

Black Cockatoo Habitat Assessment



CPS 9247/1

Lot 9064 Glenoran Road

Glenoran

October 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 9064 Glenoran Road, Glenoran.

The Landowners (N and A Muir) have applied for a permit to clear vegetation from within the property (CPS 9247/1). The proposed clearing totals about 1.62 hectares (the survey area) (Figure 1).

Upon review the Department of Water and Environmental Regulation (DWER) have advised the Landowners that in order to determine the impacts a habitat survey is required of the proposed clearing areas (DWER 2022).

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

The fauna assessment was carried out on 14 September 2022 by Greg Harewood (Zoologist).

Key Findings

- The survey area is located on either side of a drainage line situated immediately downstream of an existing dam (Figure 1). Almost all the vegetation appears to be regrowth from several stages of historical clearing possibly associated, at least in part, with the construction of the original dam. Over half of the survey area contains a mosaic of peppermint forming a low closed forest in association with areas of tall shrubland. The northern section of the survey area contains an open woodland of various densities of emergent karri (*Eucalyptus diversicolor*) and marri (*Corymbia calophylla*). These two areas are separated by an area of more recent disturbance that is in the early stages of regeneration and contains dense infestations of blackberry.
- The survey area contains one relatively small area of eucalyptus open woodland with most trees being relatively young. Six trees were identified as having a DBH >50cm, none of which appeared to contain hollows of any size.

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 9064 Glenoran Road, Glenoran.

The Landowners (N and A Muir) have applied for a permit to clear vegetation from within the property (CPS 9247/1). The proposed clearing totals about 1.62 hectares (the survey area) (Figure 1).

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

2. SCOPE OF WORKS

The request for additional information from DWER states:

Information Requirements

Photographs of the vegetation in the eastern portion of the site.

Specifications

Please provide the following;

- Photographs throughout the area outlined in green on the map below showing the overall composition of the vegetation.
- For any eucalyptus trees with a diameter at breast height (130 cm) of greater than 50cm, please take photographs of the tree canopy, and close up photographs of any hollows found.
- Locations and direction of all photographs taken (many cameras and phones will automatically record this information).
- Locations of any eucalyptus trees with a diameter at breast height (130cm) of greater than 50cm.

3. METHODS

An inspection of the survey area was carried out by Greg Harewood (Zoologist - 20 years' experience) on the 14 September 2022 and to fulfil the requested scope of works the following methods were employed.

3.1 VEGETATION ASSESSMENT

Georeferenced photographs were taken throughout the survey area to illustrate the overall composition of the vegetation present.

3.2 BLACK COCKATOO HABITAT TREE ASSESSMENT

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 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 possible each potential hollow was also inspected and photographed with a drone.

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


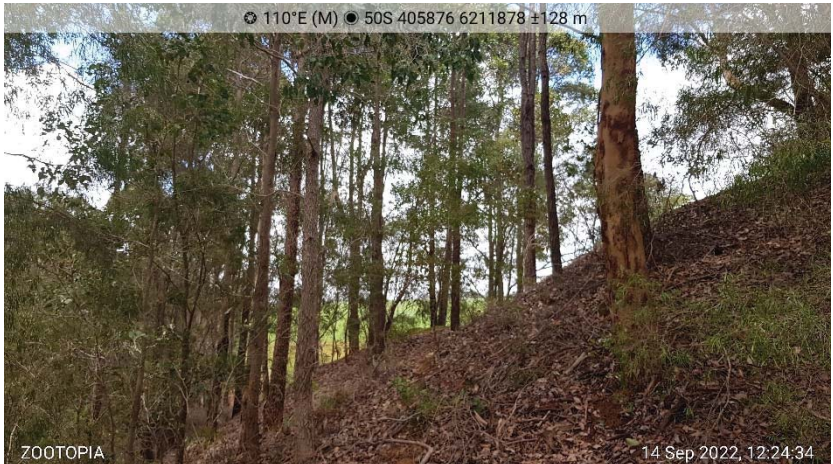
5.1 VEGETATION ASSESSMENT

The survey area is located on either side of a drainage line situated immediately downstream of an existing dam (Figure 1). Almost all the vegetation appears to be regrowth from several stages of historical clearing possibly associated, at least in part, with the construction of the original dam. Over half of the survey area contains a mosaic of peppermint forming a low closed forest in association with areas of tall shrubland. The northern section of the survey area contains and open woodland of various densities of emergent karri (*Eucalyptus*

diversicolor) and marri (*Corymbia calophylla*). These two areas are separated by and area of more recent disturbance that is in the early stages of regeneration and contains dense infestations of blackberry.

Table 1: Example images of the vegetation present within the survey area

Vegetation Description	Example Image
<p>Peppermint Low Closed Forest and Tall Shrubland . Appears to be regrowth from several historical clearing events in various stages of regeneration. Occupies most of the southern half of the survey area</p>	 <p>29°N (M) 50S 405872 6211847 ±24 m</p> <p>ZOOTOPIA 14 Sep 2022, 12:29:36</p>
	 <p>278°W (M) 50S 405980 6211927 ±12 m</p> <p>ZOOTOPIA 14 Sep 2022, 13:14:58</p>
	 <p>280°W (M) 50S 405955 6211868 ±6 m</p> <p>ZOOTOPIA 14 Sep 2022, 13:15:11</p>

Vegetation Description	Example Image
<p>Existing cleared ground in early stages of regrowth including infestation of blackberries. Located in the central eastern section of the survey area.</p>	 <p>348° (M) ● 50S 405979 6211935 ±16 m</p> <p>ZOOTOPIA 14 Sep 2022, 12:13:44</p> <p>196°S (M) ● 50S 405971 6211941 ±6 m</p> <p>ZOOTOPIA 14 Sep 2022, 12:14:06</p>
<p>Eucalyptus (marri and karri) open woodland – present across the northern section of the survey area. Most trees are relatively young and appear to be regrowth for a historical clearing event.</p>	 <p>110°E (M) ● 50S 405876 6211878 ±128 m</p> <p>ZOOTOPIA 14 Sep 2022, 12:24:34</p>

5.2 BLACK COCKATOO HABITAT TREE ASSESSMENT

The vast majority of the trees present are relatively young and appear to represent regrowth from historical clearing events. Six trees were identified as having a DBH >50cm (Figure 1), none of which appeared to contain hollows of any size, presumably a consequence of the relatively young age.

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

6. CONCLUSION

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

Almost all the vegetation present with the survey area appears to be regrowth from several stages of historical clearing possibly associated, at least in part, with the construction of the original dam. The vegetation consists of a mosaic of peppermint forming a low closed forest in association with areas of tall shrubland. The northern section of the survey area contains and open woodland of various densities of emergent karri and marri. These two areas are separated by and area of more recent disturbance that is in the early stages of regeneration and contains dense infestations of blackberry.

