• An area of land is defined as – including both the development footprint and the surrounding area that may have indirect impacts from the development (that is contained within the subject lot and adjoining land within the same ownership). The SEPP applies to both direct and indirect impacts to habitat on the site area, therefore all habitat on the landholding needs to be considered even if no vegetation is to be cleared, however this does not mean all habitat must be surveyed – see below.

For development applications, to determine the size of the surrounding area that needs to be surveyed, the suitably qualified person needs to consider the extent of potential indirect impacts from the development, such as vehicle strikes, drowning in pools, increased risk of fire, disturbance, and impediments to movement. It is not always necessary to survey the entire landholding,

- the suitably qualified person needs to describe the site area in their survey report and the justification for the description.
- historical koala occupation of the site area is determined by considering koala records within the last 18 years, within the following maximum distances from the external boundary of the site area:
  - 2.5 kilometres of the site (for North Coast, Central Coast, Central Southern Tablelands, South Coast KMAs).
  - 5 kilometres of the site (for Darling Riverine Plains, Far West, North West Slopes, Riverina, Northern Tablelands KMAs).
- This appendix outlines the survey methodologies to be applied to establish whether an area contains core koala habitat when undertaking a development application or preparing a KPoM.
- The suitably qualified person needs to describe the site area in their survey report and the justification for the description.
- Historical koala occupation of the site area is determined by considering koala records within the last 18 years.
- 'Recorded' means recorded in the form of BioNet records. Note BioNet records with a locational accuracy of more than 1,000 metres are **not** to be considered under the SEPP.
- 18 years represents three koala generations as recommended by the *Guidelines for Using* the IUCN Red List Categories and Criteria (2019). The IUCN Guidelines were adopted by the NSW Government as part of the Common Assessment Method for listing nationally threatened species in Australia. The IUCN Guidelines specify that three generations is the appropriate threshold for determining species persistence in an area.

#### Suitably qualified and experienced person

This is taken to mean a person with a minimum undergraduate qualification in natural sciences, ecology, environmental management, forestry or similar from a university and with a minimum 3 years' experience in environmental assessment, including field identification of plant and animal species and habitat.

The person must have as a minimum the following experience in conducting koala surveys:

- Greater than 10 surveys
- Experience in using the koala presence survey methods identified below
- Can accurately identify preferred koala use trees
- Can distinguish between koala faecal pellets and those from other species that may present similar characteristics

The person's skills in koala survey **must** be demonstrable by relevant qualifications and the following:

- a history of experience in koala habitat / population assessments and associated survey methods, and/or
- a resume giving details of koala survey projects conducted over the previous 10 years, including employers' names and periods of employment (where relevant).

The experience and qualifications of the surveyor **must** be documented in the koala assessment report.

#### A note on the BioNet records

All records entered into BioNet go through an automatic validation process where the record is validated against the accepted geographic distribution of the species. If the record occurs within an area that is not part of the accepted distribution, its record status will be marked as invalid until it is reviewed by the accountable officer.

Records entered into BioNet carry information about the observer who made the sighting as well as the individual who uploaded the data to BioNet so that any queries about records can be sent back to the appropriate person.

This Guideline sets out that only BioNet koala records with a high standard of validity and locational accuracy may be used to identify core koala habitat and is specifically limited to records with an accuracy level of 1,000 metres or better.

# A note for preparing KPoMs – before proceeding with surveys, first identify suitable areas for survey effort

The Site Investigation Area Map for Koala Plans of Management identifies areas that are likely to have koala use trees and excludes areas with a low probability of koala habitat. This map identifies areas councils should investigate when identifying core koala habitat in a KPoM and the extent to which core koala habitat can be identified.

Councils **should** also use other spatial information and data that is available to help them further refine the areas that are a priority for on ground surveys.

This includes:

- Koala Habitat Information Base data layers
- State Vegetation Type Map
- Plant Community Type mapping
- Local vegetation maps
- Local koala surveys and records
- Land use maps

The prioritisation of sites for on ground survey **should** consider a range of variables such as where there is a likelihood of high suitability koala habitat, historical koala records, and low or no previous on-ground survey of koala presence. Site accessibility and level of disturbance should also be taken into consideration to identify priority locations for on ground surveys.

Councils also **must** seek and gain the written consent of landholders to undertake surveys on the land. Where access to land is restricted, councils should investigate other appropriate sites.

The number and location of the on-ground surveys **must** be based on scientifically rigorous methods suitable for producing landscape scale habitat maps.

