

Black Cockatoo Habitat Tree Assessment CPS 9167/1



Pile Road Ferguson

July 2021

Version 1

On behalf of:

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SUMMARY

The Shire of Dardanup (the Shire) are seeking permission to selectively clear up to 6.93 hectares of native vegetation from within the Pike Road Reserve between SLK 4.54 – 16.94 from the Department of Water and Environmental Regulation (DWER) (ref: CPS 9167/1).

Natural Area Consulting Management Services (Natural Area) were commissioned by the Shire to undertake a detailed flora and vegetation survey and a basic fauna assessment of the road reserve in September 2020 with information being provided to DWER.

During a detailed flora and vegetation survey and a basic fauna assessment of the road reserve in September 2020 Natural Area Consulting Management Services (Natural Area) identified five trees within the survey area as containing what they considered to be “hollows of a size that could be used by endangered black cockatoos, with no evidence of use by these species apparent” (Natural Area 2020). Apart from a map showing their location, no other information relating to the trees or the hollows they contained was provided in the report.

Upon review of the information DWER have advised the Shire that in order to assist in determining the impacts to black cockatoos a more detailed habitat tree assessment of the five previously identified hollow bearing trees was required. This report details the results of an assessment carried out to satisfy this request.

Primary Findings

None of the previously identified “hollow bearing” trees were found to contain hollows that were considered by the Author to be suitable for black cockatoos to use for nesting purposes. This conclusion was in most cases based on the hollows actually being non-existent or being too small/shallow/open.

Details of each tree and the hollows they contain can be found in Appendix A.

Based on these observations the trees in question can, if required, be removed without impacting on breeding black cockatoos that may be frequenting the general area.

This report should be forwarded to DWER for their review.

1. INTRODUCTION

This report details the results of a black cockatoo habitat tree assessment carried out over sections of Pile Road, Ferguson.

The Shire of Dardanup (the Shire) are seeking permission to selectively clear up to 6.93 hectares of native vegetation from within the Pike Road Reserve between SLK 4.54 – 16.94 from the Department of Water and Environmental Regulation (DWER) (ref: CPS 9167/1).

Natural Area Consulting Management Services (Natural Area) were commissioned by the Shire to undertake a detailed flora and vegetation survey and a basic fauna assessment of the road reserve in September 2020 with information being provided to DWER.

During their assessment Natural Area identified five trees within the survey area as containing what they considered to be “hollows of a size that could be used by endangered black cockatoos, with no evidence of use by these species apparent” (Natural Area 2020). Apart from a map showing their location, no other information relating to the trees or the hollows they contained was provided in the report.

Upon review of the information DWER have advised the Shire that in order to assist in determining the impacts to black cockatoos a more detailed habitat tree assessment of the five previously identified hollow bearing trees was required. This report details the results of an assessment carried out to satisfy this request.

It should be noted that not all of the five trees assessed may necessarily require clearing.

2. SCOPE OF WORKS

The Shire defined the scope of works as:

- Locate and examine the five previously identified hollow bearing trees so as to obtain information on the nature of any hollows present and their likely suitability as breeding habitat for black cockatoo cockatoos.
- 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 (if any).

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).

Note: For the purposes of this report the term black cockatoo is in reference to Baudin's cockatoo *Calyptorhynchus baudinii*, Carnaby's cockatoo *Calyptorhynchus latirostris* and the forest red-tailed black cockatoo *Calyptorhynchus banksii naso*.

3. METHODS

The five previously identified hollow bearing trees were located in the field and examined from ground level using binoculars (Figure 1). Where considered necessary and feasible each hollow (or possible hollow) was also examined and photographed using a drone (DJI Mavic Mini).

Details on each tree were recorded including species, location, number and type of hollows observed. 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:

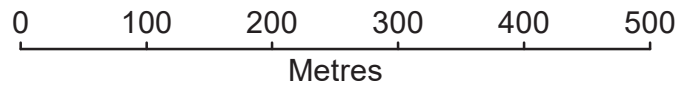
- Confirmed Hollow: Black cockatoos observed utilising the hollow for breeding purposes;
- Chewed Hollow: The hollow shows signs of chewing (“chipping” around or near entrance and/or internally) attributed to black cockatoo activity (in most cases indicating nesting activity, but in some cases possibly 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 or as having an unfavourable orientation);
- No Hollow: A possible hollow was found upon closer inspection to not be present.



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

Legend

- CPS 9167/1 Boundary
- Tree Inspected



Drawn: G Harewood
Date: July 2021
Scale: 1:6,000

Shire of Dardanup
Pile Road
**Aerial Photograph
&
Trees Inspected**

Projection/Coordinate System: UTM/MGA Zone 50 | Figure: 1

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 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

None of the previously identified “hollow” bearing trees were found to contain hollows that were considered by the Author to be suitable for black cockatoos to use for nesting purposes. This conclusion was in most cases based on the hollows actually being non-existent or being too small/shallow/open.

Details of each tree and the hollows they contain can be found in Appendix A.

A summary of observations made are provided in Table 1 below.

