# Koala Management Plan

## 396 Stanmore Road, Yatala

April 2025

BC-24186

BIOME

WATER AND ENVIRONMENTAL CONSULTING

# Document Control

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# Abbreviations and Definitions

| Term | Meaning |
|---|---|
| Category X | Non-remnant vegetation |
| Core Koala Habitat | Represents the best quality Koala habitat areas, based on modelling of biophysical measures including climate, suitable vegetation for both food and shelter, and Koala sightings. It is mapped by the Queensland Government |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* |
| Exotic Species | Refers to all species of both flora and fauna that are introduced to Australia. |
| Fauna | Refers to all animal species |
| Flora | Refers to all plant species |
| KMP | Koala Management Plan |
| NCA | *Nature Conservation Act 1992* |
| The site | 396 Stanmore Road, Yatala. Lot 1 on SP349468 |

# Contents

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## Tables

# 1 Introduction

This Koala Management Plan (KMP) has been prepared for 396 Stanmore Road, Yatala (Lot 1 SP349468). The report is consistent with a general duty of environmental care as per the *Nature Conservation Act 1992* and the Queensland *Nature Conservation (Koala) Conservation Plan 2017*.

## 1.1 Scope

The KMP has the following scope:

- To describe the existing Koala habitat on and proximal to the site; and
- Detail management of Koala during vegetation clearing operations.

## 1.2 Objectives

The fundamental objectives of this KMP are to:

- Accommodate the proposed development while enabling the survival of Koala; and
- Specify requirements to ensure connectivity and continued use of the site by Koala by:
    - Ensuring the long-term protection of the conservation areas to allow continued egress of Koala through the site to adjoining habitat; and
    - Rehabilitation of degraded areas within the conservation areas and establishment of preferred Koala food tree species.

## 1.3 Key Personnel

BIOME Consulting Pty has a focus on several technical specialities, including ecology.

Nadya Lees is the primary author of this KMP and is BIOME's Senior Ecologist. Nadya has extensive experience in threatened species management, ecological assessment, and site rehabilitation. Nadya is experienced in fauna handling and relocation. She has authored numerous scientific and technical papers on threatened species.

## 1.4 General Provisions of the Koala Management Plan

### 1.4.1 Land to which this Koala Management Plan Applies

This KMP applies to Lot 1 SP349468.

### 1.4.2 Duration of Koala Management Plan

The KMP will remain in force until all development and associated habitat enhancement and management measures have been undertaken on the land to which the plan applies.

### 1.4.3 Carriage of Costs

All costs associated with the works and actions required by this KMP will be at the expense of the site's developer.

# 2 The Site

The land on which the development is proposed is located at 396 Stanmore Road, Yatala and is formally known as Lot 1 on SP349468 (Figure 3.1).


**Figure 2.1 Site Location**

## 2.1 Current and Surrounding Land Use

The subject site is part of Enkelmann Farm which was purchased by the City of Gold Coast in 2019. Historically, the land has been cleared of native vegetation, leaving only select canopy trees. It has been, and is currently, utilised for cattle grazing.

To the west and immediately north of the site is the balance of Enkelmann Farm. The City of Gold Coast has Advanced Offset Sites on this land, with the capacity for the establishment of over 13,180 Koala habitat trees (Figure 3.2). Further west is the upper tidal reach of the Albert River. Land used and/or zoned for light industry is present to the east and south and extractive industry to the southeast. Rural and rural residential properties are located further north.

## 2.2 Vegetation Communities

The site is mapped as Category X vegetation under the *Vegetation Management Act 1999*. It is not mapped as having any mapped Core Koala Habitat.

Two vegetation communities were identified on the subject site;

1) Paddock; and
2) Open Woodland.

The locations of these vegetation communities are presented in Figure 2.2.


