

Koala Assessment Report



Pymble Ladies College – Grey House Precinct

20 Avon Road, Pymble

By Ecological Consultants Australia Pty Ltd

TA Kingfisher Urban Ecology and Wetlands

September 2021



About this document



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Statement of Authorship

This study and report was undertaken by Ecological Consultants Australia at Studio 1/33 Avalon Parade, Avalon. The author of the report is Geraldene Dalby-Ball with qualifications BSc. majoring in Ecology and Botany with over 20 years' experience in this field and Luke Johnson with qualifications B EnvSc.

Limitations Statement

Information presented in this report is based on an objective study undertaken in response to the brief provided by the client. Any opinions expressed in this report are the professional, objective opinions of the authors and are not intended to advocate any proposal or pre-determined position.

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Signed: Geraldene Dalby-Ball – Director of Ecological Consultants Australia

A handwritten signature in blue ink, reading "G Dalby-Ball".

Executive Summary

Ecological Consultants Australia (ECA) has been contracted by Kate Bimson to provide a Biodiversity Development Assessment Report BDAR at 20 Avon Road, Pymble NSW 2073 (the site) within the Kur-ring-gui Council Local Government Area (LGA). This Koala Assessment Report (KAR) is to be submitted with the appropriate development application for the site. The report should assist the consent authority in determining any potential impacts on the species. This KAR directly addresses criteria outlined in the *Koala Habitat Protection Guideline* (DPIE, 2020) as detailed by the State Environmental Planning Policy (SEPP) (Koala Habitat Protection) 2021.

The KAR provides the results of a Koala survey at the site and an review of recent literature with evidence suggesting that the site is highly unlikely to support the Koala for breeding or foraging purposes. The impact area does not contain habitat critical to the survival of the species as defined by the Commonwealth Government's EPBC Act referral guidelines for the vulnerable koala (Koala Referral Guideline). The site has been significantly altered and degraded from its natural state. It has a long history of vegetation clearing and development practices. As such, the proposal is unlikely to result in a significant impact on the Koala. Appropriate mitigation measures are proposed in section 5. The aim of recommended mitigation measures is to improve the condition of native vegetation on site and overall, increase the habitat suitability of the site, for the Koala.

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1 Introduction

1.1 Background

Ecological Consultants Australia (ECA) has been contracted by Kate Bimson to provide an BDAR for the proposed development at Pymble Ladies' College at 20 Avon Road, Pymble NSW 2073 (the site) within the Kur-ring-gui Council Local Government Area (LGA). This Koala Assessment Report (KAR) is to be submitted in conjunction with the BDAR and other applicable documents with regard to the development application (DA) for the site.

The site is in Pymble NSW, which is approximately 15 kilometres north-west of Sydney CBD. The proposal is for the construction of an education facility within the existing school grounds. The proposal is also referred to as Grey House Precinct and covers Lot 1/-/DP69541.

The purpose of this KAR is to provide a document which contains relevant information for consideration of impacts on the Koala (*Phascolarctos cinereus*). The report should assist the consent authority in determining any potential impacts on the species. This KAR directly addresses criteria outlined in the *Koala Habitat Protection Guideline* (DPIE, 2020) as detailed by the State Environmental Planning Policy (SEPP) (Koala Habitat Protection) 2021.

The 'Template for Koala Assessment Reports' (s 3.3) of the Koala Habitat Protection Guideline (DPIE, 2020) has been used to guide the structure of the report as well as the 'Koala SEPP 2021 – FACTSHEET- Development Applications Appendix A – Koala Assessment Report detailed criteria'. This ensures all relevant information has been provided in a way which aims to satisfy report requirements in leu of no standardised DPIE template under the current SEPP.



Figure 1.1 Site of the subject land associated with the proposed development. Source: SixMaps 2021

1.2 Proposed Actions

The proposed development include:

- Demolition of existing buildings (single story demountables).
- Vegetation removal within the proposed building footprint (see figure 1.4)
- Construction of a new building (dotted outline in figure 1.3).
- Integrated open space and landscaping to provide outdoor learning and support well-being.
- Proposed construction access is located along an existing paved footpath. The accessway requires a minimum 4m width and this results in 4 trees requiring removal and minor canopy trimming.

