City of Wanneroo
Black Cockatoo Habitat Tree Assessment
Flynn Drive, Neerabup (Stage 2)

Tree 3

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D1	May 2023	New Document	KG	JW	Released
V1	May 2023	Comments	KG	JW	Released

Contents

1.0 Introduction

Natural Area Consulting Management and Services (Natural Area) has been commissioned by the City of Wanneroo (the City) to undertake a Black Cockatoo habitat tree assessment of onepotential Black Cockatoo habitat tree to determine breeding suitability prior to scheduled road upgrading works. Natural Area conducted the inspection of Tree 3 on 20 December 2022.

1.1 Location

Tree 3 is located within the road reserve of Flynn Drive, just west of the intersection with Pinjar Road in the suburb of Neerabup within the City of Wanneroo (Figure 1).

1.2 Scope

The scope of works undertaken by Natural Area include:

- On ground inspection of the one *Eucalyptus marginata* (Jarrah) tree.
- Determination of the suitability of the tree as a habitat tree, using the Bamford scale (Bamford Consulting Ecologists, 2016) to determine Class rating.
- Inspect hollows to determine evidence of current or past breeding use by Black Cockatoos.

Figure 1:
Site Location
Neerabup, Western Australia

Client: City of Wanneroo
Date: May 2023
Created by: K.Grant
Image Source: Nearmap, 2023
Datum: GDA 94

2.0 Methodology

Natural Area ecologists attended site on the 20 December 2022 to conduct the Black Cockatoo habitat tree inspection. The Black Cockatoo habitat assessment was conducted in accordance with the revised *Referral guidelines for three WA threatened black cockatoo species* (Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2022).

All potential hollows were inspected for the following:

- size of entrance and angle of entry
- chewing around hollow entrances
- feedings signs or feeding debris (chewed nuts or *Banksia* cones)
- presence of droppings, feathers
- occupancy: hollows were inspected from the ground using a camera mounted on a telescopic pole.

2.1 Limitations

Potential survey limitations and their impacts are outlined Table 1 below.

Table 1: Survey limitations

Potential Limitation	Degree of Limitation	Comments
Availability of data and information	Not a limitation	Government data on the three Black Cockatoo species as well as published guidelines are available (DCCEEW, 2022). Ecoscape conducted a Black Cockatoo habitat tree assessment in 2020 within the Flynn Drive road reserve, including an assessment of Tree 3 (Ecoscape, 2020).
Competency/experience of the survey team, including experience in the bioregion survey	Not a limitation	Experienced and qualified ecologists have conducted Black Cockatoo habitat assessments across the Swan Coastal Plain, Wheatbelt and Jarrah Forest bioregions.
Scope of the survey	Not a limitation	All suitable Black Cockatoo breeding hollows were inspected.
Timing, weather, season	Not a limitation	Survey was conducted in summer and coincides with main breeding season within Swan Coastal Plain (July to December).
Disturbance that may have affected results, e.g., fire, flood	Not a limitation	No recent large-scale disturbance noted at the time of the survey.
The proportion of fauna identified, recorded or collected	Not a limitation	This is a targeted Black Cockatoo habitat survey.

Potential Limitation	Degree of Limitation	Comments
Adequacy of the survey intensity and proportion of survey achieved, e.g. the extent to which the area was surveyed	Not a limitation	All hollows were inspected.
Access problems	Not a limitation	Ecologists were able to traverse through site with no restriction.
Problems with data and analysis, including sampling biases	Not a limitation	Analysis and assessment of Black Cockatoo habitat was carried out in accordance to published guidelines.

Source: Environmental Protection Authority (EPA), 2022

3.0 Results

3.1 Tree 3

Species	*Eucalyptus marginata* (Jarrah)	
Location	-31.68600 (Lat)	115.77003 (Long)
Diameter at breast height (DBH)	610 mm	
Condition	Poor condition. Previously burnt.	
Bamford Class	3	

Hollow 1:

Unsuitable for cockatoo breeding as a large crack has developed along the length of the hollow, thus compromising structural integrity.

- Diameter of hollow: 50 by 50 mm
- Angle of hollow entry: Sloping Upright
- Chewing around hollow entrance: Absent
- Feeding signs/ feeding debris: No feeding debris was present (No chewed nuts or *Banksia* cones were present)
- Signs of hollow occupancy: No droppings, chew marks or feathers were present within the hollow.
- Camera evidence of occupancy: No evidence present.
  No direct observation of Black Cockatoos

Hollow 2:

- Diameter of hollow: 50 by 300 mm
- Angle of hollow entry: Side
- Chewing around hollow entrance: Absent
- Feeding signs/ feeding debris: No feeding debris was present (No chewed nuts or *Banksia* cones were present)
- Signs of hollow occupancy: No droppings, chew marks or feathers were present within the hollow.
- Camera evidence of occupancy: No evidence present.
- Unsuitable for Black Cockatoo breeding.

Hollow 3:

- Diameter of hollow: small hollow, 50 by 50 mm
- Angle of hollow entry: Sloping
- Chewing around hollow entrance: Absent
- Feeding signs/ feeding debris: No feeding debris was present (No chewed nuts or *Banksia* cones were present)
- Signs of hollow occupancy: No droppings, chew marks or feathers were present within the hollow.
- Camera evidence of occupancy: No evidence present.
- Unsuitable for Black Cockatoo breeding.

Additional Photos of Tree 3

4.0 Implications of Results

Hollows recorded on T3 are unlikely to support Black Cockatoo breeding and did not show any evidence of past usage. Two hollows exhibited insufficient entrance diameter while a third larger hollow was structurally compromised with large cracks noted along the sides of the hollow. All hollows were not occupied during the time of the inspection in December 2022.

5.0 References

Bamford Consulting Ecologists. (2016). *Black Cockatoo potential nest tree grading system,* as cited in Ecoscape. (2020). *Flynn Drive Basic Fauna Survey 2020.* Unpublished report for the City of Wanneroo

Department of Climate Change, Energy, the Environment and Water. (2022). *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black cockatoo.* Department of Agriculture, Water and the Environment. Canberra, February.

Environmental Protection Authority (EPA). (2020). *Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment*. Retrieved from https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf