

KOALA MONITORING PROGRAM

KOALA BEACH ESTATE

SUMMARY REPORT

**Prepared on behalf of Tweed Shire Council and the
Koala Beach Wildlife and Habitat Management Committee
(KBW&HMC)**

by

**John Callaghan, Graeme Lloyd
& Marama Hopkins**

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SUMMARY

The Koala Beach koala monitoring program was commenced in 2005 with the establishment and initial surveying of 20 faecal pellet survey sites and three search transects. Since 2005, follow-up surveys have been completed in 2007, 2010, 2012 and 2014-15. The monitoring program was designed to detect changes (trends) in the distribution and status of the local koala population. This is necessary to help evaluate the longer-term impacts of the development on the local koala population and to gauge the success of conservation measures contained in the Koala Beach Koala Plan of Management prepared for the Estate by the Australian Koala Foundation.

Twenty Spot Assessment (SAT) sites were selected, surveyed and marked as long-term monitoring stations by the Australian Koala Foundation in October and November 2005, together with three approximately 1 km-long search transects. The SAT survey stations were distributed widely across Koala Beach, with site locations ranging from adjacent to the developed areas to near the extremities of the Estate. The SAT survey stations are primarily located in areas of high and medium quality koala habitat (i.e., sites dominated or co-dominated by preferred koala tree species), as these areas provide the greatest likelihood for early detection of trends in habitat use.

The 20 SAT sites and three strip-transects were re-surveyed each monitoring period during late Spring -Summer (see Figure 1). An interval of approximately two years was set for the monitoring events to ensure sufficient time for koala pellets to decompose between monitoring.

Summary findings to date:

- i) Koala faecal pellets were recorded from all twenty SAT survey sites in 2005, 2007 and 2010 and from eighteen sites in 2012 and again in 2014-15.
- ii) Over the full extent of the monitoring to date, significant downward trends in koala activity are evident at ten of the twenty SAT survey sites.
- iii) Moderate to substantial upward trending koala activity was recorded for nine sites in the 2014-15 surveys, although all except one site still recorded lower

koala activity in the 2014-15 surveys than that recorded for the initial baseline surveys in 2005.

- iv) The activity level for the remaining SAT site has fluctuated up and down for each monitoring period.

Table 1. Number of SAT sites that recorded “low”, “medium” and “high” koala activity levels during each of the monitoring surveys.

Activity Level	2005	2007	2010	2012	2014
Low	0	2	9	9	11
Medium	3	4	5	6	5
High	17	14	6	5	4
Total Sites	20	20	20	20	20

Table 2. Koala activity levels (i.e. proportion of 30 surveyed trees at each site with koala faecal pellet evidence, expressed as a percentage) for each of the 20 Spot Assessment Technique (SAT) survey sites in 2005, 2007, 2010, 2012 and 2014.

SITE	2005 Activity %	2007 Activity %	2010 Activity %	2012 Activity %	2014 Activity %
KB051	23.3	20.0	26.7	30.0	6.67
KB052	36.7	53.3	43.3	23.3	13.33
KB053	76.7	40.0	6.7	23.3	30.0
KB054	40.0	23.3	30.0	36.7	3.33
KB055	60.0	73.3	40.0	10.0	30.0
KB056	50.0	23.3	20.0	40.0	53.33
KB057	50.0	36.7	16.7	46.7	0
KB058	30.0	43.3	3.3	36.7	20.0
KB059	53.3	30.0	23.3	16.7	3.33
KB060	83.3	46.7	36.7	0	50.0
KB061	23.3	13.3	6.7	3.3	13.33
KB062	36.7	50.0	16.7	20.0	23.33
KB063	33.3	46.7	10.0	6.7	0
KB064	33.3	30.0	23.3	20.0	10.0
KB065	80.0	73.3	76.7	26.7	23.33
KB066	63.3	76.7	30.0	16.7	23.33
KB067	60.0	40.0	43.3	0	46.67
KB068	40.0	46.7	6.7	26.7	3.33
KB069	56.7	56.7	16.7	23.3	16.67
KB070	86.7	60.0	36.7	43.3	46.67
MEAN	50.83	44.17	25.68	22.51	20.83

- v) Koalas were recorded from transect searches during the initial four monitoring periods: one adult female with a back young and one sub-adult male in 2005; two adult females in 2007; two adult females and one adult male in 2010; and one adult female and one adult male in 2012. However, no koalas were observed during the 2014-15 transect searches.
- vi) Seven incidental koala sightings were recorded during the monitoring surveys in 2005, four in 2007, six in 2010, three in 2012, and three in 2014-15 (including one female with a back young and one female with an apparent pouch young).
- vii) An additional adult female koala was observed at SAT site KB060 during the 2014-15 surveys.
- viii) Two koala skulls were observed in the northwest section of the site during the 2012 surveys, one of which showed signs of predation or scavenging by a dog or fox. One koala skull was observed at SAT site KB057 during the 2014-15 surveys.
- ix) Koala sightings and accounts of koala bellowing continue to be reported within the Estate by Koala Beach residents.

