2022 Koala Monthly Monitoring and Tracking Report

Koala Monitoring Program, Yarrabilba PDA

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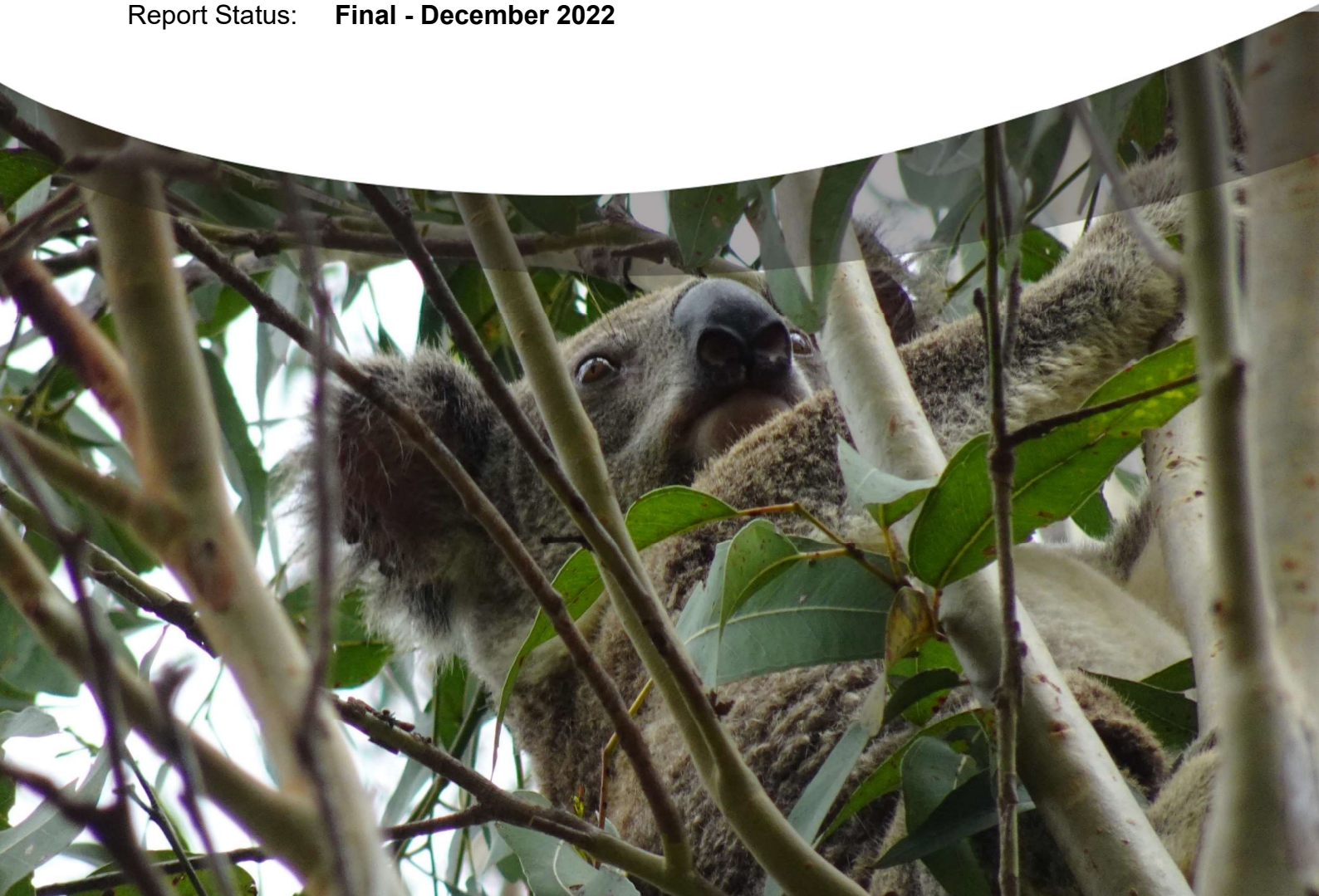
Report Status: **Final - December 2022**



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Cover Photograph – 'Cleanskin' Koala November 2022, Heath Agnew, Austecology

1. Introduction

A *Koala Monitoring Program*[1] has been developed collaboratively between Austecology, University of Queensland's Koala Ecology Group, and Professor Frank Carrick to ensure a robust, scientific, research program to comply with Condition 1b of the EPBC 2013/6791 Approval. The aims of the *Koala Monitoring Program* cover detailed investigations into the ecology, health, and population characteristics of koalas on the site.