**Figure 2.2 Vegetation Communities**

## 2.3 Vegetation Community 1 – Paddock

This vegetation community dominates the subject site. Sparse canopy vegetation has been retained in some areas and is dominated by *Eucalyptus tereticornis* (Forest Red Gum), *E. acmenoides* (White Mahogany), *E. crebra* (Narrow-leaved Ironbark), and *Corymbia intermedia* (Pink Bloodwood). Scattered regrowth is becoming established. The ground layer comprises exotic and native pasture grasses.

## 2.4 Vegetation Community 2 – Open Woodland

This vegetation community occurs in the eastern and central portions of the site. The species composition is very similar to Vegetation Community 1 although is described as a separate community based on the greater density of woody vegetation. Species in Vegetation Community 2 include *Eucalyptus acmenoides* (White Mahogany), *E. crebra* (Narrow-leaved Ironbark), *E. siderophloia* (Grey Ironbark), *Corymbia citriodora* (Spotted Gum), and *E. tereticornis* (Forest Red Gum). Regrowth vegetation is present in the understorey. The ground layer is dominated by *Imperata cylindrica* (Blady Grass).

# 3 Proposed Development

The proposed concept plan is shown in Figure 3.1. The development involves the construction of several sound stages and workshop areas. Office space and dedicated car parking are also included. The development will require the removal of most of the site's remaining native vegetation. This design has preliminary support from the City of Gold Coast Council.

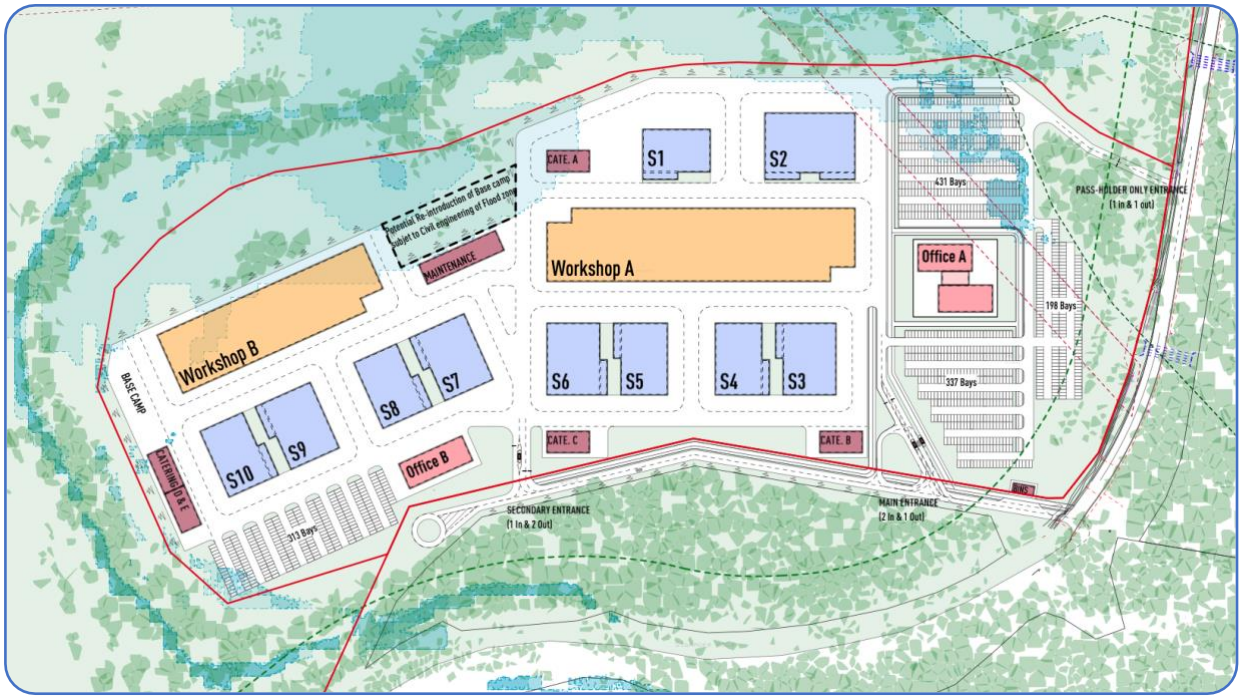


**Figure 3.1 Concept Plan of Development**

# 4 Koala Biology and Ecology

Koala (*Phascolarctos cinereus*) are listed as endangered under both the Queensland *Nature Conservation Act 1992* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

