

Hail Creek Mine Extension, June 2025: Koala survey

Summary

Lock the Gate Alliance conducted thermal drone surveys targeting arboreal fauna between 9-10 June 2025. The surveys covered approximately 160ha of land proposed for expansion of the Hail Creek Mine, located approximately 120km southwest of Mackay in Central Queensland. During a single overnight survey, 13 koalas were detected.

Method

The surveys were conducted in the mapped area identified in Figure 1. The purpose was to better understand the koala population in and around the proposed Hail Creek Mine southern expansion area. Drone surveys were launched from privately-owned land adjoining the expansion area.

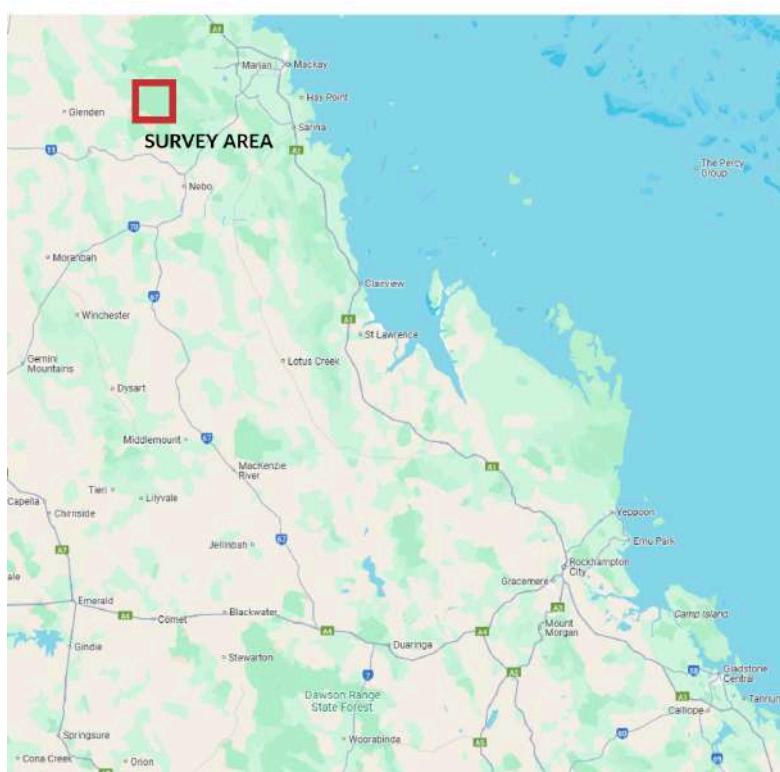


Figure 1: Survey area.

Surveys were undertaken using a Matrice M30T drone fitted with a 640 X 512 pixel thermal camera and a 48MP zoom camera. Those areas that were most likely to provide koala habitat were identified and mapped as 5 polygons each measuring approximately between 20-30ha. Each polygon was transected by means of a pre-programmed lawnmower grid pattern with an approximate grid spacing of 50m and a flying height of 45m. Time taken to complete each polygon varied depending on the number of animals encountered, but averaged about 40 minutes.

When a target animal was observed, the automated mission was paused and the drone was flown manually to obtain an appropriate viewing angle. The camera was then switched from infrared to spotlight and zoom lens. Generally, the drone remained at a distance greater than 50m and up to 200m from the target animal which was then filmed and photographed using an 80-100X zoom lens.

Surveys were conducted between 2200 and 0600 on the night and early morning of 9-10 June 2025.

Results

All koalas were observed on the night of 9-10 June. Ten koalas were observed within the expansion area and three were recorded to the north of it. Locations of individuals and survey polygons are shown in Figure 2 below, and set out in Table 1. An image of each sighting is provided in Appendix 1.

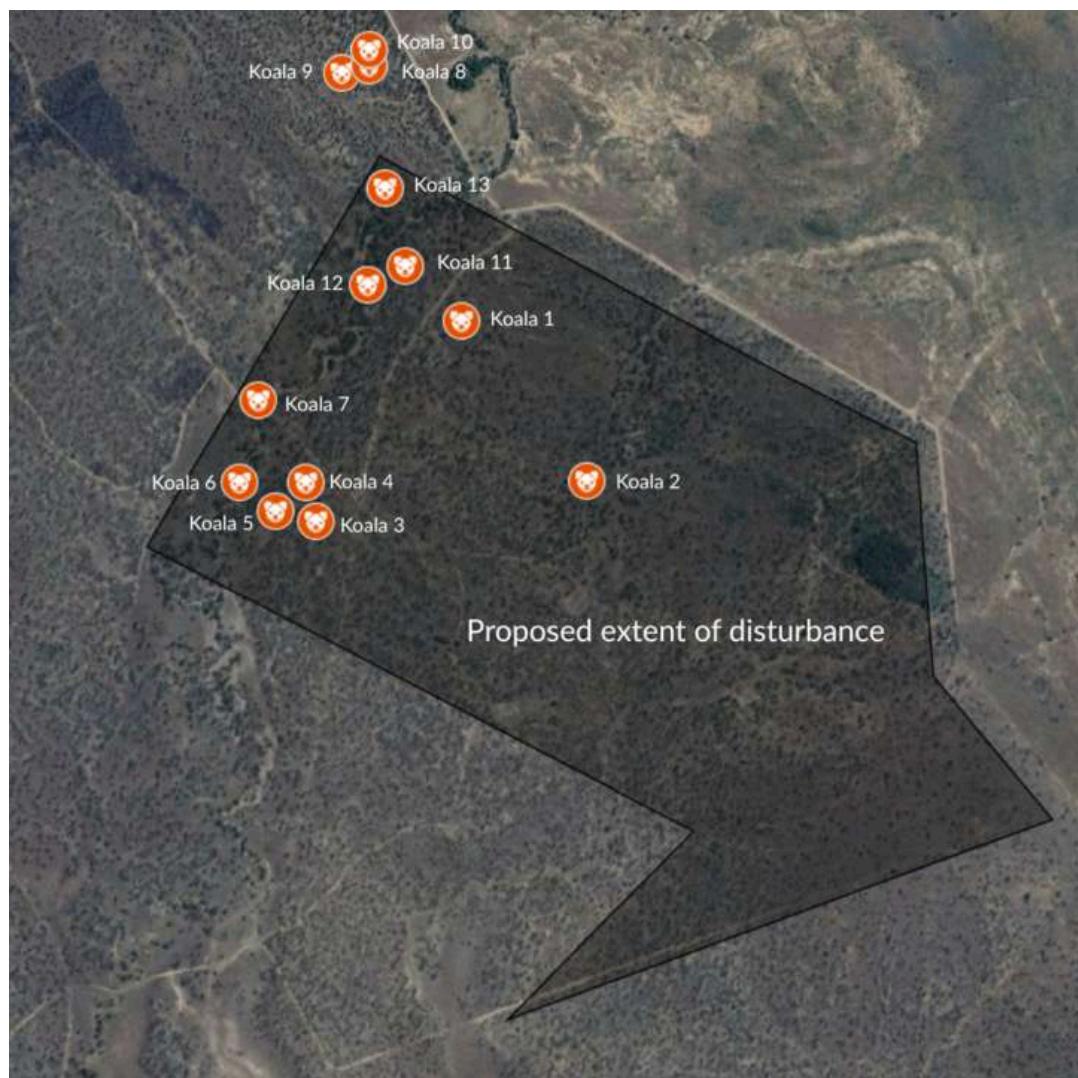


Figure 2: Location of koalas in relation to (approximate) proposed expansion Area 4.