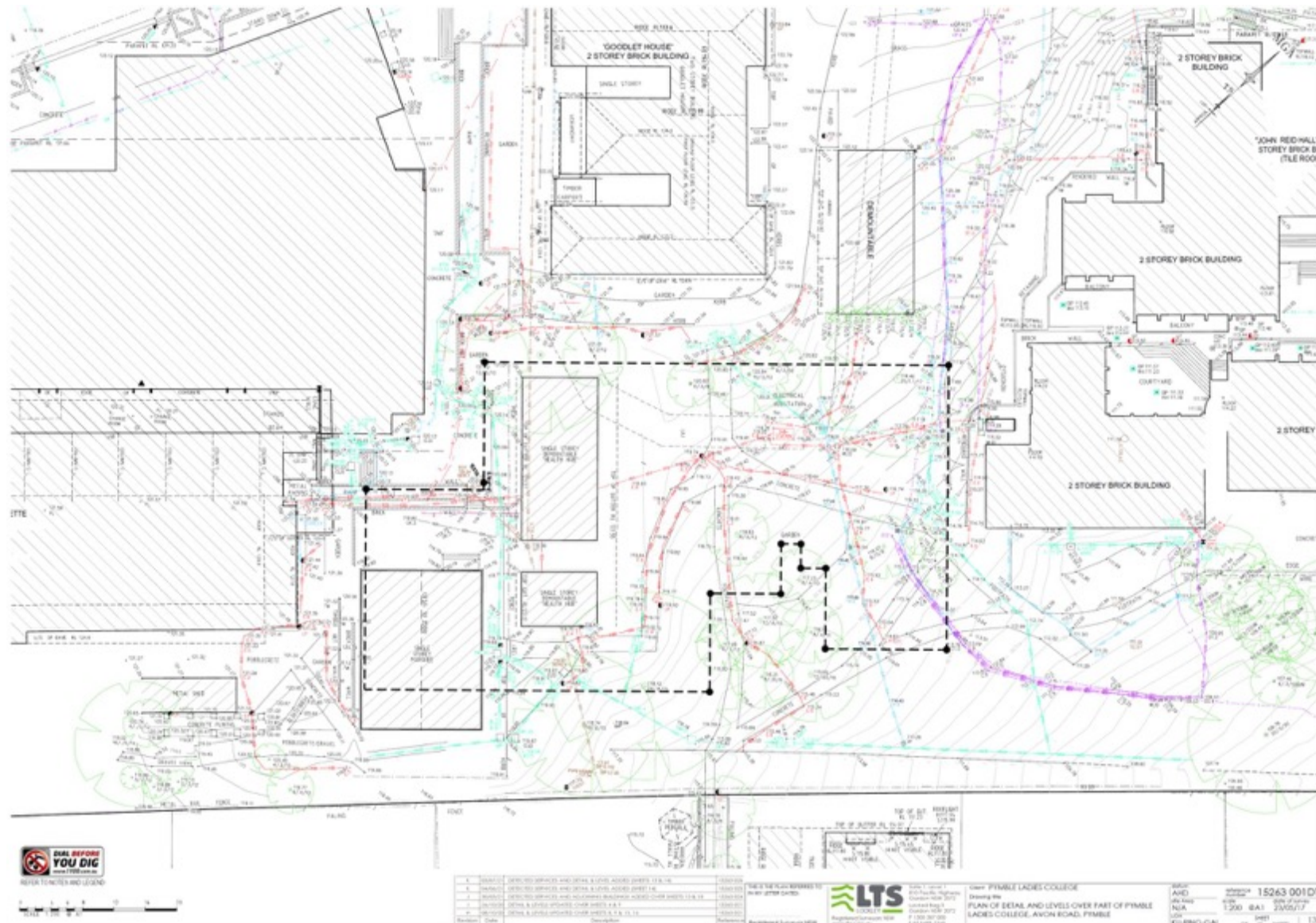


Figure 1.2. Plan of Detail and Levels over part of PLC, Avon Rd, Pymble. Source: LTS Lockley 03/07/21 Rev K

1.2.1 Application of the SEPP

Application of the SEPP the State Environmental Planning Policy (SEPP) (Koala Habitat Protection) 2021 has been applied to the proposed development as;

- The size of land associated with the development is greater than 1 hectare
- The site and the land is located within a Kur-ring-gui LGA in which the SEPP applies to all zones.
- There is no approved Koala Plan of Management for Kur-ring-gui Council

The area of the proposed development is greater than one hectare however the impact area, if defined as native canopy trees to be removed or impacted (made discontinuous) is expected to be less than 1ha. This assessment has been based on the precautionary principle and been conducted even though direct and secondary impact on native canopy trees is expected to be under one hectare (total direct impact approximately 0.06ha). The proposal will be assessed in accordance with the five key principles outlined in *Koala SEPP 2021 FACTSHEET – Appendix A (DPIE, 2021)*. The following sections provide relevant information which will the consent authority in determining any potential impacts on the species.

