

# Habitat Tree Assessment of Proposed Clearing Areas (CPS 8586/1)



## Pump Hill Road (SLK 0.94 to 1.87)

## Shire of Manjimup

April 2020

Version 1

***On behalf of:***

Shire of Manjimup  
C/- Strategen – JBS&G  
50 Subiaco Square Road  
SUBIACO WA 6008



SHIRE OF  
**MANJIMUP**

Manjimup • Northcliffe • Pemberton • Walpole

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## TABLE OF CONTENTS

### SUMMARY

1.	INTRODUCTION .....	2
2.	SCOPE OF WORKS.....	2
3.	METHODS .....	3
4.	SURVEY CONSTRAINTS .....	4
5.	RESULTS .....	5
6.	CONCLUSION .....	5
7.	REFERENCES .....	6

### TABLES

TABLE 1: Summary of Habitat Trees (DBH  $\geq$ 50cm) within the Permit Area

### FIGURES

FIGURE 1: Air Photo & Habitat Trees (DBH  $\geq$ 50cm)

### APPENDICES

APPENDIX A: Habitat Tree Details

## SUMMARY

This report details the results of a habitat tree assessment carried out over several sections of Pump Hill Road between SLK 0.94 to SLK 1.87, in the Shire of Manjimup (the Shire).

The Shire are seeking permission to clear up to 0.25577 hectares of native vegetation and 17 native trees along the road reserve by the Department of Water and Environmental Regulation (DWER).

An initial inspection of the area by DWER identified the presence of potential black cockatoo breeding habitat and as a consequence they have requested a black cockatoo habitat tree survey be undertaken (DWER 2020). The results of this survey are presented here.

An inspection of the permit area was carried out by Greg Harewood (Zoologist - 17 years' experience) on the 5 April 2020. The permit area was found to contain 13 "habitat trees" (i.e. DBH  $\geq$ 50cm). None of these trees were identified as containing hollows suitable for, or in use by black cockatoos.

Given that none of the trees within the permit area appear to contain hollows of a size suitable for black cockatoos or show any signs of use by black cockatoos it is the Authors opinion that their removal will have no direct impact on any of the three species of black cockatoo known to frequent the general area.

This report should be forwarded to DWER for their consideration.

## 1. INTRODUCTION

This report details the results of a habitat tree assessment carried out over several sections of Pump Hill Road between SLK 0.94 to SLK 1.87, in the Shire of Manjimup (the Shire).

The Shire are seeking permission to clear up to 0.25577 hectares of native vegetation and 17 native trees along the road reserve by the Department of Water and Environmental Regulation (DWER).

A preliminary assessment of the application and a site inspection by DWER has identified that suitable habitat for black cockatoos is likely to occur within the application area. DWER have subsequently requested that additional information relating to the presence and extent of fauna habitat within the permit area be obtained and forwarded for assessment. The black cockatoo habitat tree survey detailed in this report seeks to satisfy this requirement.

## 2. SCOPE OF WORKS

The scope of works is based on specifications provided in DWER's request for additional information (DWER 2020) as they relate to black cockatoos which states:

### Information Requirements

- A black cockatoo habitat tree assessment / survey is required for the area proposed to be cleared.

### Specifications

- The assessment/survey is to be carried out by a *fauna specialist* and the survey is required to identify all trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater that contain a hollow(s) that may be suitable for breeding Carnaby's cockatoo, Baudin's cockatoo, and forest red-tailed black cockatoo.
- The survey must document:
  - the date(s) of the survey;
  - the GPS locations (i.e. eastings and northings or decimal degrees) of all trees identified as containing hollows which may be suitable for black cockatoos;
  - the methodology for determining the evidence of use of each hollow and a description/photo of the evidence; and
  - a description/photo of the evidence of use.

- All surveys must be submitted in accordance with the EPA's Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA) and be accompanied by a completed Metadata and Licensing Statement.