#### For mapping Core Koala Habitat across the landscape in KPoMs

The on-ground survey results **must** be used in combination with the best available data to map core koala habitat across the landscape.

Core koala habitat are areas captured by the Site Investigation Area Map for Koala Plans of Management where there is:

- highly suitable koala habitat and koala presence, or
- highly suitable koala habitat and a koala record or records from the last 18 years, within the following maximum distances from the external boundary of the survey site:
  - 2.5 kilometres (for North Coast, Central Coast, Central Southern Tablelands, South Coast KMAs)
  - 5 kilometres (for Darling Riverine Plains, Far West, North West Slopes, Riverina, Northern Tablelands KMAs)

Councils **must** use the data from local surveys along with koala records and other published spatial data to map core koala habitat across the landscape. This includes using robust scientific methods to extrapolate the results of the on-ground surveys.

The maps of core koala habitat (in a GIS data format) **must** be provided to the Environment, Energy and Science Division of the Department of Planning, Industry and Environmentfor updating the Biodiversity Values Mapand any koala and flora survey records are to be added to the NSW BioNet.

Councils **must** also provide other data that was generated from local surveys to the Department to inform future reviews of the tree lists in schedule 1 and the Site Investigation Area for KPoMs Map.

#### Survey methodology

#### PART A

#### Presence of highly suitable koala habitat

The native vegetation of the site area **must** be mapped into Plant Community Types (PCTs) based on a full floristic survey following Sivertsen, 2009, *Native Vegetation Interim Type Standard*.

Each PCT then must be sampled individually for the presence of koala use trees listed for the relevant Koala Management Area (KMA) in Schedule 2 of the SEPP (see Appendix A). A list of which LGAs occurs in each KMA is provided in Schedule 1 of the SEPP.

A suitable sampling method must be used to enable the tree species composition of each PCT (on average) to be calculated. A number of methods can be used dependent on size of the site area, tree density and uniformity of vegetation. These are:

- Quadrats can be selected within each PCT either randomly or along a selected transect. Quadrats need to be of sufficient size to enable a minimum of at least 20 trees to be counted (at least 20 x 20 metres) and of sufficient number to allow a robust statistical determination of the percentage of tree species present in the lower, mid and upper stratum. The number and size of quadrats chosen will depend on the size of the site and the vegetation present and **must** be justified in the koala assessment report.
- 2. Transects can be randomly selected through each vegetation unit, identifying and counting all trees within a selected distance either side of the transect line (usually 20 either side). Transects **must** be of sufficient length to sample enough trees to allow a statistical determination of the percentage of tree species present, with a minimum of 100 trees if present. The number and length of transects chosen will depend on the size of the site area and the vegetation present and **must** be justified in the koala assessment report.

Results of the sampling within each PCT must be shown separately and not summed for the overall site. Where 15% or greater of the total number of trees within any PCT are the regionally

relevant species of those listed in Schedule 2 (see Appendix A), the site meets the definition of highly suitable koala habitat.

If highly suitable koala habitat has been established (via the above survey), then the suitably qualified person **must** undertake Part B of the survey to determine if koalas are present or have been recorded as being present in the last 18 years.

#### Notes about the vegetation survey:

A "tree" is taken to be a plant with a diameter at breast height over bark (DBHOB) of 10 cm or greater.

Appendix A of this Guideline provides a list of the tree species as per Schedule 2 of the SEPP.

Only the trees listed for the relevant region must be surveyed for.

The calculation of the percentage of tree species must be completed within each PCT present on the site area and not averaged or totalled across the site. A result of 15% or greater in **any** individual PCT meets the definition of highly suitable koala habitat.

#### PART B

#### i) Koala presence

Where koalas or evidence of their presence (for example a koala scat) are recorded through surveys and the site contains highly suitable koala habitat, the habitat is considered core koala habitat.

Koala presence **must** be determined through surveys of the site area.

The survey method **should** be selected based on which is most appropriate for the site and the conditions at the time of survey. The surveyors should refer to detailed koala survey guidelines where available to determine the appropriate survey method and the scale of the survey.

#### For all sites, surveys must include:

1. Searches for scats following (Phillips and Callaghan 2011) the Scat Assessment Technique (SAT) at a maximum grid spacing of 250 m. Grid spacing can be smaller than 250m to ensure there are sufficient sampling points in all PCTs.

Further information on using this method:

- Survey must not be undertaken within three days of heavy rainfall (the Bureau of Meteorology defines "heavy precipitation days as days with daily precipitation ≥ 10 mm").
- Survey must be stratified across the different PCTs on the site to ensure sufficient sampling points occur in all possible koala habitat
- The grid must be placed to maximise the number of points to be sampled

#### OR

- 2. Use of detection dogs where:
  - the underlying spatial design considerations of the (Phillips and Callaghan 2011) SAT approach are adhered to.
  - o search times are standardised (min 20 minutes / site).

#### Further information on using this method:

- Use of conservation detection dogs is preferred on sites with deep leaf litter or very dense understory vegetation.
- Conservation detection dogs should not be used in extreme weather or humidity or where feral predator baits are suspected to be present, and no less than one hour after feeding.

- Welfare of the conservation detection dog must be considered and monitored at all stages including adequate rest periods, protection from bright sunshine, and provision of water when working.
- Conservation detection dogs and their handlers must meet minimum standards of training and experience and be assessed and accredited as a team. Assessment must include demonstrated competency in:
  - reliably commanding and handling the dog.
  - reliably demonstrating koala odour recognition and response in accordance with nominated and appropriate indication type (e.g. passive, freeze, dig/scratch, etc.).
  - o reliably demonstrating non-target disinterest.
  - o reliably demonstrating behaviour that does not harm koalas.
  - selecting and applying a search methodology.
  - The handler must have the relevant approvals and permits.
- Conservation detection dogs and their handler must have previous field survey experience in koala detection.
  - Accreditation must be provided by an independent party and must be documented.

#### and one of the following survey techniques:

- 1. Spotlighting following Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC), 2011, *Survey Guidelines for Australia's Threatened Mammals,* comprising:
  - At least 2 separate transects be undertaken per 5 hectares that are each 200m long, and at least 100m apart, in most likely koala habitat on site.
  - At least one transect must be placed in each PCT known to provide habitat for koalas, even if the PCT is less than 100m wide.
  - The survey being undertaken at a walking speed of approximately 10m/ per min
  - o Searches undertaken over 2 consecutive nights.

#### Further information on using this method:

- Spotlighting can be especially suitable for detecting koalas that occur at low densities.
- Spotlighting should not be used if the site supports dense vegetation (e.g. wet sclerophyll) or in steep terrain (e.g. >30 slope).
- o Spotlighting must not be undertaken during windy or wet conditions.
- 2. Call playback at 2 locations on separate nights per site (only between September and November).
  - Calls should be played at least 3 times followed by 5 minutes of listening, at a minimum of two locations.
  - Locations should be separated by 800m to 1km intervals on larger sites or min of 500m on smaller sites.
  - Locations should be selected to minimise background noise (i.e. away from roads).

#### Further information on using the method

- Call playback is not suitable for small sites less than 50 ha. Use of the technique on small sites increases the risk of false positives (i.e. koalas calling from locations beyond the site boundary).
- Given the technique relies on male response it must only be used during peak breeding season (September to November).
- o Survey must not be undertaken on wet or windy nights.

- 3. Passive acoustic recording (as per Law et al. 2019), placed at intervals of a minimum of 500m and maximum of 1000m, in a grid pattern, across all suitable habitat on the site (only between September and November).
  - For sites 100ha or less, recorders must remain in place for at least 7 nights without rain.
  - For sites with greater than 100ha, recorders must remain in place for 14 nights without rain.
  - Scanning recordings for koala calls must be undertaken by a recognised bioacoustics expert or scanned manually by an appropriately experienced person.

Further information on using this method:

- Passive acoustic recording is not suitable for small sites less than 50ha. Use of the technique on small sites increases the risk of false positives (i.e. koalas calling from locations beyond the site boundary).
- Given the technique relies on male response it must only be used during peak breeding season (September to November).
- Must not be undertaken on wet or windy nights.

#### ii) Koala records

In addition to site survey, there must also be a consideration of existing records spanning the previous 18 years (3 koala generations). The site area is considered to contain habitat that meets the definition of core koala habitat, provided the site contains highly suitable koala habitat (identified via the above survey) and where a record or records exist within the last 18 years, within the following maximum distances from the external boundary of the survey site:

- 2.5 kilometres of the site (for North Coast, Central Coast, Central Southern Tablelands, South Coast KMAs)
- 5 kilometres of the site (for Darling Riverine Plains, Far West, North West Slopes, Riverina, Northern Tablelands KMAs)

These distances reflect the estimated median home ranges of koalas within coastal and inland locations. In NSW, home ranges can vary greatly; some ranges have been recorded as low as 1-1.5 ha (AMBS, 2012), while others over 100 ha (McAlpine et al., 2006). Koalas studied in south-east Queensland moved on average 3.5km (and up to 10.6km) in their first breeding season (Dique et al., 2003), and male koalas translocated to sites across Western Victoria travelled up to 120km (as the crow flies) from where they were released over a six-month period (McIlwee, 2003).

