

Black Cockatoo Habitat Assessment



CPS 9399/1

Lot 2760 and Lot 1002

Forest Grove

December 2022

Version 1

On behalf of:

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SUMMARY

This report details the results of a black cockatoo habitat assessment carried out over sections of Lot 2760 and Lot 1002, Forest Grove (Figure 1).

The Landowners have applied for a permit to clear vegetation (~25 trees) from within various sections of the two lots (CPS 9399/1) (the survey areas). Upon review the Department of Water and Environmental Regulation (DWER) have advised the Landowners that in order to determine the impacts a black cockatoo habitat survey is required of the proposed clearing areas. This report details the results of an assessment carried out to satisfy this request.

The fauna assessment was carried out on 6 December 2022 by Greg Harewood (Zoologist).

Key Findings

- The proposed clearing areas contain parkland cleared marri trees in a paddock setting. Twenty six trees were identified as having a DBH >50cm which fits DWER's criteria for potential black cockatoo breeding habitat. Twenty four of the habitat trees did not appear to contain hollows of any size. One tree contains a potential small spout type hollow assessed as being too small for black cockatoos.
- Another tree was found to contain a large upwards facing chimney type hollow in its main trunk. Upon closer inspection with a drone this hollow was found to be very shallow (base visible) and broad. Because of these characteristics the hollow has been assessed as being unsuitable for black cockatoos to use for nesting purposes as it would be too exposed to prevailing weather conditions and potential predators.
- Apart from some small dead trees, all of the trees present within the proposed clearing areas represents potential foraging habitat for black cockatoos given the dominance of marri. Foraging evidence attributed to Baudin's black cockatoo was found at one location in the form of chewed marri fruits.

This report should be forwarded to DWER for their consideration.

1. INTRODUCTION

This report details the results of a black cockatoo habitat assessment carried out over sections of Lot 2760 and Lot 1002, Forest Grove (Figure 1).

The Landowners have applied for a permit to clear vegetation (~25 trees) from within various sections of the two lots (CPS 9399/1) (the survey areas). Upon review the Department of Water and Environmental Regulation (DWER) have advised the Landowners that in order to determine the impacts a black cockatoo habitat survey is required of the proposed clearing areas.

This report details the results of an assessment carried out to satisfy this request.

2. SCOPE OF WORKS

The scope of works was to carry out a black cockatoo habitat assessment to the following specifications:

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

The black cockatoo habitat survey/assessment 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 by Carnaby's cockatoo, Baudin's cockatoo, and/or forest red-tailed black cockatoo observed during the survey should also be documented.

3. METHODS

An inspection of the various proposed clearing areas was carried out by Greg Harewood (Zoologist - 20 years' experience) on the 6 December 2022. To fulfil the requested scope of works the following methods were employed.

The black cockatoo breeding habitat assessment involved a series of transects across the survey area while searching for trees which fitted DWER's required criteria for a "habitat tree" (i.e. diameter at breast height (DBH at 130cm from ground level) of 50cm or more).

Details on each tree were recorded including species, location, number and the type of hollows observed. Photographs of each tree's canopy were also taken.

Potential hollows were initially placed into one of three categories based on the type of hollow entry:

- Chimney: the hollow entry faces directly upwards in the end of the trunk;
- Spout: hollow entry which is at the end of a broken branch; or
- Side: the entry is directly into the side of the trunk or a branch with no protrusions.

For the purpose of this review, hollows have then been placed into one of five categories based on the observable characteristics of each hollow. The categories used were:

- Confirmed Hollow: Black cockatoos observed utilising the hollow for breeding purposes;
- Chewed Hollow: The hollow shows signs of chewing ("chipping" around or near entrance and/or internally) attributed to black cockatoo activity (in most cases indicating nesting activity, but in some cases possibly marks left by black cockatoos investigating ("prospecting") hollows);
- Unused Hollow: The hollow appears to be of a suitable size for black cockatoos to use for nesting, but no conclusive evidence of this activity seen. It should be noted that chew marks/chipping are not always evident or present on some hollows that have been used for nesting. Hollows classified as "unused" may therefore have been used for nesting but cannot be specifically classified as such. Alternatively, some "unused" hollows may not be suitable for black cockatoos as a range of characteristics, not all of which can be seen or measured, ultimately determined if a hollow will ever actually be used;
- Unsuitable Hollow: The hollow has been assessed, based on information obtained, as being unlikely to be suitable for black cockatoos (generally because of the entrance appearing to be too small or because the actual hollow or accommodating branch/tree trunk appears to be too small/shallow or as having an unfavourable orientation);

- No Hollow: A possible hollow was found upon closer inspection to not be present.

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 considered warranted and if possible, any potential nest hollows were also inspected and photographed with a drone.

Any black cockatoo foraging evidence observed was also documented.

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

Twenty six habitat trees (trees with a DBH >50cm) were identified within the various proposed clearing areas (Figure 2). Almost all of the trees did not appear to contain hollows of any size

One tree contains a potential small spout type hollow (too small for black cockatoos) while another (wpt010) was found to contain a large upwards facing chimney type hollow in its main trunk. This hollow was examined and photographed with a drone. Examination of the photographs showed the hollow to be very shallow (base visible) and broad. Because of these characteristics the hollow has been assessed as being unsuitable for black cockatoos to use for nesting purposes as it would be too exposed to prevailing weather conditions and potential predators. Example images of this tree are held in Appendix A along with additional details on the other habitat trees identified.

Details of each habitat tree can be found in Appendix A.

Apart from some small dead trees, all of the trees present within the proposed clearing areas represents potential foraging habitat for black cockatoos given the dominance of marri. Foraging evidence attributed to Baudin's black cockatoo was found at one location in the form of chewed marri fruits.

6. CONCLUSION

The assessment reported on here was primarily undertaken to determine the presence/absence of suitable black cockatoo breeding trees within the survey area.

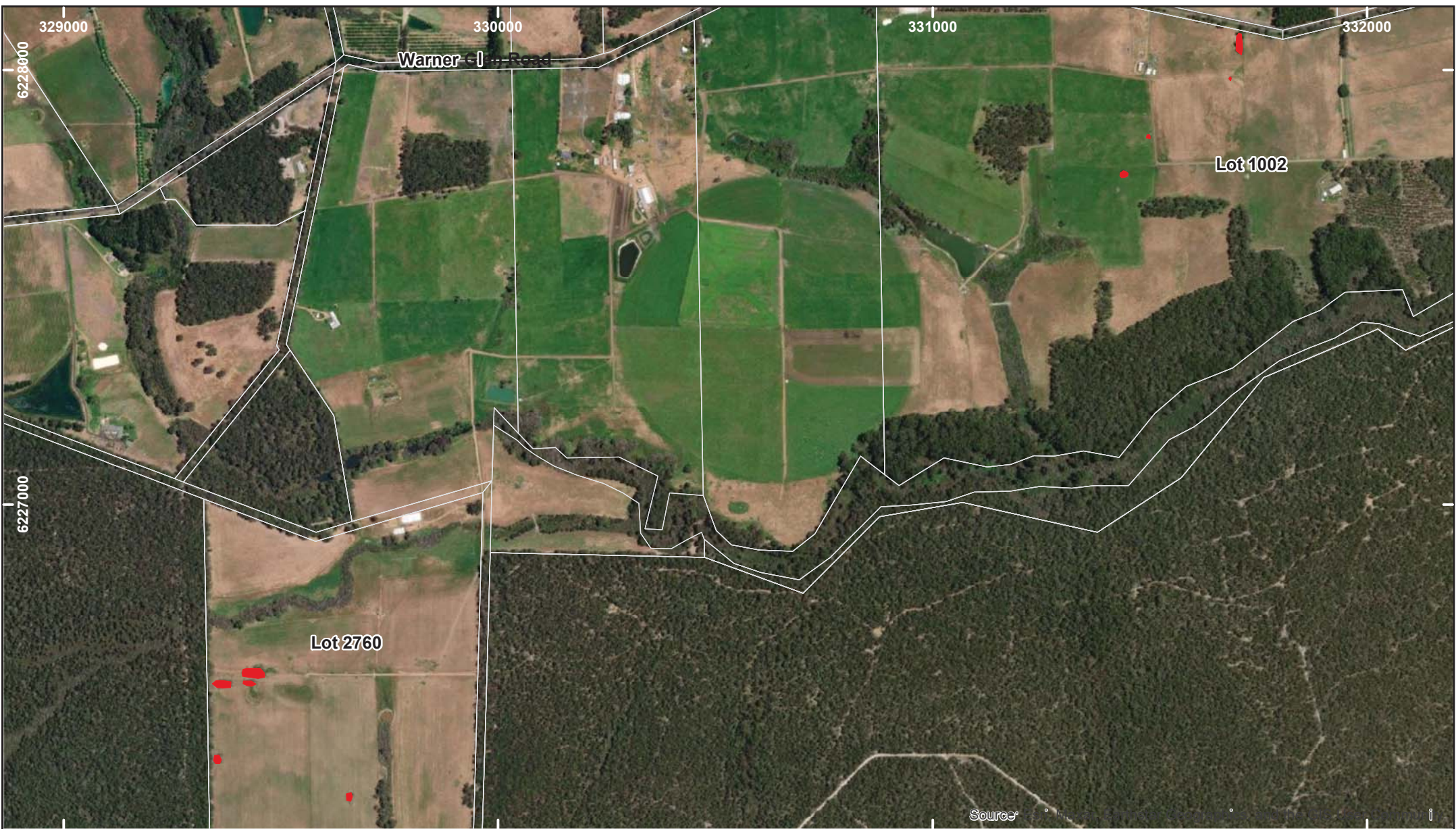
The proposed clearing areas contain parkland cleared marri trees in a paddock setting. Twenty six trees were identified as having a DBH >50cm. Twenty four of the habitat trees did not appear to contain hollows of any size. One tree contains a potential small spout type hollow assessed as being too small for black cockatoos.