## 4.1 Distribution

Koalas are widely distributed throughout Queensland, New South Wales, and Victoria and also occur within a small area in south-eastern South Australia. The population of Koala within south-east Queensland is regarded as nationally significant, however, is under substantial threat from urban expansion (DES, 2021).

## 4.2 Habitat Associations

Koalas have a distinct association with woodlands and forest habitat types dominated by eucalypt species (Hume and Esson, 1993; Moore and Foley, 2000; Martin et al., 2008), particularly those growing on alluvial or other fertile soils (Moore et al., 2004, Crowther et al., 2009).

## 4.3 Food

While Koalas will use a variety of trees, including non-eucalypts, for feeding and resting (Dique et al., 2004; Martin et al., 2008), they exhibit distinct, localised feeding preferences, selecting some species in favour of others and in some cases, individual trees (Pahl and Hume, 1990).

In south-east Queensland, highly preferred species include Forest Red Gum (*Eucalyptus tereticornis*), Grey Gums (*E. propinqua* and *E. biturbinata*), Tallowwood (*E. microcorys*) and Red Stringybark (*E. resinifera*) (DERM, 2008).

Feed trees are visited repeatedly and often shared with other individuals, although not concurrently (Martin et al., 2008).

## 4.4 Home Range

Individual animals, although solitary, coexist within overlapping home ranges. Home range sizes vary from an average home range size of 34 ha for males and 15 ha for females in southeast Queensland (White, 1999). In areas where there is a high proportion of preferred food trees, the home ranges of Koala are smaller (DERM, 2008).

## 4.5 Reproduction

Female Koalas can reproduce annually from two years of age, giving birth most frequently from November to January. A joey will leave the pouch at around six months and be independent at 12 months of age. Sub-adult animals (approximately 18 months of age) typically leave the maternal home range and disperse to new habitat areas (Dique et al., 2003a).

The movement of adult and sub-adult individuals in the breeding season increases the risk of vehicle strike and dog attacks (DERM, 2008) as Koalas move on the ground between trees.

## 4.6 Threats

Key threatening processes for Koala in south-east Queensland include:

- Habitat loss;
- Vehicle strike;
- Disease; and
- Dog attack.

### 4.6.1 Habitat Loss

Habitat loss is regarded as the primary threat to Koala throughout its range (Reed et al., 1990; Melzer et al., 2000; DERM, 2008).

Vegetation clearing reduces the area of habitat available for Koala, reducing the size of the populations and may ultimately render them unviable (Clark et al., 1990; Reed et al., 2003). Similarly, a reduction in habitat quality (e.g., through weed invasion or selective tree removal) lowers the carrying capacity of an area, which has flow-on effects on the population size.

Habitat loss also entails habitat fragmentation resulting from clearing and/or the construction of movement barriers, such as roads and rail lines (Lee et al., 2010). Habitat fragmentation reduces or eliminates dispersal, which inhibits the ability of Koalas to colonise vacant habitat or exploit small habitat patches (Lassau et al., 2008). Lack of habitat connectivity may also reduce the viability of Koala populations by limiting access to mates and increasing their vulnerability to predation or vehicle strike as they move from one habitat patch to another.

### 4.6.2 Vehicle Strike

In southeast Queensland, an average of approximately 300 Koalas are killed each year by motor vehicles (DES, 2021). As the incidence of vehicle strike is related to traffic volume and speed, it typically occurs where areas of bushland occur in proximity to major roads (Lunney et al., 1999; Dique et al., 2003b; Preece, 2007).