NOTE: DWER considers “*fauna specialist*” to mean a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of two years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016 (WA)*.

### 3. METHODS

An inspection of the permit area was carried out by Greg Harewood (Zoologist - 17 years' experience) on the 5 April 2020. The assessment has involved the identification of all suitable trees species within the permit area that have a diameter at breast height (DBH) of equal to or over 50cm with special attention paid to those containing hollows or apparent hollows. The DBH of each tree was estimated using a pre-made 50 cm “caliper”.

Target tree species included marri and jarrah and any other *Corymbia/Eucalyptus* species of a suitable size that are present. Peppermints, banksia, sheoak and melaleuca tree species (for example) were not be assessed as they typically do not develop hollows that are used by black cockatoos.

The location of each tree identified fitting the required criteria (i.e. DBH  $\geq$ 50cm) were recorded with a GPS and details on tree species, number and size of hollows (if any) noted.

Possible hollows were placed into one of four categories, based on the size of the apparent hollow entrance, these being:

- Small =  $\sim$ <5cm diameter (i.e. entrance appears too small for a black cockatoo);
- Medium =  $\sim$ 5cm-10cm diameter (i.e. entrance appears too small for a black cockatoo);
- Large =  $\sim$ >10cm diameter (entrance appears large enough for a black cockatoo, but possible hollow appears to be unsuitable for nesting i.e. wrong orientation, too small, too low or too shallow); or
- Large (cockatoo) =  $\sim$ >10cm diameter (entrance appears big enough to provide access to a possible hollow that maybe suitable for a black cockatoo to use for nesting).

Based on this assessment trees present within the permit area have been placed into one of four categories:

- Tree < 50cm DBH or an unsuitable species (not assessed/recorded);

- Tree >50cm DBH, no hollows seen;
- Tree >50cm DBH, one or more potential hollows seen, none of which were considered suitable for black cockatoos to use for nesting; or
- Tree >50cm DBH, one or more potential hollows seen, with at least one considered possibly suitable for black cockatoos to use for nesting.

For the purposes of this assessment a tree containing a potential cockatoo nest hollow has been defined as:

*Generally, any tree which is alive or dead that contains one or more visible hollows (cavities within the trunk or branches) or possible hollows considered potentially suitable for occupation by a black cockatoo for the purpose of nesting/breeding. Hollows that had an entrance greater than about 10cm in diameter and would allow the entry of a black cockatoo into a suitably orientated and sized branch/trunk were recorded as a “potential black cockatoo nest hollow”.*

Identified hollows were examined using binoculars for evidence of actual use by black cockatoos (e.g. chewing around hollow entrance, scarring and scratch marks on trunks and branches).

Where the ground based assessment of possible large hollows was inconclusive a drone was available for use (if considered warranted and feasible) to examine and photograph potential hollows in more detail.

## **4. SURVEY CONSTRAINTS**

No seasonal sampling has been carried out as part of this fauna assessment. The conclusions presented are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. It should also be recognised that site conditions can change with time.

During the black cockatoo habitat survey trees with hollows were searched for. It should be noted that identifying hollows suitable for fauna species from ground level has limitations. Generally, the full characteristics of any hollow seen are not fully evident (e.g. internal dimensions). It is also difficult to locate all hollows within all trees as some are not observable from ground level, though to a certain extent some of these limitations can be overcome by using a drone or pole camera to examine possible hollows in more detail (where considered warranted and feasible).

## 5. RESULTS

The permit area was found to contain patches of open forest/woodland mostly comprised of karri (*Eucalyptus diversicolor*) with occasional marri (*Corymbia calophylla*) trees over peppermint (*Agonis flexuosa*), sheoak (*Allocasuarina* spp.) and *Banksia* spp..

A summary of the black cockatoo “habitat trees” observed within the permit area is provided in Table 1 below. The location of the trees recorded are shown in Figure 1.

