

Forrest Road, City of Armadale Habitat Tree Assessment



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Report prepared by:

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Wildlife Photography ~ Research ~ Environmental Education

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Executive Summary

As part of road modification works to Forrest Road and Eighth Avenue, the City of Armadale (COA) is in the process of obtaining a permit to remove a number of *Eucalyptus* trees growing close to the verge along Forrest Road. In order to assess the habitat values these trees may provide to local fauna prior to removal, the City commissioned iNSiGHT Ornithology to conduct a tree-hollow assessment. This study had a particular focus on the suitability of tree-hollows for three Black Cockatoo species endemic to south-west Western Australia (WA), all of which are listed as Conservation Significant species under State and Federal legislation:

- Carnaby's Black Cockatoo (CBC; *Calyptorhynchus latirostris*)
- Baudin's Black Cockatoo (BBC; *Calyptorhynchus baudinii*)
- Forest Red-tailed Black Cockatoo (FRTBC; *Calyptorhynchus banksii naso*)

This habitat assessment was conducted on 29th February 2020, during the morning. Weather conditions were cool and partly cloudy with a light breeze, daily maximum 28°C. Eleven trees previously identified by Focused Vision (2020) as having tree-hollows potentially suitable for Black Cockatoos were assessed from the ground, with the characteristics of hollows in each tree inspected closely using a high resolution camera attached to telescopic pole. Notes were made on the height and approximate size of any hollows observed. Each tree was then given a rank according to the following scale (Focused Vision 2020).

Rank	Description of Tree and Hollows/Activity
0	Tree large (DBH +/- 500 mm), but not tall, may be with thinner or branching trunks, so does not contain and no potential for hollows.
1	Active nest observed; adult (or immature) bird seen entering or emerging from hollow.
2	Hollow of suitable size and angle (i.e. near-vertical) visible with chew marks around entrance.
3	Potentially suitable hollow visible but no chew marks present; or potentially suitable hollow present (as suggested by structure of tree, such as large, vertical trunk broken off at a height of > 10 m).
4	Tree with large hollows or broken branches that might contain large hollows, but hollows or potential hollows are not vertical or near-vertical; thus, a tree with or likely to have hollows of sufficient size but not to have hollows of the angle preferred by Black-Cockatoos.
5	Tree lacking large hollows or broken branches that might have large hollows; a tree with more or less intact branches and a spreading crown.
x	Where a hollow that is (otherwise) potentially suitable for Black-cockatoo nesting has been colonised by feral Honey Bees (<i>Apis mellifera</i>), and therefore rendered unusable, the nest-tree rank is preceded by 'x' (e.g. x2, x3, x4).

In order to provide broader coverage of the characteristics possessed by trees assessed along Forrest Road, one further category was added to the Focused Vision (2020) ranking system, as follows:

4a Tree with hollows or broken branches that might contain hollows, but hollows or potential hollows are either not currently large enough to be suitable for Black Cockatoos, and/or not vertical or near-vertical; thus, the tree may provide suitable Black Cockatoo nesting habitat in the future but not currently.

Finally, each tree was given a 'Likelihood of Use' category based on the chances of the trees being used as current Black Cockatoo nests. Although none of the three species have historically nested on the Swan Coastal Plain,

there has been a shift in the breeding distribution of both CBC and the FRTBC in the last decade, with both species now occasionally breeding there.

The results of the assessment are presented in Table 1 below:

Table 1. Characteristics of 11 habitat trees situated along Forrest Road. Tree No. refers to the Focused Vision (2020) identification number. Rank follows the Focused Vision (2020) numbering system in Table 2 supplied by COA, with addition category '4a' (see below). LoU = Likelihood of Use by Black Cockatoo species as current nest tree, with abbreviations as follows: P = possible, U = unlikely, N = not possible.

Tree No.	Easting	Northing	Species	Rank	LoU
2	405291	6441503	<i>Eucalyptus rudis</i>	4a	N
7	405281	6441506	<i>Eucalyptus rudis</i>	4a	P
14	405225	6441474	<i>Corymbia calophylla</i>	4a	U
26	405344	6441523	<i>Corymbia calophylla</i>	5	U
31	405237	6441482	<i>Corymbia calophylla</i>	4a	P
46	405519	6441528	<i>Eucalyptus camaldulensis</i>	5	U
47	405651	6441508	<i>Eucalyptus botryoides</i>	5	N
53	405292	6441522	<i>Corymbia calophylla</i>	5	N
54	405558	6441525	<i>Eucalyptus camaldulensis</i>	5	N
58	405347	6441528	<i>Eucalyptus rudis</i>	x4a	N
62	405327	6441525	<i>Corymbia calophylla</i>	5	N
	Notes				
2	Two small hollows: 1 @ ~6m, 1 @ ~8m. Single larger hollow @ 4m, D<200mm				
7	1 larger spout @ ~10m, 1 @ ~8m, but neither with D >200mm.				
14	Broken off spout at top not hollow. Single large canker near spout.				
26	Intact tree, no hollows present apart from very small dead limbs, no openings.				
31	Top pruned, 3 vertical spouts, 1 hollow but ~200mm D and Galahs present.				
46	Shallow depression in lowest large fork, not hollow.				
47	Pruned limb with Galah chewing at edge but no obvious hollow.				
53	Single large canker on trunk @ ~10m. No obvious hollows.				
54	Small knot hole but otherwise no visible hollows. Intact tree.				
58	Two small hollows with feral bees hive @ 3m double entrance. 2nd hive @ 8m.				
62	Large cankers near top but no obvious hollows. FRTBC foraging debris below.				

Only two of the eleven trees, Trees 7 and 31, contained hollows that were given a Likelihood of Use rating of 'possible'. This was because these hollows were approaching suitability for Black Cockatoo nests and may meet the requirements in the short-term. The larger hollows identified in Trees 2, 7 and 31 all had entrance diameters large enough for cockatoos to enter but their approximate internal dimensions (<200mm) and/or depth (<500mm) were too small to be suitable. The larger hollow in Tree 2 was also lower than most Black Cockatoo nests known from forest habitat in south-west WA.

Based on the habitat tree assessment, none of the trees assessed contained active Black Cockatoo nests, nor did their hollows provide nests currently suitable for these species.