Young males are disproportionally represented in road mortality statistics, which is thought to be due to their dispersal behaviour (Lassau et al., 2008; Dique et al., 2003b), frequently crossing roads to seek new habitat and breeding females. As males typically have larger home ranges than females (White, 1999; Lassau et al., 2008), it would be expected that they would make home-range scale movements more frequently than females, thereby encountering more roads, especially in fragmented habitat. Males also become more active during the breeding season (Ellis et al., 2010; Ellis et al., 2011), which may also contribute to vehicle strike (Dique et al., 2003a).

### 4.6.3 Disease

The predominant pathogen of Koala is Chlamydia, which commonly causes ocular and urogenital tract infections, leading to blindness, infertility and in severe cases, mortality. During times of stress, Koalas are prone to outbreaks of Chlamydia (Ellis et al., 1993; Augustine, 1998). Habitat clearing and disruption to home ranges may contribute to elevated levels of stress in Koalas, making them more susceptible to chlamydial disease.

Infertility from Chlamydia is a contributing factor to the decline in population numbers (DES, 2021). Rhodes et al. (2011) concluded that of all the factors causing Koala population decline

within Redlands City, the control of disease would have the greatest impact in reversing the decline.

### 4.6.4 Dog Attack

Dog attacks have the potential to occur wherever residential development abuts Koala habitat. More than 100 Koalas are hospitalised each year from dog attacks, with 75% dying from their injuries. As many dog attacks go unreported, it is likely that mortality is higher (DES, 2021).

# 5 Management of Potential Impacts on Koalas

The potential impacts of the development include:

- Loss of habitat;
- Death or injury to resident Koalas during vegetation clearing;
- Increased risk of stress and disease; and
- Increased risk of death or injury as a result of:
    - vehicle strike,
    - Koalas entering active construction areas, and
    - an increase in pest animals that may prey on Koalas.

In response to these potential impacts, the vegetation clearing in recognised Koala habitat will be conducted per the *Nature Conservation (Koala) Conservation Plan 2017*. Appropriate procedures have been detailed in the following sections.

Wherever land clearing involves the removal of woody vegetation of more than 4 m in height, irrespective of the tree species, operations implemented are to be consistent with the management measures outlined in the proceeding sections. In addition, the following general fauna protection measures are to be followed:

- Before the commencement of clearing, fauna spotter catchers are to examine the area to be cleared and the immediately adjoining vegetation for fauna;
- Cleared vegetation is not to be stockpiled in locations where it may impede fauna movement;
- Companion animals are not to be taken onto the site; and
- All site personnel shall attend site induction training prior to entering the work site. As part of this training, all personnel shall be briefed about their obligations to protect Koala and other native fauna.

## 5.1 Identification of the Clearing Footprint

The following actions are to be implemented in regard to any clearing operations:

- Approved clearing boundaries are to be delineated (e.g., with high visibility poly-web fencing) prior to the commencement of vegetation removal; and
- During the site induction, all site personnel are to be made aware of the clearing areas and the restrictions imposed in the areas of retained vegetation.

## 5.2 Clearing Operations

Clearing is to be done in a manner that ensures Koalas in the clearing area have enough time to move off the site without human intervention.

Vegetation clearing must adhere to the following:

a) Maintain appropriate habitat between the site and its adjacent areas, to allow Koalas to move off the site; and
b) Ensure that no tree in which a Koala is present, or a tree with a crown overlapping a tree in which a Koala is present, is cleared until the tree is vacated by the Koala.

### 5.2.1 Direction of Clearing

The direction of clearing should be away from hostile environments (such as roads or residential areas), and towards any retained vegetation or habitat links, ensuring that:

- Koalas are not pressured to cross over roads or move through developed or disturbed areas, such as residential areas or areas that require movement of greater than 100 m over cleared ground to reach suitable habitat;
- Koalas are not left occupying an 'island' of habitat between hostile environments; and
- Koalas can safely leave the site and relocate to adjacent habitat.

Clearing is to begin in the south of the building envelope and proceed to the north.