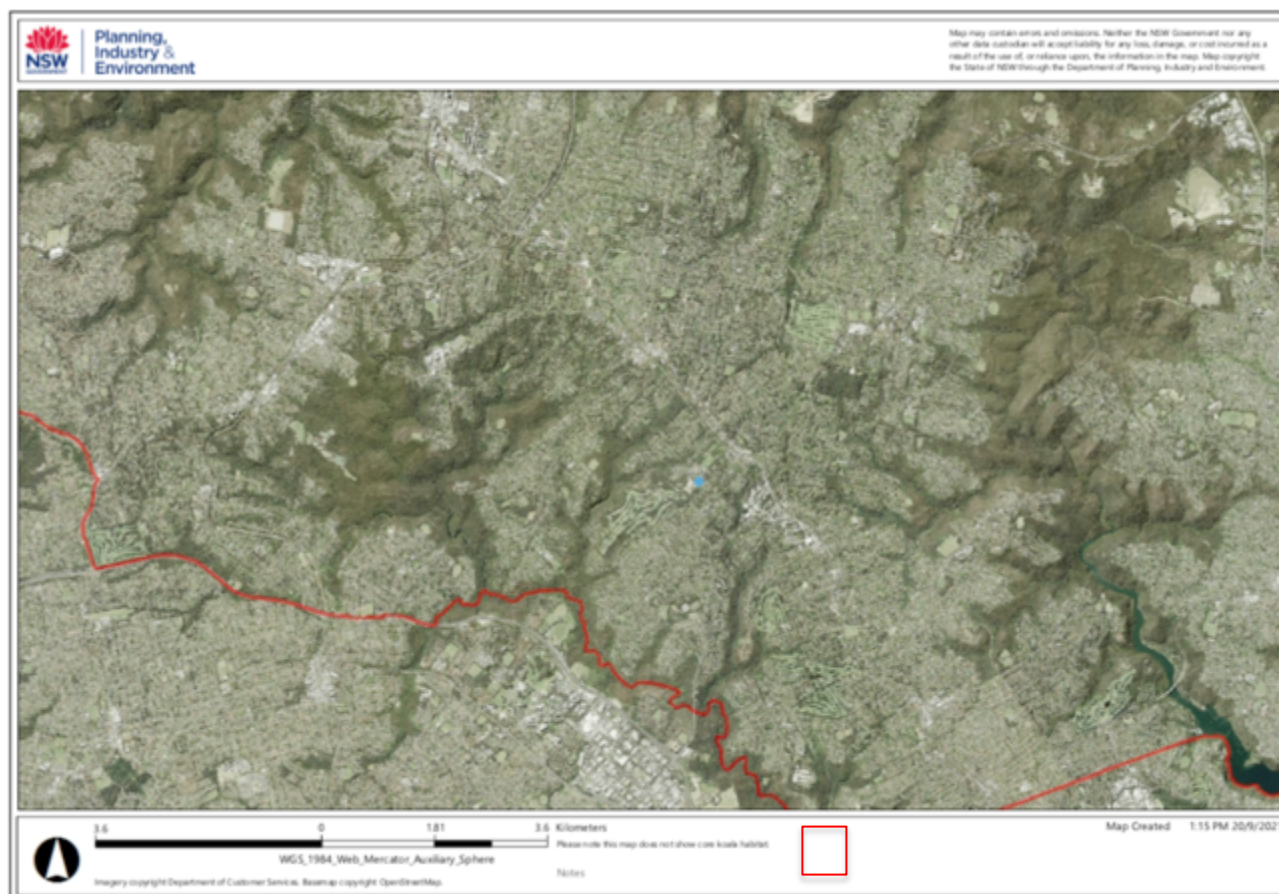


Figure 1.3. Site location identified on the Koala Land Application Map (DPIE, 2021). (Approximate -Not to scale).

2 Koala Habitat Values Criteria 1 - 2

Site history and description

The site has been managed for educational purposes since 1916. Native vegetation would have once covered the site although due to modification and disturbance, the site has lost many natural attributes. A majority of vegetation on site is has been planted by the property management. There is no remnant vegetation left within the development footprint. Patches of remnant vegetation are scattered throughout the PLC campus. Bush regeneration works are being conducted in isolated areas of the property, however the majority of vegetation within the campus is dominated by exotic species and current management practices are preventing the recruitment of the original vegetation communities.

The site has been significantly altered such that it does not reflect natural attributes of the original vegetation communities. The site does contain a number of trees listed in *Schedule 2 'Koala use tree species'* such as *Eucalyptus pilularis*, *Eucalyptus saligna*, *Syncarpia glomulifera*, *Eucalyptus paniculate* and *Eucalyptus microcorys* at a concentration greater than 15% of the total number of trees within the whole of the property. Whilst the development footprint site does contain Koala Use Tree species previous fragmentation and isolation have resulted in the area not being considered as core Koala habitat.

The proposed development area is primarily isolated from other areas of koala habitat. The site is surrounded by artificial barriers including; residential areas, cleared agricultural land and roads. Dog attacks and vehicle strikes are expected to be common in the area given the proximity to residential development and major roads. These threats further reduce the likelihood occurrence and quality of habitat on site.

Impacts

The likelihood of direct or indirect impacts which may cause a significant and/or irreversible impact on the species is low. Ecologists have concluded this finding after a field assessment revealed that the remnant pockets of native vegetation exist in a significantly degraded state, there was no evidence of Koalas on the property via scat evidence, scratching's or otherwise.

Vegetation removal is limited to the development site and consists of approximately 0.06 ha. However, due to the degraded nature of vegetation and habitat on site, the Koala has a low likelihood of occurrence.

Several significant connectivity barriers including; urban development and major roads, encompass the site. These barriers further reduce the likelihood of occur for the Koala. Indirect impacts (dog attacks, vehicle strikes and human disturbance) are expected to be already occurring within the vicinity. As such, the proposal is unlikely to lead to a significantly increase in indirect impacts such that the local population Koalas is placed at risk of extinction.

Whilst no indications of koala use were identified within the survey some areas of vegetation within the property (although in poor condition) may provide potential Koala habitat in the future. These areas are considered to be outside of both direct and indirect impacts of the proposed development of the Grey House Precinct due to the isolated distribution from previous clearing.

Therefore, it is considered that the site does not host core koala habitat and no core koala habitat will be directly or indirectly impacted by the proposed development.

Survey

The survey guidelines suggested within the Koala Habitat Protection Guideline (DPIE, 2020) and EPBC Act Referral Guidelines for the vulnerable koala published by Commonwealth Department of Environment (DotE; 2014) were used as a general guide. A targeted on-ground survey for the Koala was conducted on the site with each tree being directly observed. Binoculars were available for use however the trees are so distant and the canopies clear that a Koala would have been seen if present. Searches were also made in accessible surrounding land holdings and along road ways, binoculars were used here to facilitate clear sight into inaccessible areas (including some private property). Off-site observational surveys for Koalas were opportunistic in nature and focused primarily where potential habitat is greatest (and accessible).

Desktop (Bionet, ALA) and on-ground surveys were conducted to determine the presence / absence of the species. The on-ground survey also contributed to information regarding habitat availability within the site. Indirect survey methods including; scat and scratching's searches (outlined in guiding documents) were conducted. No evidence of Koalas was found on site. It is noted that the surveyor has successfully spotted Koalas in semi-rural areas (including Koalas from the Campbelltown Population), the surveyor also knows that Koalas can and do use any tree species for travel. The ecologists surveying for Koalas has (on other sites in Western Sydney and the Central Coast) recorded Koalas in Norfolk Island Palms and Jacarandas and knows to be broad minded about what makes up Koala habitat in urban areas. See figure 2.1 for the Koala survey tracks, both on site and surrounds.

On site, detailed observations were made within all patches of vegetation. Individual trees were inspected at their base for koala scat, scratching's and presence / absence within each tree. Additionally, roads and patches of bushland as identified in figure 2.1 were searched. The larger patches were searched through three times over the course of the 4-hour survey covering dusk, one-hour post dusk and 4-hours post sunset. No individuals were observed during the survey both on and off site. Torches with attached red-light filter were used to search the canopy during the evening.



Figure 2.1 – Koala survey tracks, both on site and off site searches conducted.

Local koala population and mapping

The Koala species sightings map (DPIE) shows that no Koalas have been recorded within the subject site. Information on the size, health and viability of the koala population at Kur-ring-gui is limited. As per DPIE guidelines there are no records of the Koala occurring within 2.5km of the subject land for any period of time (figure 2.2). Koala sightings have been recorded within 10km of the site over the previous 18 years, the closest of which was recorded in 2017 2.55km's from the development footprint (see figure 2.3).

Previously recorded species sightings is extremely limited such that use of this data to assess the health and viability of the local population would be inappropriate. Generational persistence of the local population and regional movement patterns are likely to result in inaccurate and misleading information.

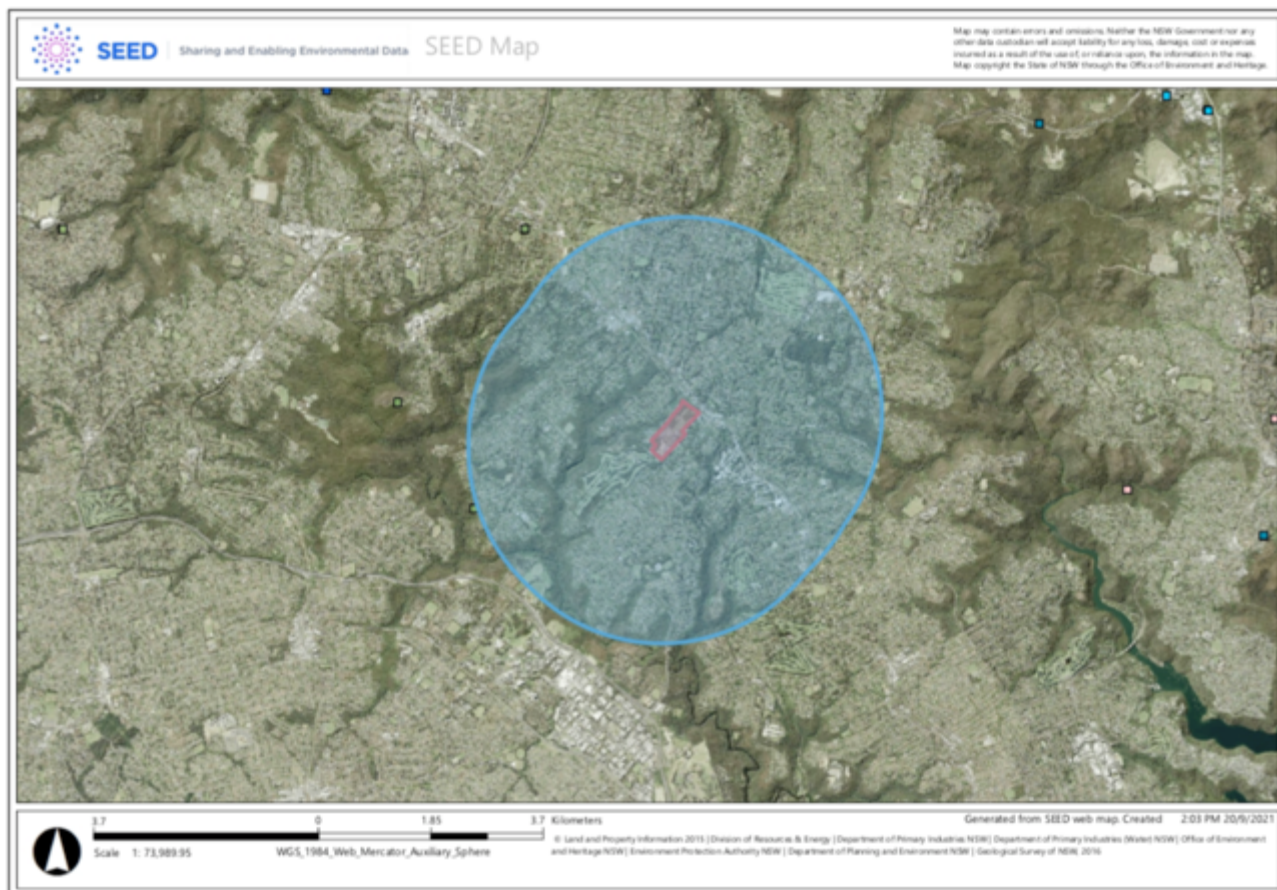


Figure 2.2 - Koala (*Phascolarctos cinereus*) species sightings map with 2.5km buffer of subject land, published by DPIE.

