

Black Cockatoo Habitat Tree Review



Pickering Brook Quarry (M 70/733)

Pickering Brook

July 2023
Version 1

On behalf of:

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SUMMARY

This report details the results of a black cockatoo habitat tree review carried out over an area of proposed clearing within a section of B & J Catalano Pty Ltd's "Pickering Brook Quarry" Pickering Brook (the subject site) (Figure 1).

A fauna assessment was carried out over the subject site in late 2021 by Western Wildlife during which time a number of trees were identified as potentially containing hollows suitable for black cockatoos to use for nesting purposes (Western Wildlife 2021).

In order to assist in determining the impacts to black cockatoos a more detailed habitat tree assessment of three of the previously identified potential hollow bearing trees has been carried out. This report details the methods used and the results of this review.

Primary Findings

None of the habitat trees examined 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.

1. INTRODUCTION

This report details the results of a black cockatoo habitat tree review carried out over an area of proposed clearing within a section of B & J Catalano Pty. Ltd.'s "Pickering Brook Quarry" Pickering Brook (the subject site) (Figure 1)

A fauna assessment was carried out over the subject in late 2021 by Western Wildlife during which time a number of trees were identified as potentially containing hollows suitable for black cockatoos to use for nesting purposes (Western Wildlife 2021).

As this assessment was carried out from ground level some uncertainty existed about the true nature of the hollows/possible hollows in each of these particular habitat trees. In order to assist in determining the impacts to black cockatoos a more detailed habitat tree assessment of three of the previously identified hollow bearing trees has therefore been carried out. This report details the methods used and the results of this review.

2. SCOPE OF WORKS

The scope of works was:

- Locate and examine in detail three of the previously identified trees containing possible large hollows using a drone/pole mounted camera so as to obtain information on their likely suitability as breeding habitat for black cockatoo cockatoos.

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

3. METHODS

The three previously identified hollow bearing trees were located in the field and each hollow (or possible hollow) was examined and photographed using a drone (DJI Mavic Mini) in as much detail as possible.

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.
-

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 hollow bearing trees examined 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 Large Hollows	Status	Justification
60622	1	Unsuitable Hollows.	Jarrah with a potential large chimney style hollow. When examined with drone the hollow was found to be very shallow. Another horizontal “snap off:” with possible small hollow and some smaller spout type hollows higher in the tree. None of these hollows would be suitable for black cockatoos to use for nesting purposes.
60627	1	Unsuitable Hollow.	Dead jarrah with a potential large chimney style hollow. When examined with drone the hollow was found to have no depth. This hollow would be unsuitable for black cockatoos to use for nesting purposes.
60621	0	Unsuitable Hollow.	Marri (near dead) with no obvious possible large hollows. When examined with drone a small medium size potential hollow was found . In the Authors opinion this possible hollow would be unsuitable for black cockatoos to use for nesting purposes because it is too small.



6. CONCLUSION

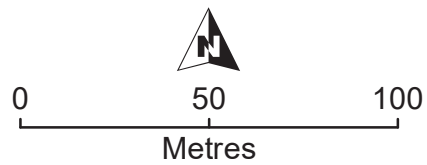
The assessment reported on here was undertaken to identify black cockatoo breeding hollows within eight previously identified hollow bearing trees.

None of the hollow bearing trees examined 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.



Legend

-  M 70/733 Boundary
-  Habitat Trees Inspected



Drawn: G Harewood
 Date: July 2023
 Scale: 1:2,000

B & J Catalano Pty Ltd
Pickering Brook Quarry
Aerial Photograph
&
Trees Inspected

7. REFERENCES

Western Wildlife (2021). Pickering Brook Quarry, Kings Mill Road: Basic Vertebrate Fauna Survey and Targeted Black-cockatoo Habitat Survey 2021. Prepared for B & J Catalano, by Western Wildlife, September 2021.

APPENDIX A

Details of Trees Inspected

ID	Coordinates (MGA 94/Z50)	420772 mE	6451949 mN	Tree Species	Jarrah	Survey Date	15/07/2023
60622	Comments	Jarrah with a potential large chimney style hollow (centre picture). When examined with drone the hollow was found to be very shallow (base visible – photo below left). Another horizontal “snap off:” with possible small hollow and some smaller spout type hollows higher in the tree. None of these hollows would be suitable for black cockatoos to use for nesting purposes. No signs of use by any fauna.				Classification	Unsuitable Hollows



ID	Coordinates (MGA 94/Z50)	420797 mE	6451943 mN	Tree Species	Jarrah (dead)	Survey Date	15/07/2023
60627	Comments	Dead jarrah with a potential large chimney style hollow (centre picture). When examined with drone the hollow was found to have no depth (base visible – photo below left). This hollow would be unsuitable for black cockatoos to use for nesting purposes. No signs of use by any fauna.				Classification	Unsuitable Hollow.

224°SW (M) • 50S 420803 6451950 ±3 m



ZOOTOPIA

15 July 2023, 9:54:28 am



ID	Coordinates (MGA 94/Z50)	420830 mE	6451968 mN	Tree Species	Marri	Survey Date	15/07/2023
60621	Comments	Marri (near dead) with no obvious possible large hollows. When examined with drone a small medium size potential hollow was found (photo below left). In the Authors opinion this possible hollow would be unsuitable for black cockatoos to use for nesting purposes because it is too small. No signs of use by any fauna.				Classification	Unsuitable Hollow.



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