## 5.3 Fencing

### 5.3.1 Fauna Exclusion Fencing

Before the commencement of any vegetation clearing works, temporary fauna exclusion fencing is to be erected along the interface of the construction site and the retained vegetation. This fence is to be in place prior to the pre-start meeting with relevant Council officers and is to remain until the completion of all clearing.

Fauna exclusion fencing is to be at least 1.8 m in height with a 40 cm wide metal sheet around the top of the fence. The bottom of the fence is to be in contact with the ground.

## 5.4 Koala Management

### 5.4.1 Koala Spotter

As standard practice, all vegetated areas will be assessed by a Koala spotter in advance of clearing operations. There must be one Koala spotter per clearing machine.

No clearing of vegetation is to commence without the presence of a suitably qualified Koala spotter. A person is considered to be suitably qualified as a Koala spotter if they have worked with Koalas in their natural habitat (e.g., by conducting Koala surveys, Koala monitoring, or by being involved with Koala rescue) or have experience in Koala habitat areas as a licensed fauna spotter catcher.

The key responsibility of the Koala spotter throughout the clearing operations is to ensure that no tree, described as follows, be felled, damaged, or interfered with until the Koala has moved of its own volition:

- A tree in which a Koala is present;
- A tree with a crown overlapping a tree in which a Koala is present; or
- A tree identified as being a risk to Koalas if felled.

A Koala spotter is not to physically move Koalas from a tree in which they are residing to another location to expedite clearing operations and cannot be asked to do so.

### 5.4.2 Koala Management During Clearing Operations

If a Koala is located prior to clearing or during clearing activities the following procedures are to be followed:

a) The tree containing the Koala (the primary tree) shall be marked with flagging tape;

b) Any other trees with canopies touching the primary tree shall also be clearly marked;
c) A corridor of trees that allows the Koala to disperse in the desired direction from the clearing area is to remain in place until the Koala has moved of its own volition;
d) Machinery operators are to be informed of the location of the Koala, and the trees that must not be disturbed; and
e) The trees must not be disturbed in any form until the Koala has moved of its own accord and this has been confirmed by the Koala spotter.

In the event a Koala breaches a fenced area and wanders into the construction area, all activities in the vicinity of the Koala will be suspended until the Koala has moved out of the construction zone. Wherever practical, the animal will be encouraged to move of its own volition. However, to prevent immediate or potential threats that may cause death or harm, it will be prudent to capture and relocate the threatened animal. Capture and relocation are to only be undertaken by a licenced and experienced Koala spotter.

The Koala spotter will be required to possess appropriate equipment and cages and to immediately release all animals after capture unless veterinary attention is required.

### 5.4.3 Machinery Checks

Koalas may take refuge in machinery at night and are at risk of injury when machinery starts the following day. All machinery should be checked before use.

### 5.4.4 Animal Welfare

In the event that a Koala is killed, injured, orphaned, or sick, works must cease immediately and are not to recommence until:

i. The Department of Environment, Tourism, Science and Innovation is notified;
ii. Any sick, injured, or orphaned koala has been assessed by the Department of Environment, Tourism, Science and Innovation or wildlife care organisation and has either been removed from the site for treatment/care or has been released back into the wild in habitat to be retained (if deemed well enough to do so by relevant authorities); and
iii. The Spotter Catcher has identified the cause of the incident and has implemented suitable measures to ensure the incident cannot reoccur.

Spotter catchers are to transfer any injured Koala (or other native fauna) to the nearest designated veterinary clinic for treatment.

Designated veterinary clinics with experience in the treatment of Koalas are as follows:

- Currumbin Wildlife Sanctuary;
- Moggill Koala Hospital; and
- Australia Zoo Wildlife Hospital.

A register of fauna incidents/interactions is to be maintained daily during clearing operations. Injuries or deaths of Koala are to be reported to the Department of Environment, Science, and Innovation.