In summary, the *Koala Monitoring Program* (KMP) comprises a field program extending over a 5-year period – September 2017 to October 2023, and includes the implementation of three field investigation streams, being:

1. The capture of koalas for the purpose of health assessments and to tag and / or attach monitoring collars in order to assess home range, dispersal into and out of the site, and habitat use. This work includes laboratory analyses of swabs taken from captured koalas in order assess koala health, and genetic diversity of koalas on the site.
2. A monthly program of fieldwork to radio-track koalas in order to visually assess koala condition and collect information on tree species usage.
3. Bi-annual systematic surveys across the site to investigate koala abundance and distribution.

This report presents the results of the 2021 monthly program of fieldwork to radio-track koalas across the site.

2. Field Methodology

The aim of each event was to track collared koalas in order to assess health condition and collect information on tree species usage. Each event was implemented by one to two biologists, using a Yagi 151MHz antenna and Australis 26K receiver scanner to track Koalas, and binoculars to assess animal condition and ancillary information such as the presence of joeys with their mothers. Notes were made of each observation.

Monitoring events were undertaken from January 2022 through to December 2022 (inclusive). Non-scheduled events were also implemented to investigate low / nil movement data for an individual Koala detected as part of the daily assessment of 12-hourly updates via the web-based LX System. As part of these non-scheduled events, other Koalas were also tracked.

During the field work, observations of other Koalas (previously ear-tagged and / or collared) were recorded to augment the data for the program.

There were no site access constraints which were considered to have any material impact to the success of either survey.

[1] Austecology (2017). Koala Monitoring Program Yarrabilba UDA. Report prepared by Lindsay Agnew (Austecology) and Bill Ellis (University of Queensland's Koala Ecology Group).

3. Results and Summary Observations

The program provided a total of 12 tracking events between early-January to mid-December 2022. **Attachment A** provides a summary of the monitoring and tracking results.

A total of 48 observational records were collected, and providing data for 16 'known' adult Koalas (collared and / or tagged; 7 males and 9 females) and potentially up to 8 individual 'cleanskin' Koalas (not previously tagged). The monitoring results included observations of 3 females and their joeys.

Koalas observed were (in no particular order): Gladys (with accompanying joey); Zara; Jana (and joey); Ella (with accompanying joey); Millie Mae, Miso; Scarlet; Kamala; Marlee; Bilba (Zara's joey); Larabee; Cain; Lucky; Clancy; Brumby; and Lindsay.

'Cleanskin' Koalas comprised 4 males, 3 females, and 1 young Koala of indeterminant sex.

Of the 24 individual Koalas observed, and with repeat sightings of individuals over the year, only two Koalas (Clancy and a cleanskin) exhibited signs of Chlamydial infection that could be detected through visual clues[2]. These two cases were regarded as a low-level manifestation within the population, though noting that not all infected Koalas exhibit clinical signs nor can infection status of wild Koalas atop of trees be confidently assessed visually in the field.

Koalas were observed in 7 different tree species, including the introduced *Pinus radiata*. The results highlight that Koalas were most commonly observed within *Eucalyptus moluccana*. Koalas were also recorded within (in no particular order): *E. tereticornis; E. crebra*; *E. drepanophylla; Angophora floribunda*; and *Corymbia intermedia*.