Sightings	Time/date recorded	Location (lat/long)
Koala 1	0134 on 10/06/25	-21.508994° S 148.4536596° E
Koala 2	0304 on 10/6/25	-21.5134633° S 148.4573871° E
Koala 3	0351 on 10/6/25	-21.5145345° S 148.4493596° E
Koala 4	0358 on 10/6/25	-21.5134952° S 148.4490049° E
Koala 5	0400 on 10/6/25	-21.5142711° S 148.4481346° E
Koala 6	0416 on 10/6/25	-21.5135261° S 148.4470405° E
Koala 7	0419 on 10/6/25	-21.511229° S 148.4475836° E
Koala 8	2313 on 9/6/25	-21.5019582° S 148.4509115° E
Koala 9	2322 on 9/6/25	-21.5021523° S 148.4500792° E
Koala 10	2325 on 9/6/25	-21.5014908° S 148.4509038° E
Koala 11	2400 on 10/6/25	-21.507481° S 148.4519777° E
Koala 12	0038 on 10/6/25	-21.5080322° S 148.4508591° E
Koala 13	0049 on 10/6/25	-21.5053268° S 148.4513708° E

Table 1: Details for individual sightings.

Conclusion

The Impact Assessment Report accompanying the application stated that the koala population occurring on the site is “likely to be quite large and therefore potentially a key source population”.¹ Our drone survey recorded 13 koalas on a single night, confirming that this is a large healthy population. The Hail Creek Mine expansion would have a significant impact on 600ha of koala habitat “critical to the survival of the species”.

The combined koala populations of Queensland, NSW and the ACT are listed as Endangered under both the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the species is also listed as Endangered under the NSW *Biodiversity Conservation Act 2016* (BC Act).

¹https://environment.desi.qld.gov.au/__data/assets/pdf_file/0030/394167/appendix-a-ecological-impact-assessment-report.pdf

The threatened koala was uplisted from Vulnerable to Endangered under national law in 2022 due to the increased threats recognised following the Black Summer bushfires. Key source populations such as the one found at Hail Creek are considered to be crucial for the long-term survival and recovery of the species. The habitat in the southern extension area comprises both refuge habitat along riparian corridors and important feeding and dispersal habitat in surrounding woodland. These factors are essential to ensure the species' survival in the face of increased droughts and prolonged heat waves that are already occurring with climate change.