Records within these maximum distances **must** only be considered after a careful examination of the broader landscape. That is, within areas of contiguous habitat or between areas of habitat with connectivity. For example, a record from 2.5km from the subject site **must** not be used if natural or artificial landscape features would prevent koalas from the area with the record ever moving to the site (e.g. due to large rivers, roads, fences or built up areas). The suitably qualified and experienced person **must** consider this carefully and provide evidence justifying record inclusion or exclusion (e.g. local studies, surveys, landscape observations, peer reviewed academic literature).

A description of the record (Bionet, SightingKey, or catalogNumber, source, date, accuracy, associated observations) must be provided in the koala assessment report (only relevant to development applications).

Note that Schedule 1 of the SEPP identifies which KMA is applicable to your local government area.

Results of investigations, site surveys and justification of survey methods and conclusions **must** be fully detailed in the survey report. Areas identified as core koala habitat **must** be clearly defined and mapped.

Where core koala habitat is identified, the assessment report and maps of core koala habitat (in a GIS data format) **must** be provided to the Environment, Energy and Science Division of the Department of Planning, Industry and Environment for updating the Biodiversity Values Map and any koala and flora survey records are to be added to the NSW BioNet.

#### Alternative process for landholders where a survey may be unwarranted

There may be situations where engaging a suitably qualified and experienced person to conduct a survey for core koala habitat in accordance with this appendix is not necessary. For example, if the site does not contain any trees or contains only species comprising a monoculture plantation such as a macadamia or avocado farm.

If a landholder believes a survey is not necessary because the land obviously does not contain core koala habitat, the following evidence may be presented to council:

- Aerial imagery (satellite photographs) of the subject land with date and time stamps, showing the land does not contain any trees
- Aerial imagery of the subject land and on-ground photographs showing vegetation on the site is clearly not of the species listed in Schedule 2 of the SEPP (e.g. because the vegetation comprises apple orchards and is clearly not comprised of Eucalyptus species).
- The land is an authorised plantation approved under the Plantations and Reafforestation Act and listed on the public register and/or it is a plantation with an existing development approval for harvesting rights (and no change in development type is being proposed). The landholder must provide evidence of the plantation approvals and authorisations.

Following the council's review of this evidence, the council may determine that it agrees with the landholder and because the site clearly does not contain core koala habitat, a survey is not required.

However, if evidence fails to satisfy council that the land does not contain core koala habitat, council will request the landholder proceeds with the usual process and engages a suitably qualified and experienced person to conduct a survey for core koala habitat.

**Note**: The landholder also has the option of requesting council conducts a survey for core koala habitat, where their land has been identified as such in a draft KPoM on exhibition. Council can use the suitably qualified person who prepared the KPoM, or another suitably qualified person at their discretion.

# Glossary

Term	Definition
BC Act	Biodiversity Conservation Act 2016.
Biodiversity Offsets Scheme	a framework under the BC Act to avoid, minimise and offset impacts on biodiversity from development and clearing, and should ensure that land that is used to offset impacts is secured in-perpetuity.
	NSW BioNet is the repository for biodiversity data managed by the Department of Planning, Industry and Environment.
BioNet Record	All records entered into BioNet go through an automatic validation process where the record is validated against the accepted geographic distribution of the species. If the record occurs within an area that is not part of the accepted distribution, its record status will be marked as invalid until it is reviewed by the accountable officer.
	Records entered into BioNet carry information about the observer who made the sighting as well as the individual who uploaded the data to BioNet so that any queries about records can be sent back to the appropriate person.
	This Guideline sets out that only BioNet koala records with a high standard of validity and locational accuracy may be used to identify core koala habitat and specifically excludes records with an accuracy level greater than 1,000 metres.
	Clause 4 of the SEPP defines core koala habitat as:
Core koala habitat	<ul> <li>an area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or</li> </ul>
	<ul> <li>b) area of land which has been assessed by a suitably qualified and experienced person in accordance with the Guideline as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.</li> </ul>
	Please note core koala habitat is established through a survey undertaken by a suitably qualified and experienced person undertaken in accordance with Appendix C, or through the use of the best available data (when identifying core koala habitat in a KPoM where the council is unable to obtain access to land – see Appendix C).
DA	Development application.
DPI&E	NSW Department of Planning, Industry and Environment.
EES Division	Environment, Energy and Science Division of DPIE (formerly Office of Environment and Heritage).
EP&A Act	Environmental Planning and Assessment Act 1979.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999.