**Table 1: Summary of Habitat Trees (DBH  $\geq$ 50cm) within the Permit Area**

Total Number of Habitat Trees (i.e. DBH $\geq$ 50cm)	Number of Habitat Trees <u>without hollows or apparent hollows</u>	Number of Habitat Trees <u>with possible hollows considered unsuitable for black cockatoos</u>	Number of Habitat Trees <u>with possible hollows considered potentially suitable for black cockatoos</u>
13	10	3	0

The vast majority of the trees with the permit application area appear to be relatively young and as a consequence do not contain hollows of any size.

The permit area was found to contain 13 “habitat trees” (i.e. DBH  $\geq$ 50cm). None of these trees were identified as containing hollows suitable for, or in use by black cockatoos.

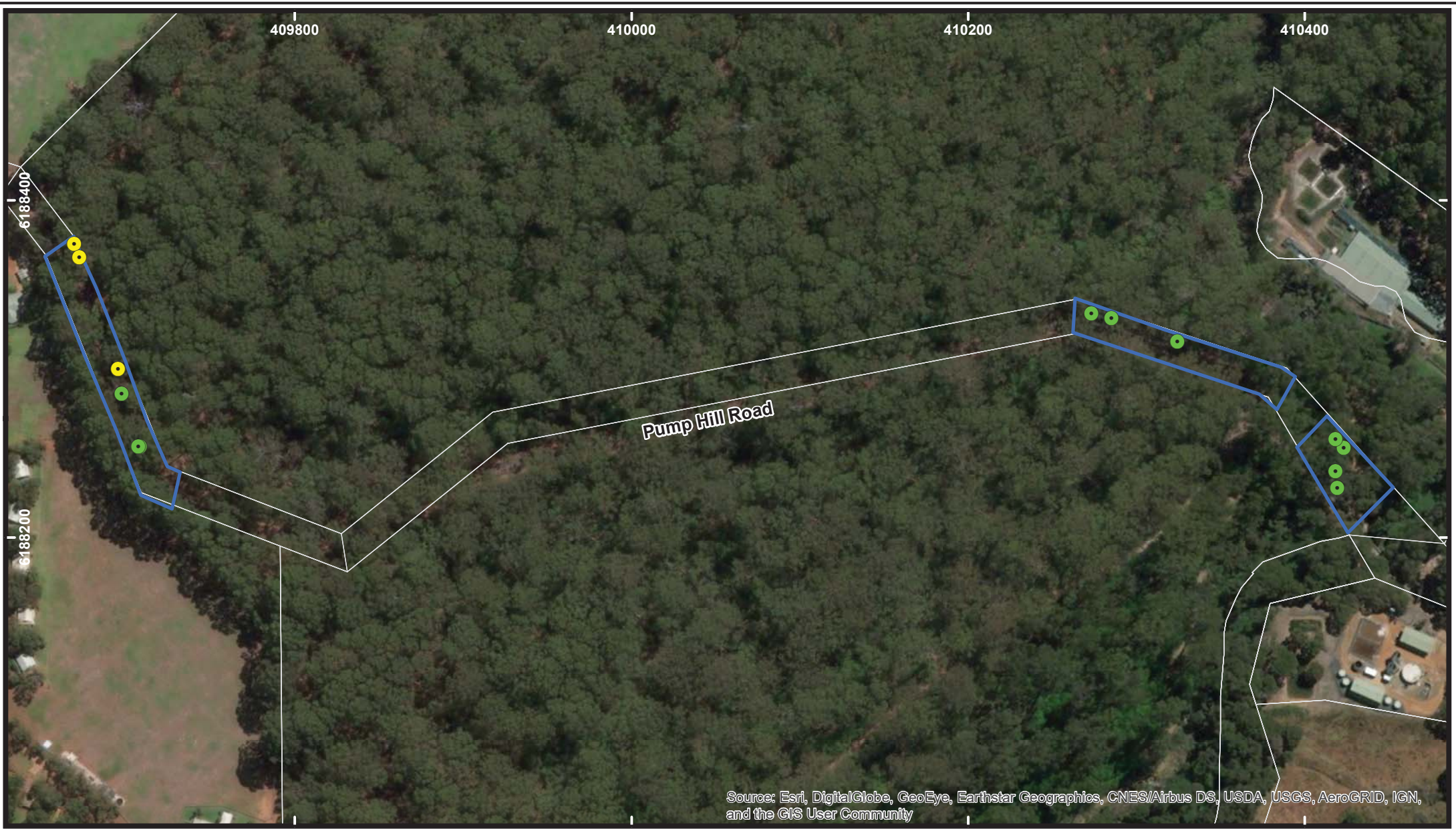
Additional details of each tree/shrub can be found in Appendix A.

## 6. CONCLUSION

The assessment reported on here was primarily undertaken to identify trees within the Permit area that contain hollows suitable for use by black cockatoos for nesting purposes.

No trees were recorded as having hollows suitable for black cockatoos and clearing can therefore be carried out without compromising conditions of the Permit relating to this matter.

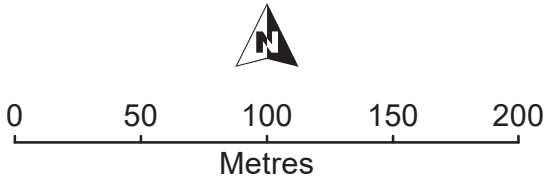
In accordance with condition 8(c) this report should be forwarded to DWER for their review and comment prior to clearing commencing.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

- Permit Area (8586/1)
- Habitat Tree - no hollows observed
- Habitat Tree - One or more hollows.
- None appear suitable for Black Cockatoos



Drawn: G. Harewood  
 Date: April 2020  
 Scale: 1:3,000  
 Projection/Coordinate System: UTM/MGA Zone 50

**CPS 8586/1**  
**Pump Hill Road**  
**Shire of Manjimup**  
**Habitat Trees**  
**(DBH >50cm)**

Figure: 1

## **7. REFERENCES**

Department of Water and Environmental Regulation (DWER 2020). Application to Clear Native Vegetation under the Environmental Protection Act 1986 – Request for information (CPS 8502/1, CPS 8578/1, CPS 8579/1, CPS 8580/1 and CPS 8586/1). 3 February 2020

# **APPENDIX A**

## **HABITAT TREE DETAILS**

Habitat Trees DBH >50cm

Datum - GDA94

Entrance Size Ranges - Small = >5cm, Medium = 5, 10cm, Large = >10cm

Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow	Comments
wpt001	50H	410419	6188229	Karri	20	<50	0					
wpt002	50H	410418	6188239	Karri	20	<50	0					
wpt003	50H	410423	6188253	Karri	20	<50	0					
wpt004	50H	410418	6188258	Karri	20	<50	0					
wpt005	50H	410324	6188316	Marri	15-20	<50	0					
wpt006	50H	410285	6188330	Karri	20	<50	0					
wpt007	50H	410273	6188333	Karri	20	<50	0					
wpt008	50H	409669	6188374	Karri	20	<50	2+	Small	No Signs	No Signs	No	Possible small hollows in upper dead branches
wpt009	50H	409672	6188366	Karri	20	<50	2+	Small	No Signs	No Signs	No	Possible small hollows in upper dead branches
wpt010	50H	409695	6188300	Karri	20	<50	2+	Small	No Signs	No Signs	No	Possible small hollows in upper dead branches
wpt011	50H	409697	6188285	Karri	20	<50	0					
wpt012	50H	409708	6188254	Karri	20	<50	0					
wpt013	50H	409707	6188254	Karri	20	<50	0					

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The conclusions are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of preparing the report. Also it should be recognised that site conditions, can change with time.

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