APPENDIX 1: IMAGES OF EACH SIGHTING

Koala 1



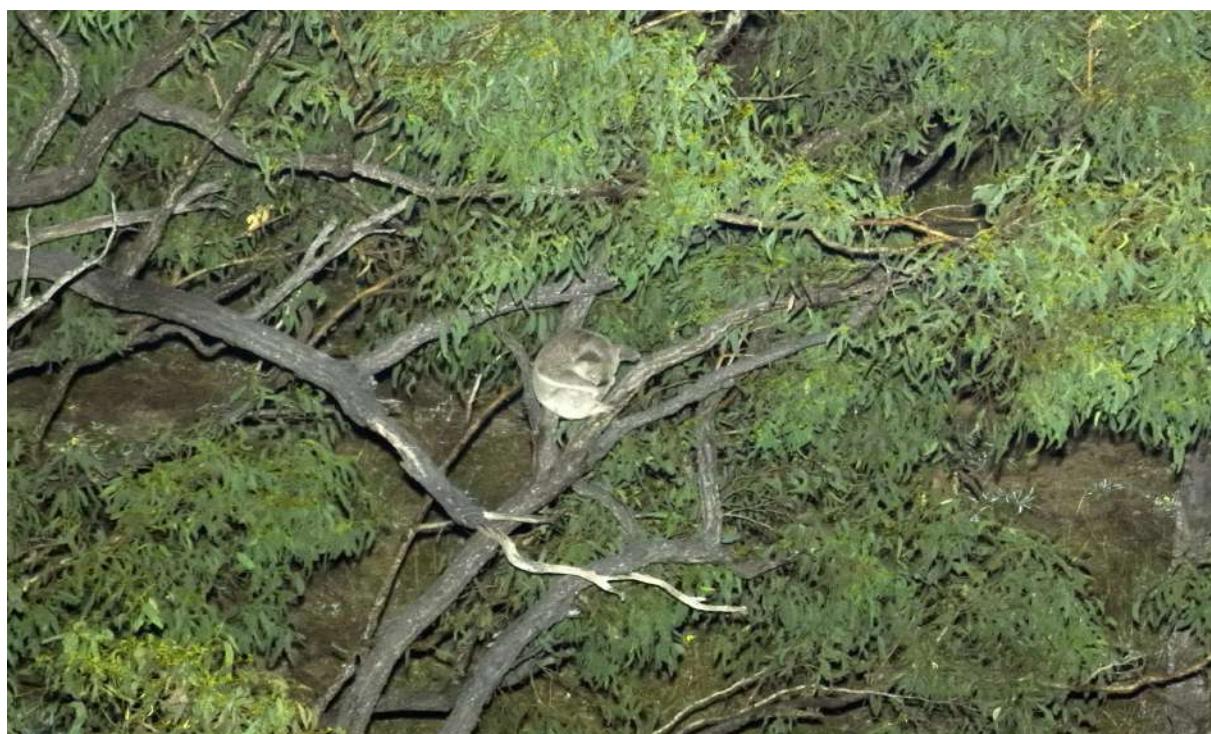
Koala 2



Koala 3



Koala 4



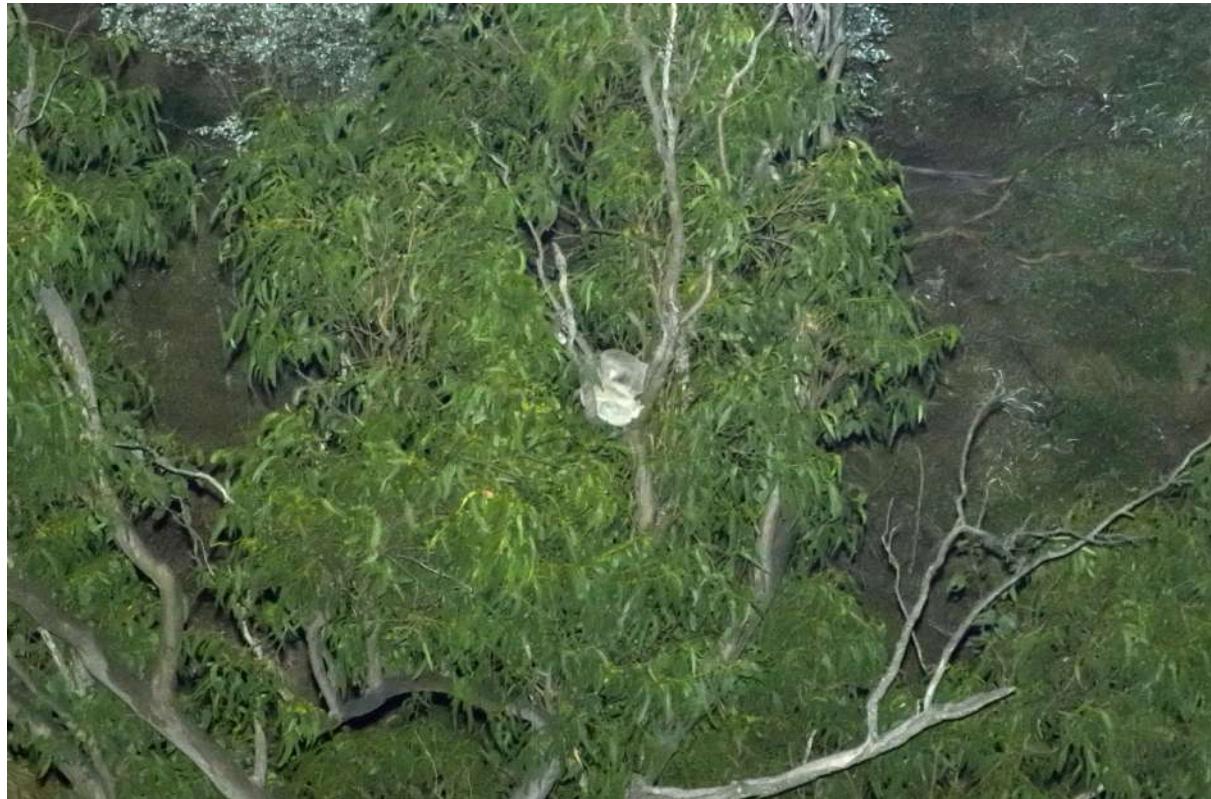
Koala 5



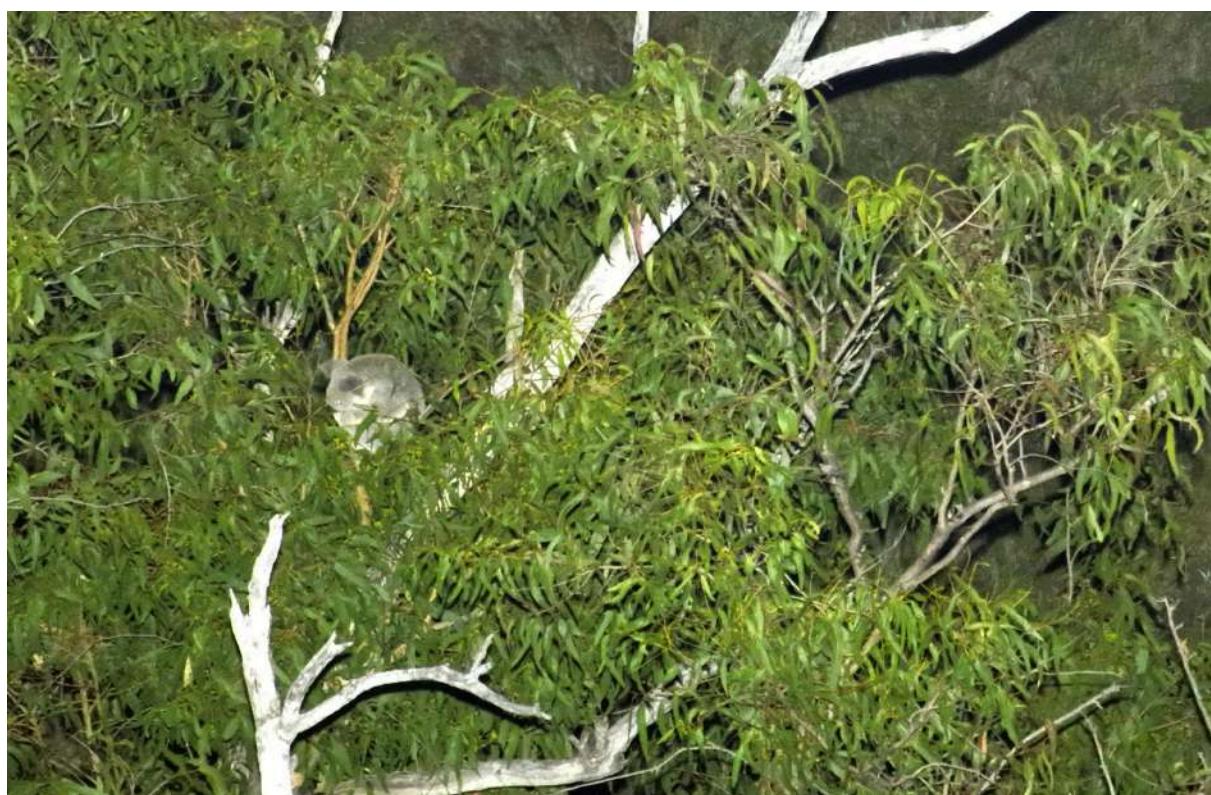
Koala 6



Koala 7



Koala 8



Koala 9



Koala 10



Koala 11



Koala 12



Koala 13