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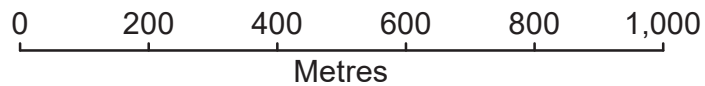
This report should be forwarded to DWER for their consideration.

FIGURES



Legend

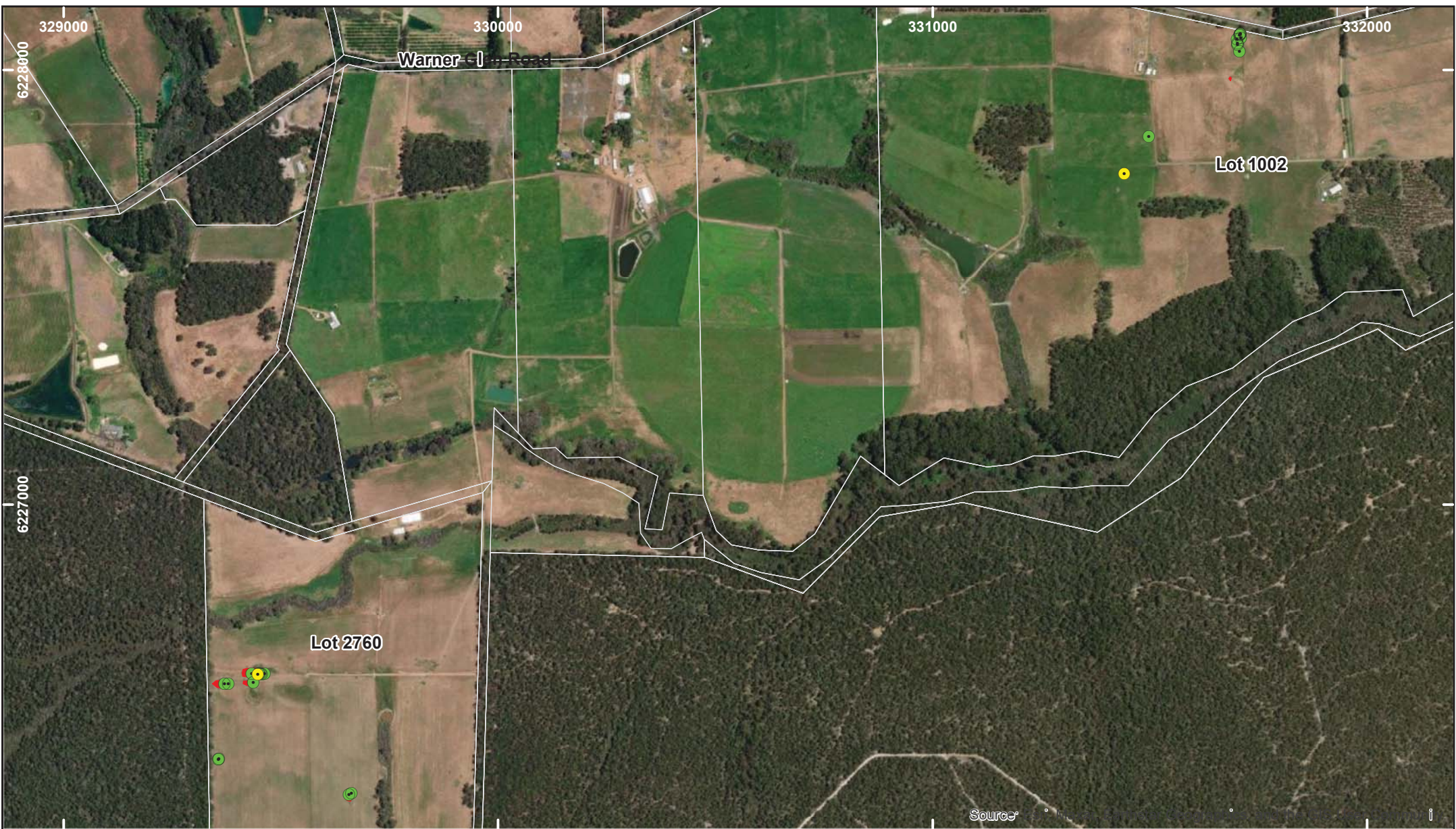
 Survey Areas (CPS 9399/1)



Drawn: G Harewood
Date: 11-Dec-22
Scale: 1:11,750

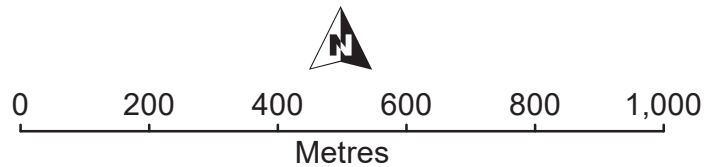
CPS 9399/1
Lot 2760 & Lot 1002 - Warner Glen Rd
Forest Grove

**Survey Areas
Aerial Photograph**



Legend

- Survey Areas (CPS 9399/1)
- Habitat Tree - No visible hollows
- Habitat Tree - One or more visible hollows
- None suitable for black cockatoos



Drawn: G Harewood
Date: 11-Dec-22
Scale: 1:11,750

CPS 9399/1
Lot 2760 & Lot 1002 - Warner Glen Rd
Forest Grove

Habitat Trees (DBH >50cm)

APPENDIX A

Habitat Tree Details

Habitat Trees

DBH >50cm

Datum - GDA94

Entrance Size Ranges - Small = >5cm, Medium = 5 to 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	331707	6228043	Marri	20+	>50	0					
wpt002	50H	331702	6228058	Marri	20+	>50	0					
wpt003	50H	331702	6228061	Marri	0-5	>50	0					
wpt004	50H	331701	6228070	Marri	10-15	>50	0					
wpt005	50H	331710	6228074	Marri	10-15	>50	0					
wpt006	50H	331707	6228080	Marri	20+	>50	0					
wpt007	50H	331708	6228081	Marri	15-20	>50	0					
wpt008	50H	331709	6228082	Marri	20+	>50	0					
wpt009	50H	331709	6228083	Marri	10-15	>50	0					
wpt010	50H	331441	6227761	Marri	15-20	>50	1	Large	No signs	No signs	No	Chimney type hollow -Examined with drone - too shallow/open/exposed
wpt011	50H	331498	6227847	Marri	10-15	>50	0					
wpt015	50H	329463	6226611	Marri	0-5	>50	0					
wpt016	50H	329456	6226610	Marri	15-20	>50	0					
wpt017	50H	329454	6226611	Marri	20+	>50	0					
wpt018	50H	329451	6226611	Marri	20+	>50	0					
wpt019	50H	329450	6226611	Marri	20+	>50	0					
wpt020	50H	329447	6226609	Marri	20+	>50	1	Small	No signs	No signs	No	
wpt021	50H	329433	6226611	Marri	20+	>50	0					
wpt022	50H	329437	6226591	Marri	15-20	>50	0					
wpt023	50H	329379	6226587	Marri	15-20	>50	0					
wpt024	50H	329370	6226587	Marri	15-20	>50	0					
wpt025	50H	329356	6226414	Marri	10-15	>50	0					
wpt026	50H	329357	6226415	Marri	0-5	>50	0					
wpt027	50H	329657	6226334	Marri	0-5	>50	0					Main trunk broken
wpt028	50H	329663	6226337	Marri	10-15	>50	0					

ID	Coordinates (MGA 94/Z50)	331441mE	6227761 mN	Tree Species	Marri	Survey Date	14/09/2022
10	Comments	Marri with a large chimney style hollow. When examined with drone the hollow was found to be very broad and shallow (base visible – see photo below). In the Authors opinion the hollow would be unsuitable for black cockatoos to use for nesting purposes because it is too shallow and exposed. No signs of use by any fauna.				Classification	Unsuitable Hollow.

📍 243°SW (M) 📍 50S 331462 6227772 ±12 m



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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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