## 5.5 Contact Details

The Site Supervisor is responsible for ensuring contact details are up to date.

| Organisation | Contact Details |
|---|---|
| Department of Environment, Tourism, Science, and Innovation | 1300 130 372 |
| Currumbin Wildlife Hospital | 5534 0813 |
| Moggill Koala Rehabilitation Centre | 0436 949 954 |
| Australia Zoo Wildlife Hospital | 5436 2097 |
| Spotter Catcher | TBC |
| Wildlife Care Group (Wildcare Australia) | 5527 2444 |

# 6 Action Plan

The following sections summarise the actions to be taken to manage Koala on site.

**Table 6.1 Pre-clearing Mitigation Measures**

| Activity | Management Measure | Responsibility |
|---|---|---|
| Engage a registered Koala spotter | A registered Koala spotter will need to be present on-site for the duration of vegetation clearing activities. | Site construction manager / Project overseer |
| Awareness of roles and responsibilities | At the pre-start meeting, all site personnel will be made aware of their roles and responsibilities in relation to the welfare of Koala. | Site construction manager / Project overseer |
| Mark 'no-go' zones around vegetation to be retained | • Fencing is to be erected around vegetation that is to be retained as per Australian Standard AS4970-2009, Protection of Trees on Development Sites.<br>• All site personnel are to be made aware of the no-go zones on site. | Site construction manager / Project overseer<br>Supervising Arborist |
| Koala searches | • Immediately prior to the commencement of clearing works, the Koala spotter is to examine the canopy and area to be cleared.<br>• Trees that contain Koalas are to be clearly marked as are any trees with canopies touching the primary tree.<br>• A corridor of trees is to be retained to allow the Koala to move from the clearing area. | Koala Spotter<br>Site construction manager |
| Companion Animals | • No companion animals are permitted on the construction site.<br>• Guard dogs are to be controlled at all times. | Site construction manager / Project overseer |

**Table 6.2 Fauna Mitigation Measures**

| Activity | Management Measure | Responsibility |
|---|---|---|
| Communication | The Koala spotter is required to inform machinery operators if/where Koalas are on the site and the management measures that must be complied with. | Koala Spotter<br>Machinery operator/s |
| Direction of clearing | • Clearing is to commence in the south and proceed in a northerly direction. Flushing of wildlife towards the road or residential areas is to be avoided.<br>• Machine operators are to be made aware of the direction of clearing at the start of each day. | Site construction manager / Project overseer |
| Injured Koalas | Any injured Koala will be taken directly to a veterinary clinic for treatment (see Section 5.4.3). Treatment costs will be the responsibility of the site developers. | Koala Spotter |
| Stockpiles | Cleared vegetation, topsoil, mulch, and construction equipment are not to be stockpiled where they will impede fauna movement into adjacent habitat. | Site construction manager / Project overseer |
| Reporting | All incidents with Koala during clearing operations will be recorded and details reported to the City of Gold Coast and the Department of Environment, Tourism, Science, and Innovation. | Koala Spotter |

## 6.1 Triage

The following provides a summary of steps to take if a Koala is seen at any time on the construction site:

STOP any machinery or operations near the Koala.

PROTECT the Koala by establishing a temporary 25-metre radius exclusion around the Koala. Do not attempt to move the Koala.

REPORT the sighting to the Site Supervisor who will report to Spotter Catcher.

SEARCH the exclusion zone. If the Koala moves on from the exclusion zone, operations may resume in the area only after the completion of a thorough search coordinated by the Spotter Catcher.

Operations may not resume without the explicit approval of the Spotter Catcher.

If the Koala:

- has no visible injuries
- is moving around normally
- is small cat-sized or bigger.

IT DOES NOT NEED ASSISTANCE.

If the Koala:

- has weeping eyes
- has a brown stain on the bottom
- is not placing weight on a limb(s)
- is in poor body condition
- is displaying unusual behaviour (e.g. restricted movement, unusual posture)
- is smaller than a cat.

IT NEEDS ASSISTANCE. Contact the Spotter Catcher.

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