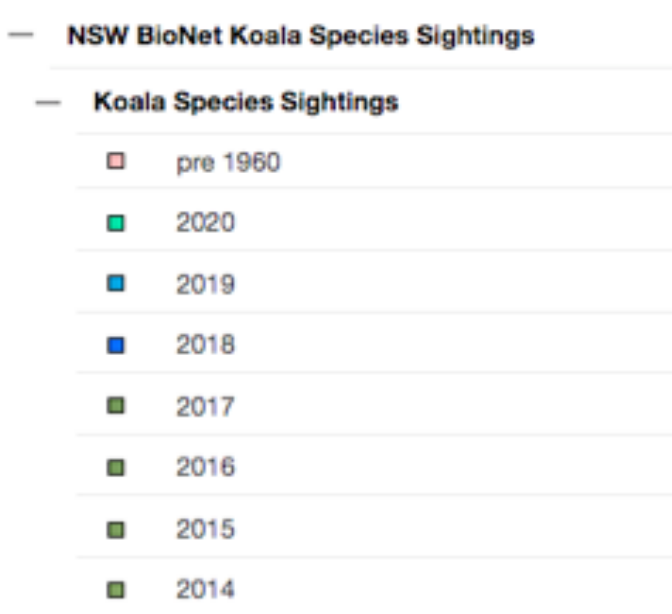


Figure 2.3 – Koala sightings timeline key for figure 2.1

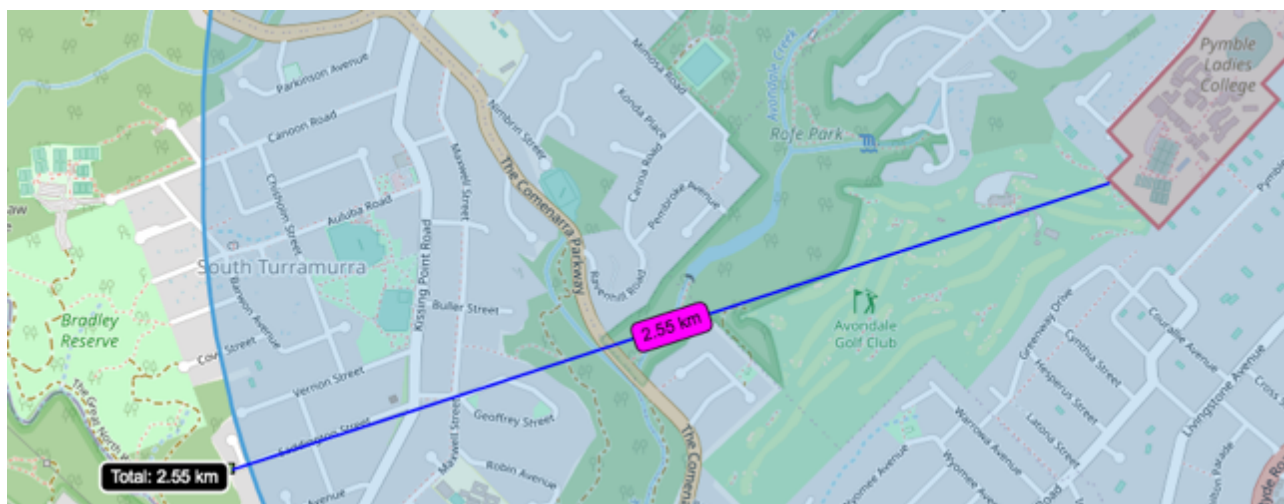


Figure 2.4 – Nearest previously recorded Koala to the subject land published by DPIE

