2021 Koala Monthly Monitoring and Tracking Report

Koala Monitoring Program, Yarrabilba PDA

Prepared for: **Lend Lease Communities (Yarrabilba) Pty Ltd**
Prepared by: **Lindsay Agnew, Austecology**
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Cover Photograph – Lucky (February 2021), 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.

An event was scheduled, and implemented during each month from January 2021 through to December 2021 (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 Observations

The program provided a total of 12 tracking events between early-January to early-December 2020. **Attachment A** provides a summary of the monitoring and tracking results.

A total of 49 observational records were collected, and providing data for 10 'known' adult Koalas (collared and / or tagged; 2 males and 3 females) and potentially up to 5 individual 'cleanskin' Koalas (not previously tagged). The monitoring results included observations of 4 females and their joeys.

Koalas observed were (in no particular order): Bilba (Zara's joey); Bomber; Ella; Gladys (with accompanying joey, then later with back young); Jana (and joey); Lucky; Millie Mae, Nyunga; Scarlet (and joey); and Zara (with joey).

'Cleanskin' Koalas comprised 3 males, 1 female, and 1 young Koala of indeterminant sex (possibly the offspring of Gladys).

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

Observations within the introduced pine *Pinus radiata* represented 6% of the data, and most were attributable to one individual, Nyunga. *Pinus radiata* is a legacy of former silviculture operations, and is progressively being removed from the site a part of the on-going site-wide rehabilitation program.

The above results are similar to the previous stages of monitoring and tracking, with records from both *Eucalyptus moluccana* and *E. tereticornis* accounting for significant proportion of the overall tree usage data[2].

Records of Koalas within the introduced *Pinus radiata* were lower than previous years data (e.g., 6% tree records in 2021, versus ~ 10-13% in previous years), probably reflecting the impact of the site-wide program to eradicate this environmental weed.

The tree size class data indicates that Koalas were more commonly encountered in trees with a trunk characteristic of >30cm DBH (45% 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] *Eucalyptus moluccana* accounting for 41% of tree use data, with *E. tereticornis* accounting for 37% of tree use data.

Attachment A Summary of Koala Monitoring and Tracking Records

Date	Koala	Gender	Tree Species	Tree Character	Health Appearance	Comments
13/01/2021	Nyunga	F	*C. intermedia*	>40cm DBH	eyes & rump appear clean.	
13/01/2021	Bomber	M	*P. radiata*	>30cm DBH	eyes & rump appear clean.	
13/01/2021	Cleanskin	F	*C. intermedia*	>30cm DBH	eyes & rump appear clean.	
13/01/2021	Millie Mae	F	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	
17/02/2021	Zara	F	*E. fibrosa*	>30cm DBH	eyes & rump appear clean.	accompanying joey
17/02/2021	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	accompanying joey
17/02/2021	Scarlet	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
17/02/2021	Bomber	M	*M. quinquenervia*	>20cm DBH	eyes & rump appear clean.	
17/02/2021	Nyunga	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
17/02/2021	Millie Mae	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
8-12/03/2021	Population Survey					
18/03/2021	Zara	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	accompanying joey
18/03/2021	Bilba	M	*E. mollucana*	<20cm DBH	eyes & rump appear clean.	
18/03/2021	Gladys	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	accompanying joey
18/03/2021	Nyunga	F	*E. tereticornis*	>30cm DBH	eyes & rump appear clean.	
18/03/2021	Millie Mae	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
18/03/2021	Lucky	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
19-21/04/2021	Capture Event					
26/05/2021	Jana	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	accompanying joey
26/05/2021	Nyunga	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
26/05/2021	Ella	F	*E. fibrosa*	>30cm DBH	eyes & rump appear clean.	
26/05/2021	Gladys	F	*E. tereticornis*	>30cm DBH	eyes & rump appear clean.	
26/05/2021	Bilba	M	*E. tereticornis*	>20cm DBH	eyes & rump appear clean.	
13/06/2021	Jana	F	*E. tereticornis*	>20cm DBH	eyes & rump appear clean.	accompanying joey
13/06/2021	Nyunga	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	
13/06/2021	Ella	F	*E. fibrosa*	>30cm DBH	eyes & rump appear clean.	
13/06/2021	Gladys	F	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.	
13/06/2021	Bilba	M	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.	

Date	Koala	Gender	Tree Species	Tree Character	Health Appearance	Comments
09/07/2021	Jana	F	*E. tereticornis*	>30cm DBH	eyes & rump appear clean.	
09/07/2021	Nyunga	F	*P. radiata*	>40cm DBH	eyes & rump appear clean.	
09/07/2021	Bilba	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
09/07/2021	Gladys	F	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.	
09/07/2021	Ella	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
16-18/08/2021	Capture Event					
03/09/2021	Ella	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
03/09/2021	Bilba	M	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.	
03/09/2021	Gladys	F	*E. mollucana*	<20cm DBH	eyes & rump appear clean.	
03/09/2021	Jana	F	*E. tereticornis*	>20cm DBH	eyes & rump appear clean.	
13-17/09/2021	Population Survey					
21/09/2021	Jana	F	*E. tereticornis*	>20cm DBH	eyes & rump appear clean.	
21/09/2021	Nyunga	F	*E. fibrosa*	>40cm DBH	eyes & rump appear clean.	
21/09/2021	Bilba	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
21/09/2021	Lucky	M	*E. mollucana*	>30cm DBH	eyes & rump appear clean.	
21/09/2021	Cleanskin	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
22/10/2021	Bilba	M	*A. floribunda*	>40cm DBH	eyes & rump appear clean.	
22/10/2021	Gladys	F	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.	
22/10/2021	Cleanskin	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
09/11/2021	Jana	F	*P. radiata*	>40cm DBH	eyes & rump appear clean.	
09/11/2021	Bilba	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
09/11/2021	Gladys	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	
09/11/2021	Cleanskin	?	*E. mollucana*	>40cm DBH	eyes & rump appear clean.	young animal, possibly Gladys's joey
22-24/11/2021	Capture Event					
17/12/2021	Gladys	F	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	with back young
17/12/2021	Bilba	M	*E. mollucana*	>20cm DBH	eyes & rump appear clean.	