

Habitat Tree Assessment of Proposed Clearing Areas (CPS 8926/1)



Wingebellup Road and Kojonup-Frankland Road Shire of Cranbrook

August 2020

Version 1

On behalf of:

Shire of Cranbrook
PO Box 21
CRANBROOK WA 6321

Prepared by:

Greg Harewood
Zoologist
PO Box 755
BUNBURY WA 6231
M: 0402 141 197
E: gharewood@iinet.net.au



TABLE OF CONTENTS

SUMMARY

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

TABLES

TABLE 1:	Summary of Habitat Trees (based on DBH) within the Permit Area
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FIGURES

FIGURE 1:	Habitat Trees (CPS 8926/1a)
FIGURE 2:	Habitat Trees (CPS 8926/1b)
FIGURE 3:	Habitat Trees (CPS 8926/1c)
FIGURE 4:	Habitat Trees (CPS 8926/1d)

APPENDICES

APPENDIX A:	Habitat Tree Details
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SUMMARY

This report details the results of a habitat tree assessment carried out over several sections of the Frankland-Kojonup Road and Wingebellup Road, in the Shire of Cranbrook (the Shire)..

The Shire is seeking permission to clear up to 0.583 hectares of native vegetation along the road reserves from the Department of Water and Environmental Regulation (DWER) and have made application for a clearing permit (Ref: CPS 8926/1).

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 20 August 2020. The permit area was found to contain 24 "habitat trees" (i.e. DBH \geq 50cm/ \geq 30cm for wandoo).

None of these trees were identified as containing hollows suitable for, or in use by black cockatoos. In addition, no black cockatoo foraging or roosting activity was observed

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 the Frankland-Kojonup Road and Wingebellup Road, in the Shire of Cranbrook (the Shire).

The Shire is seeking permission to clear up to 0.583 hectares of native vegetation along the road reserves from the Department of Water and Environmental Regulation (DWER) and have made application for a clearing permit (Ref: CPS 8926/1).

A preliminary assessment of the application and a site inspection by DWER identified the potential for habitat suitable for black cockatoos to be present within the application area. DWER have subsequently requested that additional information relating to the presence and extent of black cockatoo habitat within the permit area be obtained and forwarded for assessment (DWER 2020). 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 by Carnaby's cockatoo, Baudin's cockatoo, and/or 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 of use.

- Any evidence of foraging or roosting by Carnaby's cockatoo, Baudin's cockatoo, and/or forest red-tailed black cockatoo observed during the survey should also be documented.
- 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 submitted via DWER's [IBSA Submissions Portal](#). The proponent is also required to provide the corresponding IBSA Submissions Reference Number to the assessing officer, using the contact details provided (DWER 2020).

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 20 August 2020. The assessment has involved the identification of all suitable trees species within the four separate permit areas (as depicted on Plan CPS 8926/1a, 1b, 1c and 1d) that had a diameter at breast height (DBH) of equal to or over 50cm with special attention paid to those containing hollows or apparent hollows (Note: a DBH of ≥ 30 cm was used for "wandoo" tree species (i.e. *Eucalyptus wandoo* and *E. loxophleba*)). The DBH of each tree was estimated using a pre-made "caliper". A DBH tape was used where doubt existed as to the actual DBH of a tree.

Target tree species included marri, jarrah, wandoo, flooded gum and any other *Corymbia/Eucalyptus* species of a suitable size that were present. Peppermints, banksia, sheoak and melaleuca tree species (for example) were not 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 ≥ 50 cm or ≥ 30 cm for wandoo) 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 = $\sim < 5$ cm diameter (i.e. entrance appears too small for a black cockatoo);
- Medium = ~ 5 cm-10cm diameter (i.e. entrance appears too small for a black cockatoo);

- Large = $\sim > 10$ cm 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) = $\sim > 10$ cm 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 < 50 cm DBH or an unsuitable species (not assessed/recorded) (< 30 cm for wandoo);
- Tree ≥ 50 cm DBH, no hollows seen (≥ 30 cm for wandoo);
- Tree ≥ 50 cm DBH, one or more potential hollows seen, none of which were considered suitable for black cockatoos to use for nesting (≥ 30 cm for wandoo); or
- Tree ≥ 50 cm DBH, one or more potential hollows seen, with at least one considered possibly suitable for black cockatoos to use for nesting (≥ 30 cm for wandoo).

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 and pole mounted camera were 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 four separate permit areas were found to contain patches of open woodland mostly comprised various combinations of planted non-endemic eucalypts (unidentified eastern states species), flooded gum (*Eucalyptus rudis*) and wandoo (*Eucalyptus wandoo*/*E. loxophleba*) over bare ground, open grassland and/or open shrubland.

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 Figures 1 to 4.

Table 1: Summary of Habitat Trees (based on DBH) within the Permit Area

Total Number of Habitat Trees	Number of Habitat Trees <u>without hollows</u> or apparent hollows	Number of Habitat Trees with <u>possible hollows</u> considered <u>unsuitable</u> for black cockatoos	Number of Habitat Trees with <u>possible hollows</u> considered <u>potentially suitable</u> for black cockatoos
24	24	0	0

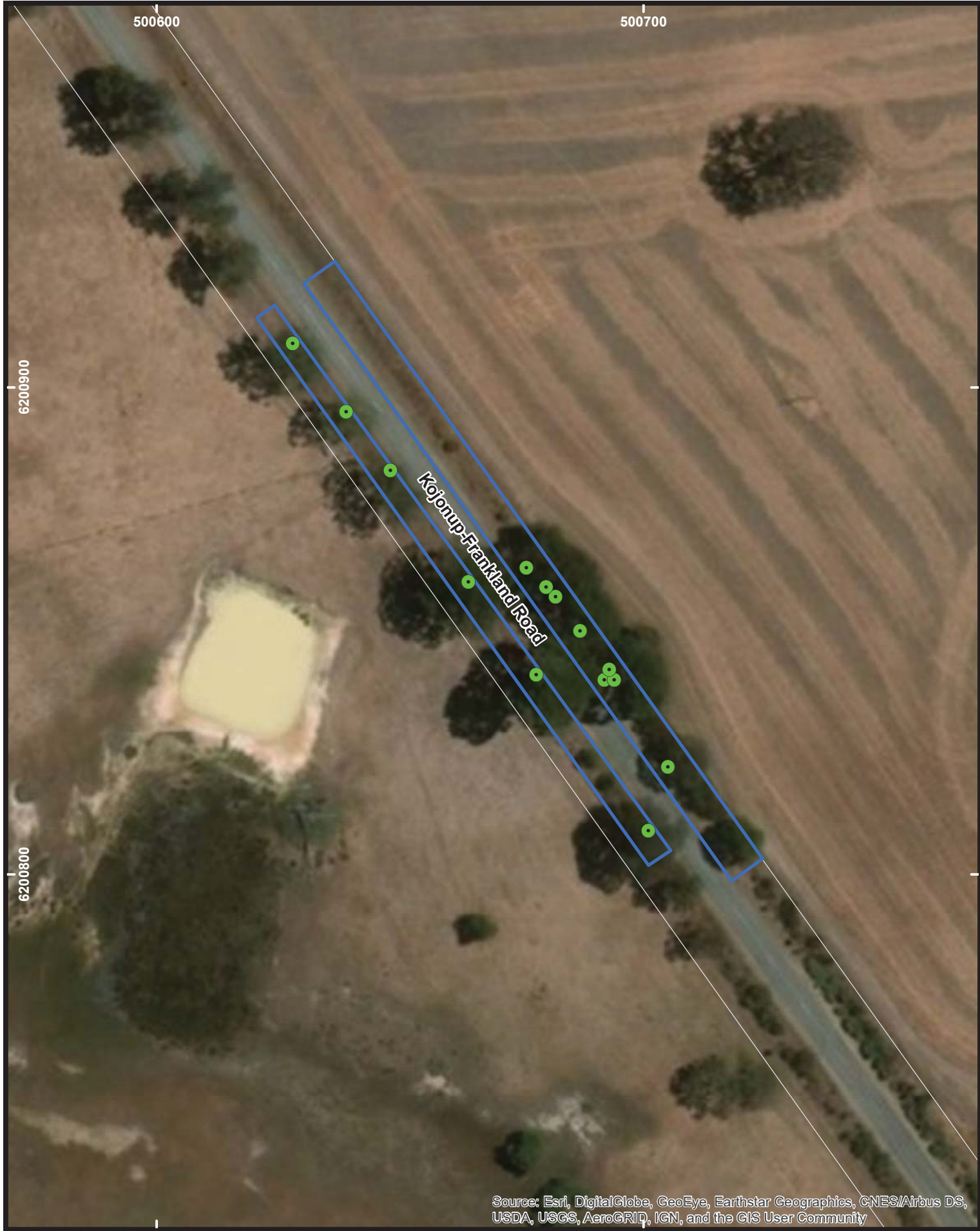
The vast majority of the trees with the permit application area appear to be relatively young and as a consequence do not contain hollows of any size.

The permit area was found to contain 24 “habitat trees” (i.e. DBH \geq 50cm or \geq 30cm for wandoo).



None of these trees were identified as containing hollows suitable for, or in use by black cockatoos.

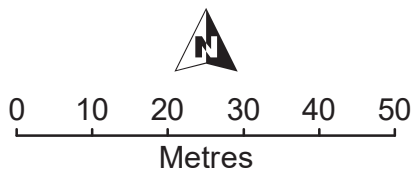
No evidence of black cockatoos foraging or roosting within the permit area was observed.

Additional details of each of the identified habitat trees can be found in Appendix A.



Legend

-  Permit Area (8923/1a)
-  Habitat Tree - No hollows observed



Drawn: G. Harewood
 Date: August 2020
 Scale: 1:1,000



CPS 8926/1
 Wingebellup and
 Kojonup-Frankland Roads
 Shire of Cranbrook

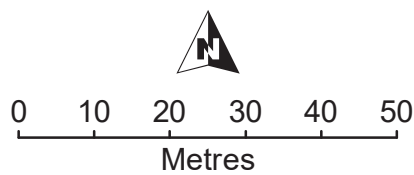
**Habitat Trees
 (CPS 8926/1a)**



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

Legend

-  Permit Area (8923/1b)
-  Habitat Tree - No hollows observed




FaunaSurvey
 Drawn: G. Harewood
 Date: August 2020
 Scale: 1:1,000



CPS 8926/1
 Wingebellup and
 Kojonup-Frankland Roads
 Shire of Cranbrook

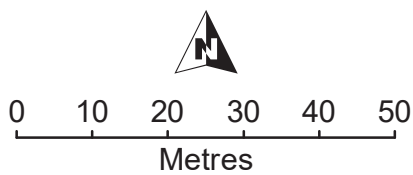
**Habitat Trees
 (CPS 8926/1b)**

Projection/Coordinate System: UTM/MGA Zone 50 **Figure: 2**



Legend

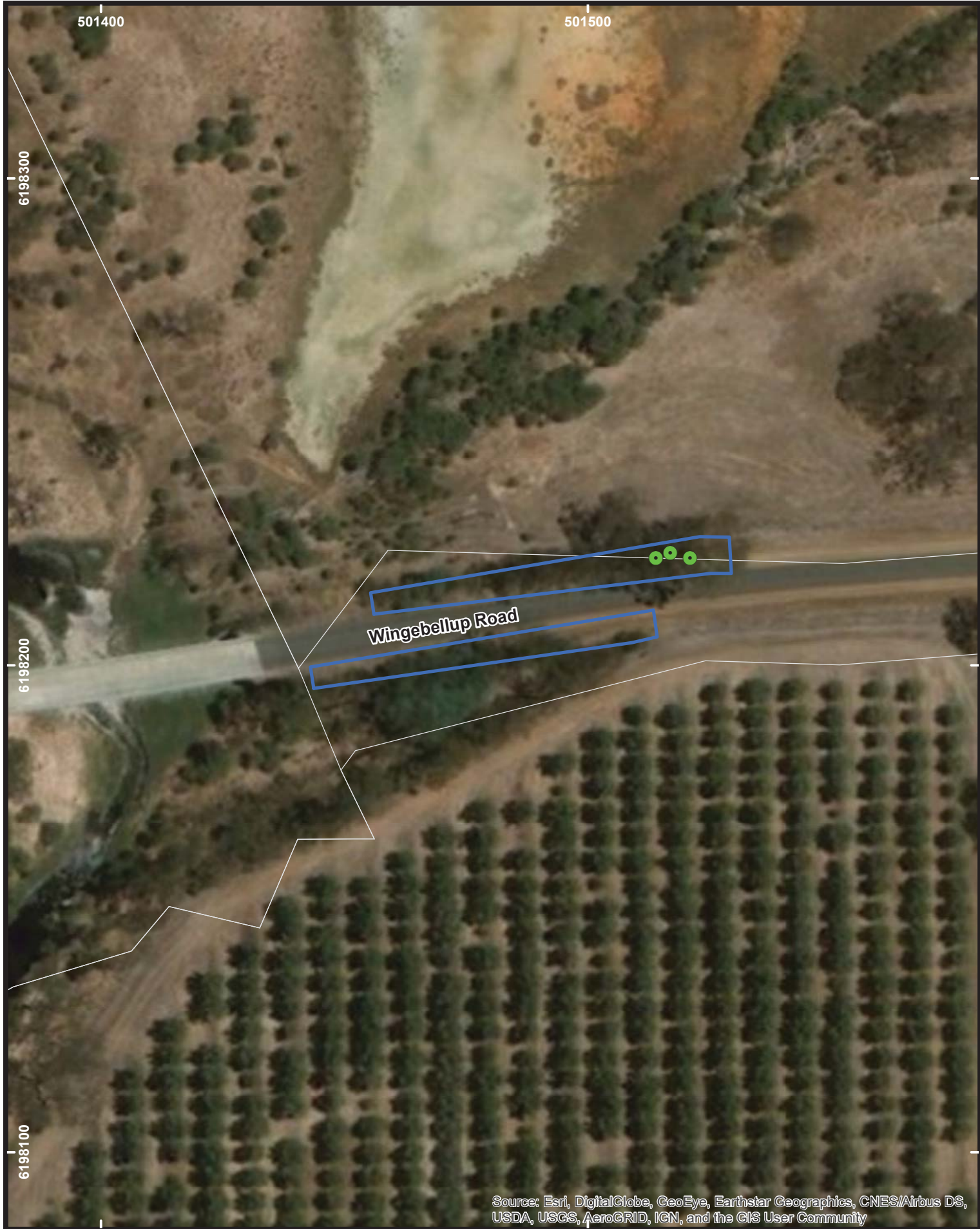
-  Permit Area (8923/1c)
-  Habitat Tree - No hollows observed