Overview:

The overall downward trends in koala activity over the course of the monitoring period to date continue to pose very serious concerns for the future of the koala population at Koala Beach.

As raised previously, the overall indications of koala declines for the Koala Beach Estate may be indicative of the broader decline in the Tweed coast koala population as reported by Biolink in the Tweed Coast Koala Habitat Study (2011), with fire frequency and intensity identified as a major contributing factor.

However, the ongoing persistence of koalas at Koala Beach coupled with positive indications for nine of the SAT sites provide hopeful signs. In an interesting outcome from the 2014-15 surveys, the SAT sites that recorded the greatest increases in koala activity tended to be sites that were nearer to the established residential areas.

The long-term future of the koala population at Koala Beach is likely to depend heavily on the level of success of Tweed Shire Council's Tweed Coast Comprehensive Koala Plan of Management (2014) and associated koala conservation programs for the broader Tweed Coast area.



Figure 1 Koala Beach monitoring sites and transects
 KOALA BEACH ESTATE - KOALA MONITORING 2014-2015

Plan prepared August 2015
 Tweed Shire Council

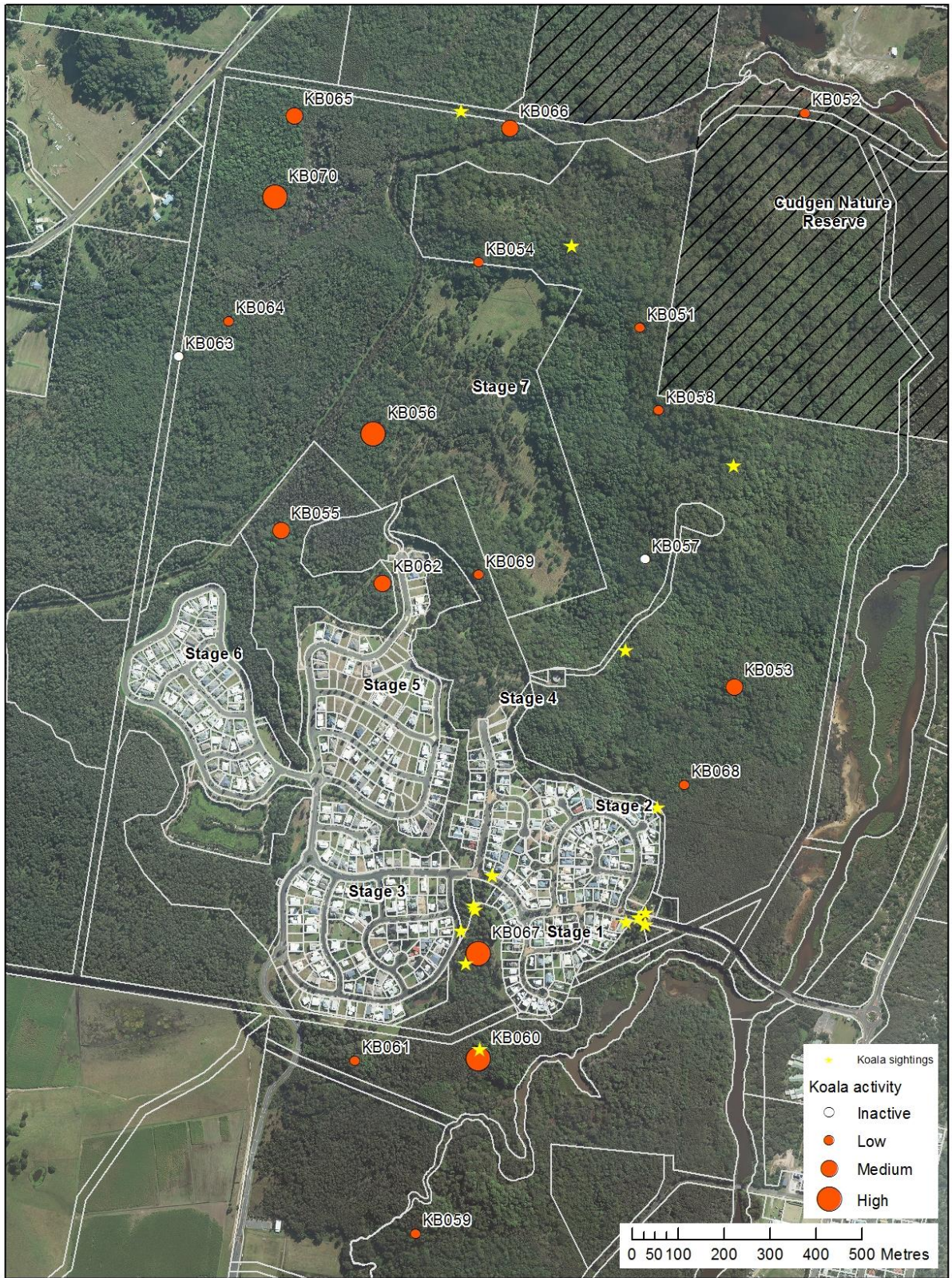


Figure 2 Koala activity and sightings during 2014.
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