Observations within the introduced pine *Pinus radiata* represented 2% of the data. In 2022, observations of koalas within the introduced pine appear were the lowest of the five years of monitoring. This may in part be explained by the progressive removal of this environmental weed form the site.

The above results are similar to the previous stages of monitoring and tracking, with records from *Eucalyptus moluccana*[3] accounting for significant proportion of the overall tree usage data.

The tree size class data indicates that Koalas were more commonly encountered in trees with a trunk characteristic of >30cm DBH (57% being trees of >40cm DBH, and 29% being trees between 30 to 40cm DBH). These results are similar to the findings from previous years monitoring results.

[2] Ocular infections leading to swollen eyes and / or urogenital disease leading to "Chlamydiosis" or "wet-bottom syndrome".
[3] *Eucalyptus moluccana* accounting for 65% of tree use data.

Attachment A Summary of Koala Monitoring and Tracking Records

Date	Koala	Gender	Tree species	Tree Character	Health Appearance	Comments
20/01/2022	Gladys	F	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	accompanying joey
20/01/2022	Bilba	M	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
20/01/2022	Cleanskin	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
20/01/2022	Jana	F	*P. radiata*	>40cm DBH	eyes & rump appear clean.	
14-16/02/2022	**Capture Event**					
3/03/2022	Cleanskin	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
3/03/2022	Ella	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	accompanying joey
3/03/2022	Miso	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
3/03/2022	Zara	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
3/03/2022	Larabee	M	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	
3/03/2022	Jana	F	*E. crebra*	>30cm DBH	eyes & rump appear clean.	
3/03/2022	Cain	M	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
3/03/2022	Cleanskin	M	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.	
21-25/03/2022	**Population Survey**					
11/04/2022	Lucky	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
11/04/2022	Cain	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
11/04/2022	Ella	F	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.	
11/04/2022	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	accompanying joey
11/04/2022	Miso	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
06/05/2022	Ella	F	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.	
06/05/2022	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
06/05/2022	Miso	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
06/05/2022	Cleanskin	M	*P. radiata*	>40cm DBH	slight staining of rump	
16/06/2022	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
16/06/2022	Miso	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
16/06/2022	Ella	F	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.	
16/06/2022	Clancy	M	*E. mollucana*	>20cm DBH	eye swollen & stained rump	
11-13/07/2022	**Capture Event**					

Date	Koala	Gender	Tree species	Tree Character	Health Appearance	Comments
14/08/2022	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
14/08/2022	Ella	F	*A. floribunda*	>40cm DBH	eyes & rump appear clean.	
14/08/2022	Scarlet	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
14/08/2022	Cain	M	*C. intermedia*	>40cm DBH	eyes & rump appear clean.	
14/08/2022	Brumby	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
14/08/2022	Cleanskin	F	*E. drepanophylla*	>30cm DBH	eyes & rump appear clean.	
2/09/2022	Bilba	M	unknown	>40cm DBH	eyes & rump appear clean.	
2/09/2022	Gladys	F	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.	
2/09/2022	Scarlet	F	*A. floribunda*	>40cm DBH	eyes & rump appear clean.	
2/09/2022	Brumby	M	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	
29/08-2/09/2022	**Population Survey**					
26/10/2022	Cleanskin	M	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
26/10/2022	Lindsay	M	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
26/10/2022	Cleanskin	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
26/10/2022	Miso	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
26/10/2022	Scarlet	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
26/10/2022	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
14-15/11/2021	**Capture Event**					
13/12/2022	Larabee	M	*E. mollucana*	>20cm DBH		
13/12/2022	Kamala	F	*E. mollucana*	>40cm DBH		
13/12/2022	Lindsay	M	*E. mollucana*	>40cm DBH		
13/12/2022	Cleanskin	?	*E. mollucana*	>40cm DBH		young adult
13/12/2022	Millie Mae	F	*E. tereticornis*	>40cm DBH		
13/12/2022	Marlee	F	*E. mollucana*	>40cm DBH		
13/12/2022	Ella	F	*C. intermedia*	>30cm DBH		