Table 1: Summary of Habitat Tree Observations

Tree ID	Number of Possible Hollows	Status	Justification
432	4	Unsuitable Hollows/No Hollow.	Marri with four possible large spout type hollows. When examined with the drone two of the possible hollows were found to have little or no depth. The other two spouts were found to be solid sawn off branches removed for safety reasons as they would have been overhanging the road.
441	1	Unsuitable Hollow.	Marri with one possible large side entry hollow. When examined with the drone the hollow was found to be too shallow/small to be suitable for a black cockatoo to use for nesting purposes. Some chew marks evident on left side of hollow entrance may be a consequence of black cockatoos visiting the hollow for water which had pooled in the shallow base of the hollow after recent rains.
443	1	No Hollow.	Marri with possible upward facing chimney/spout style hollow. This “hollow” could not be examined with a drone due to dense foliage but appeared, when viewed with binoculars, to be a solid broken off branch/trunk. The branch/trunk was also too small (~20cm diameter) to accommodate a hollow that would be suitable for a nesting black cockatoo in any event.
447	2+	Unsuitable Hollows/No Hollows.	Jarrah that did not appear to have any large hollows. The only possible hollows appeared to be very small “knot holes” with <5cm entrances.
466	4	Unsuitable Hollows/No Hollows.	Jarrah (near dead) with two possible spouts and two possible side entry hollows. Upon closer inspection with a drone all the possible hollows were found to be too shallow or non-existent and unsuitable for black cockatoos to use for nesting purposes.

6. CONCLUSION

The assessment reported on here was undertaken to identify black cockatoo breeding hollows within five previously identified hollow bearing trees.

None of the previously identified “hollow bearing” trees were found to contain hollows that were considered by the Author to be suitable for black cockatoos to use for nesting purposes. This conclusion was in most cases based on the hollows actually being non-existent or being too small/shallow/open.

Based on these observations the trees in question can, if required, be removed without impacting on breeding black cockatoos that may be frequenting the general area.

This report should be forwarded to DWER for their review.

7. REFERENCES

Natural Area Holdings Pty Ltd (Natural Area) (2020). Detailed Flora and Basic Fauna Survey. SLK 4.54 – 16.94 Pile Road, Ferguson. Unpublished report for the Shire of Dardanup. 5 November 2020.

APPENDIX A

Details of Trees Inspected

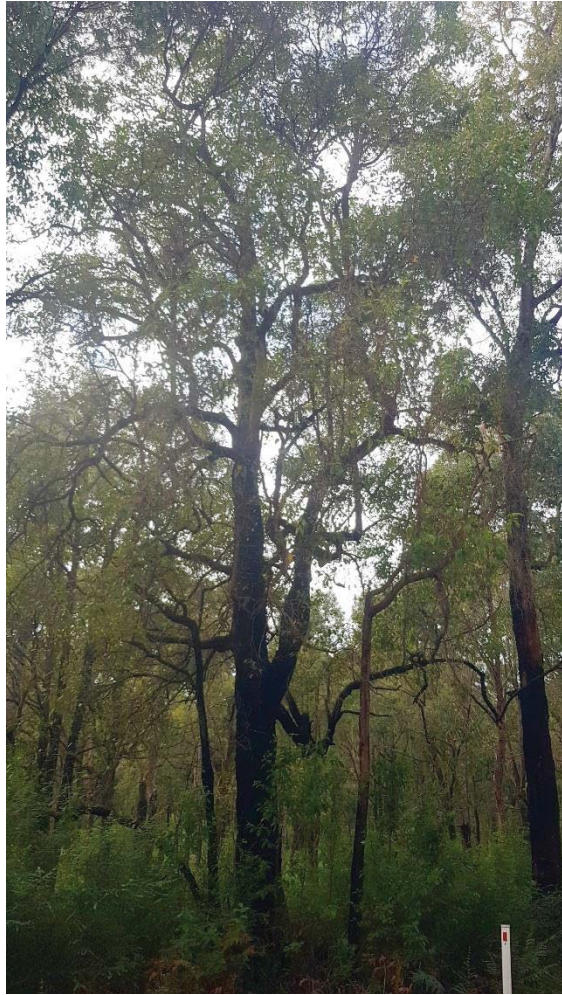
ID	Coordinates (MGA 94/Z50)	402101 mE	6300050mN	Tree Species	Marri	Survey Date	02/07/2021
432	Comments	Marri with four possible large spout type hollows. When examined with the drone two of the possible hollows were found to have little or no depth (pictured below - top). The other two spouts (pictured below – bottom) were found to be solid sawn off branches removed for safety reasons as they would have been overhanging the road.				Classification	Unsuitable Hollows/No Hollow.



WPT	Coordinates (MGA 94/Z50)	401966 mE	6300180 mN	Tree Species	Marri	Survey Date	02/07/2021
441	Comments	Marri with one possible large side entry hollow. When examined with the drone the hollow was found to be too shallow/small to be suitable for a black cockatoo to use for nesting purposes. Some chew marks evident on left side of hollow entrance may be a consequence of black cockatoos visiting the hollow for water which had pooled in the shallow base of the hollow after recent rains.				Classification	Unsuitable Hollow.



WPT	Coordinates (MGA 94/Z50)	401915 mE	6300245 mN	Tree Species	Marri	Survey Date	02/07/2021
443	Comments	Marri with possible upward facing chimney/spout style hollow. This “hollow” could not be examined with a drone due to dense foliage but appeared, when viewed with binoculars, to be a solid broken off branch/trunk. The branch/trunk was also too small (~20cm diameter) to accommodate a hollow that would be suitable for a nesting black cockatoo in any event.				Classification	No Hollow.



WPT	Coordinates (MGA 94/Z50)	401817 mE	6300284 mN	Tree Species	Jarrah	Survey Date	02/07/2021
447	Comments	Jarrah that did not appear to have any large hollows. The only possible hollows appeared to be very small “knot holes” (pictured).				Classification	Unsuitable Hollows/No Hollows.



WPT	Coordinates (MGA 94/Z50)	400536 mE	6300801 mN	Tree Species	Jarrah	Survey Date	02/07/2021
466	Comments	Jarrah (near dead) with two possible spouts and two possible side entry hollows. Upon closer inspection with a drone all the possible hollows were found to be too shallow or non-existent and unsuitable for black cockatoos to use for nesting purposes.				Classification	Unsuitable Hollows/No Hollows.



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