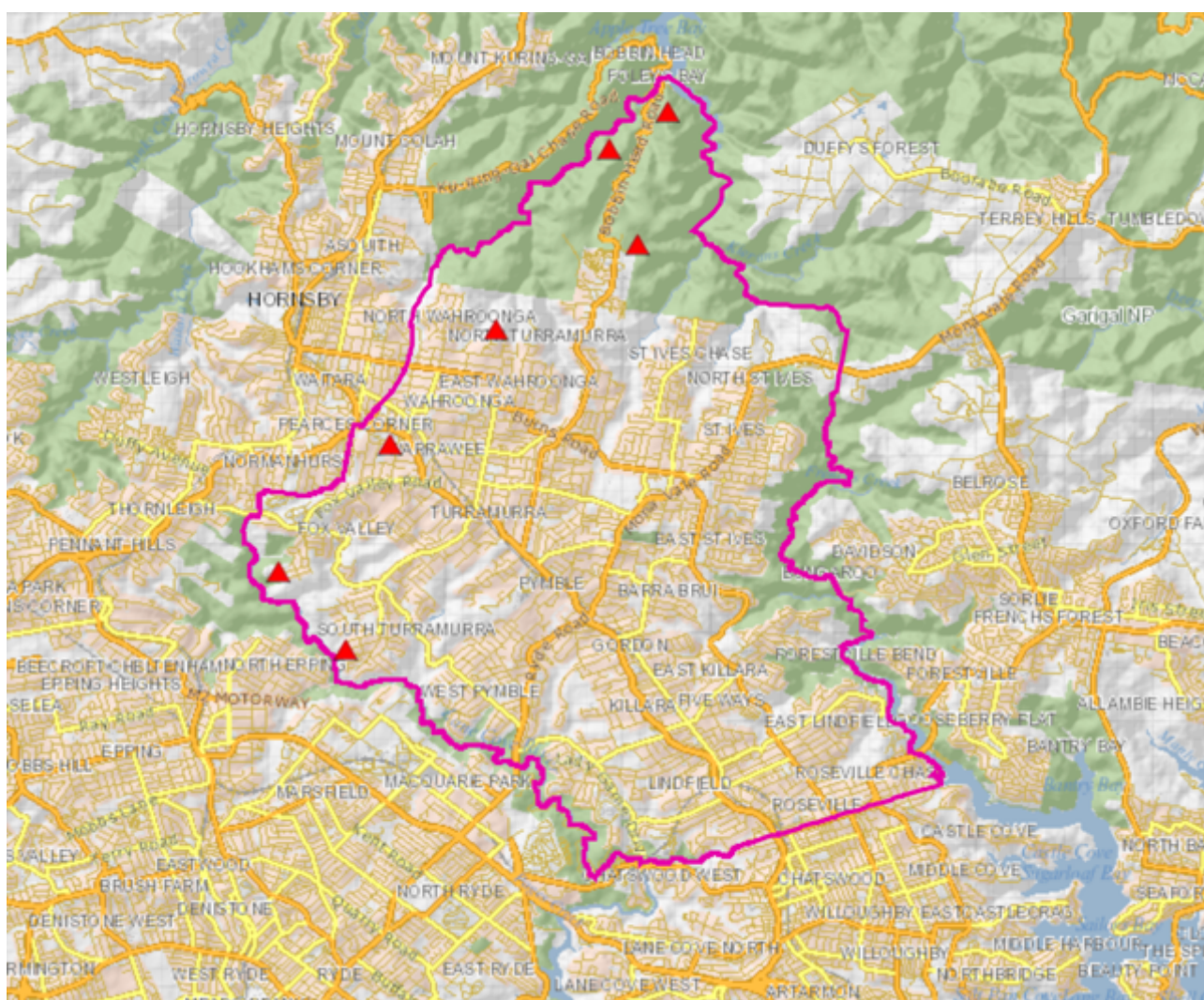


Figure 2.5 – Previously recorded Koala sightings within Kur-ring-gui LGA. DPIE, Atlas of Living Australia.

Site Context and photos.

Many areas have been deliberately planted with *Eucalyptus sp.* and the understory maintained as open grass for recreation. As such, the ground and mid stratum across much of the site is in poor condition. The canopy coverage across the site is not considered remnant, most canopy trees are planted. The small bushland patches across the site are dominated by an exotic understory. The site does not reflect attributes of optimal Koala habitat. The following photos exhibit the poor habitat quality of the site for the Koala.

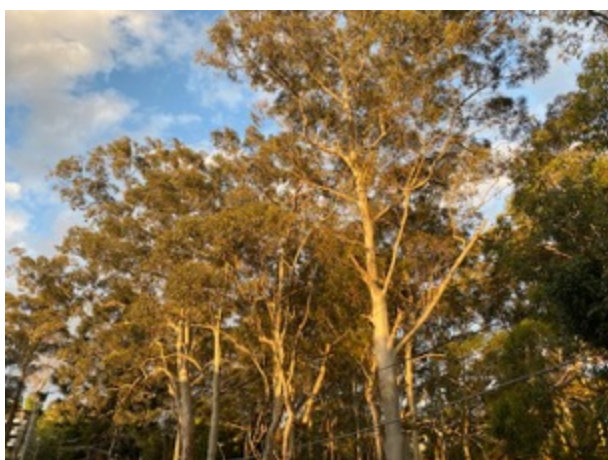
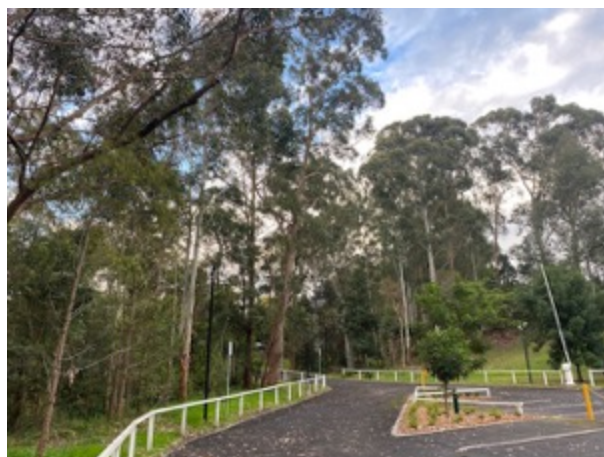


Plate 2.1 – Photos depict the marginal quality of vegetation onsite.





Plate 2.2 – Direct Koala survey within canopy vegetation

3 Measures taken to avoid impacts to Koalas; criteria 3 - 8

The site does not contain areas of optimal koala habitat and as such will avoid removal of habitat which may be critical to the survival of the species. Many areas of the site will remain vegetated with locally native species. Vegetation to be retained will be maintained. Patches of retained vegetation will also ensure that connectivity within the landscape is maintained. A majority of the development footprint occurs within areas of the site which are currently cleared. Tree removal will occur; however, the development has been designed to ensure areas of higher value native vegetation can be retained and enhanced.

There is expected to be an increase in vegetation condition post development. This can be facilitated through effective bushland management programs. Planting of feed and browse tree species is recommended to encourage Koala back to the site. All Koala feed and browse trees should be retained in areas outside of the development footprint.

4 Analysis of potential impacts; criteria 9

Indirect impacts including; dog attacks, vehicle strikes and human disturbance are expected to be currently occurring within the surrounding landscape. It is unlikely that the proposal would significantly increase the rate at which these indirect incidents is expected to occur.

The proposal should include Koala proof fencing which surrounds areas of retained vegetation. Should an individual visit the site, fencing will prevent the Koala from entering residential areas or roads, therefore reducing the risk of indirect impacts. Vegetation corridors should be established to encourage the movement and long-term survival of the local Koala population. Corridors and retained vegetation should be treated as an exclusion zone to protect potential habitat for the Koala. Such measures would likely increase the habitat suitability of the site for the Koala. Given the current surrounding land use, the proposal is unlikely to lead to a significantly increase in indirect impacts such that the local population Koalas is placed at risk of extinction.

5 Plan to manage and protect Koalas and their habitat; criteria 10 -13.

The following mitigation measures are recommended. They aim to improve the condition of native vegetation on site and overall, increase the habitat suitability of the site, for the Koala.

Wildlife corridor/ Revegetation – Revegetation is currently being implemented in areas for the site. These areas should be revegetated with Koala feed and browse trees. Locally native ground and mid storey species are also recommended to support the habitat quality of the wildlife corridor. Such measures will also increase habitat connectivity of the surrounding landscape. Shrub and ground covers will also increase the habitat area for other wildlife including small insectivorous and insectivorous birds.

Figure 5.1 identifies the proposed location for revegetation activities. Such actions will increase biodiversity within the site and the immediate landscape. Planting of threatened flora species within revegetation areas is also proposed.



Figure 5.1 Wildlife corridor/ Revegetation is proposed for Pink highlighted areas within the site.

Fencing - Koala proof fencing (which excludes dogs) is recommended in areas where vegetation will be retained in particular between areas of vegetation within the campus grounds and neighboring residential lots that may have dogs. The fencing should be designed so Koalas are still able to disperse through the site and onto any surrounding areas of Koala habitat.

Vehicles will likely be travelling at low speeds within the development due to the pedestrian and mixed use nature of the site. The proposed development is considered unlikely to increase the risk of vehicle strikes to Koalas.

An ecologist should be engaged to conduct reporting and monitoring at the site. This may occur on an annual basis over 5 years once the construction phase is complete. Key performance criteria may include;

Successful implementation of recommended mitigation measures, increase in potential habitat area on site, increase in vegetation condition and a potential increase in Koalas recorded on site.