Drawn: G. Harewood
 Date: August 2020
 Scale: 1:1,000



CPS 8926/1
 Wingebellup and
 Kojonup-Frankland Roads
 Shire of Cranbrook

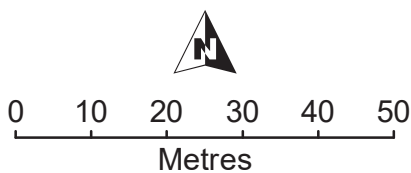
Habitat Trees (CPS 8926/1c)



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

Legend

-  Permit Area (8923/1d)
-  Habitat Tree - No hollows observed



Drawn: G. Harewood
Date: August 2020
Scale: 1:1,000

CPS 8926/1
Wingebellup and
Kojonup-Frankland Roads
Shire of Cranbrook

Habitat Trees (CPS 8926/1d)

Projection/Coordinate System: UTM/MGA Zone 50

Figure: 4

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.

This report should be forwarded to DWER for their review and comment prior to clearing commencing.

7. REFERENCES

Department of Water and Environmental Regulation (DWER 2020). Application to Clear Native Vegetation under the *Environmental Protection Act 1986* – Request for Further Information (CPS 8926/1). 7 August 2020

APPENDIX A

HABITAT TREE DETAILS

Habitat Trees**DBH >50cm (>30cm for wandoo)****Datum - GDA94**

Waypoint Number	Zone	mE	mN	Plan	Tree Species	DBH (cm)	Tree Height (m)	Number of Hollows	Comments
wpt001	50H	500628	6200909	CPS 8926/1a	Unknown Euc	>50	10-15	0	Historic planting
wpt002	50H	500639	6200895	CPS 8926/1a	Unknown Euc	>50	10-15	0	Historic planting
wpt003	50H	500648	6200883	CPS 8926/1a	Unknown Euc	>50	10-15	0	Historic planting
wpt004	50H	500664	6200860	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt005	50H	500678	6200841	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt006	50H	500701	6200809	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt007	50H	500705	6200822	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt008	50H	500692	6200840	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt009	50H	500694	6200840	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt010	50H	500693	6200842	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt011	50H	500687	6200850	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt012	50H	500682	6200857	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt013	50H	500680	6200859	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt014	50H	500676	6200863	CPS 8926/1a	Unknown Euc	>50	15-20	0	Historic planting
wpt015	50H	500868	6200501	CPS 8926/1b	Flooded Gum	>50	10-15	0	
wpt016	50H	500785	6200012	CPS 8926/1c	Flooded Gum	>50	15-20	0	
wpt017	50H	500781	6200034	CPS 8926/1c	Wandoo	>30	10-15	0	
wpt018	50H	500777	6200049	CPS 8926/1c	Wandoo	>30	10-15	0	
wpt019	50H	500776	6200055	CPS 8926/1c	Wandoo	>30	10-15	0	
wpt020	50H	500773	6200059	CPS 8926/1c	Wandoo	>30	10-15	0	
wpt021	50H	500772	6200080	CPS 8926/1d	Flooded Gum	>50	15-20	0	
wpt022	50H	501521	6198222	CPS 8926/1d	Flooded Gum	>50	15-20	0	
wpt023	50H	501517	6198223	CPS 8926/1d	Flooded Gum	>50	15-20	0	
wpt024	50H	501514	6198222	CPS 8926/1d	Flooded Gum	>50	15-20	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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