Term	Definition
Highly suitable koala habitat	Where 15% or greater of the total number of trees within any PCT are the regionally relevant species of those listed in Schedule 2 (see Appendix A).
КМА	Koala Management Area. These are the regions listed in the Schedules of the SEPP and were derived from the Koala Tree Species Index as part of the Koala Habitat Information Base. Sometimes also referred to as Koala Modelling Region (KMR).
КРоМ	Koala Plan of Management.
LGA	Local Government Area.
LLS Act	Local Land Services Act 2013.
Site area	Includes both a development footprint and the broader area of land on which the development is proposed (i.e. the subject lot). When undertaking a survey for core koala habitat in accordance with Appendix C or D, the broader area of land (extending beyond the cadastre boundaries of the subject lot) will be considered when using the maximum distances from koala records. The controls within the SEPP apply to both direct and indirect impacts and all possible habitat on the site area therefore needs to be considered even if no vegetation is to be cleared.
Site Investigation Area for Koala Plans of Management Map	The Site Investigation Area for Koala Plans of Management Map in the SEPP available to the public through council or the Department.
Suitably qualified and experienced person	<ul> <li>suitably qualified and experienced person means a person who has—</li> <li>(a) a tertiary qualification in ecology, environmental management, forestry or other equivalent qualifications, and</li> <li>(b) experience in flora and fauna identification, survey and management, including experience in conducting koala surveys in accordance with the techniques specified in the Guideline.</li> <li>This is further detailed in Appendix C.</li> </ul>

# References

- AMBS 2012. Investigation of the Impact of Roads on Koalas: Final Report. Report prepared for the NSW Roads and Maritime Services: Australian Museum Business Services.
- DECC. 2008. Recovery plan for the koala (Phascolarctos cinereus). Department of Environment and Climate Change.
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) 2011. Survey Guidelines for Australia's Threatened Mammals.
- Dique, D. S., Thompson, J., Preece, H. J., De Villiers, D. L. & Carrick, F. N. 2003. Dispersal patterns in a regional koala population in south-east Queensland. Wildlife Research, 30, 281-290.
- Law, B., Gonsalves, L., Bilney, R., Peterie, J., Pietsch, R., Roe, P., and Truskinger, A. 2019. Using Passive Acoustic Recording and Automated Call Identification to Survey Koalas in the Southern Forests of New South Wales. Australian Zoologist
- Mcalpine, C. A., Rhodes, J. R., Callaghan, J. G., Bowen, M. E., Lunney, D., Mitchell, D. L., Pullar, D. V. & Possingham, H. P. 2006. The importance of forest area and configuration relative to local habitat factors for conserving forest mammals: a case study of koalas in Queensland, Australia. Biological Conservation, 132, 153-165
- Mcilwee, A. 2003. Post-release monitoring of surgically sterilised and relocated Koalas, Mt Eccles National Park, Victoria. Unpublished report, Parks Victoria, Melbourne.
- NSW Chief Scientist and Engineer 2016. Report of the Independent Review into the Decline of Koala Populations in Key Areas of NSW.
- Phillips, S, & Callaghan, J. 2011. The Spot Assessment Technique: a tool for determining localised levels of habitat use by Koalas Phascolarctos cinereus. *Australian Zoologist, 35*(3), 774-780. Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) 2011
- Sivertsen, 2009. Native Vegetation Interim Type Standard, Department of Environment, Climate Change and Water NSW, Sydney

## Links Referenced in this Guideline

Local Land Services

#### www.lls.nsw.gov.au

Biodiversity Values Map (BV Map)

https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap

• Mapping Standards and Requirements

https://www.planning.nsw.gov.au/Plans-for-your-area/Local-Planning-and-Zoning/Mapping-standards-and-requirements

• The Koala Habitat Information Base

https://datasets.seed.nsw.gov.au/dataset/koala-habitat-information-base