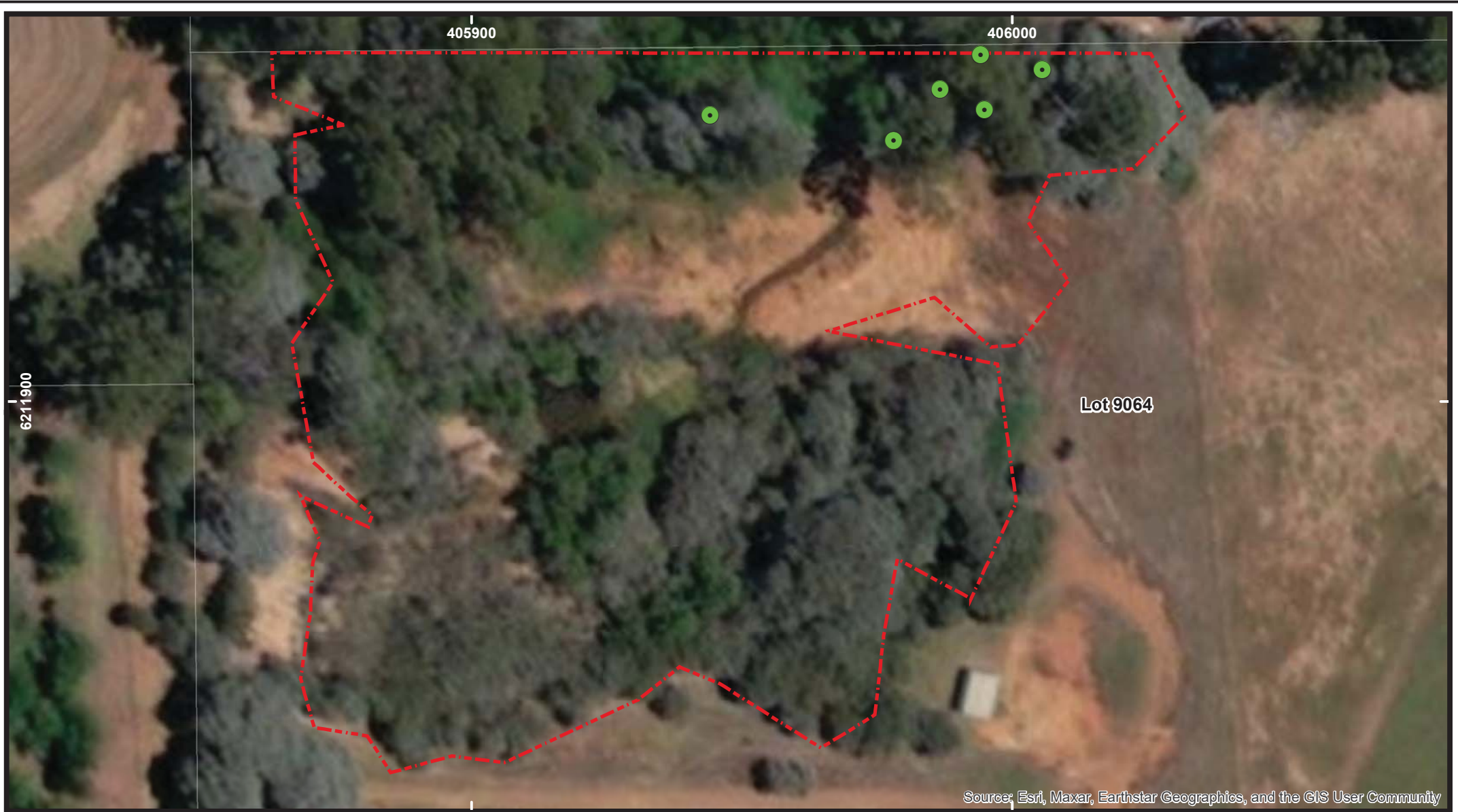
The survey area contains one relatively small area of eucalyptus open woodland with most trees being relatively young. Six trees were identified as having a DBH >50cm, none of which appeared to contain hollows of any size.

This report should be forwarded to DWER for their consideration.



7. REFERENCES

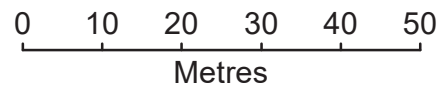
Department of Water and Environmental and Regulation (DWER) (2022). Letter to Mr Nathaniel Muir and Ms Amanda Leah Muir – Application to Clear Native Vegetation Under the *Environmental Protection Act 1986* - Request for Further Information. Ref: CPS 5247/1. Dated 27 May 2021.

FIGURES



Legend

-  CPS 9247/1 - Permit Boundary
-  Habitat Trees (DBH >50cm) - No Hollows Observed



Drawn: G Harewood
 Date: 26-Oct-22
 Scale: 1:950

CPS 9247/1
 Lot 9064 Glenoran Road
 Glenoran

Aerial Photograph & Habitat Trees

APPENDIX A

Habitat Tree Details

ID	Coordinates (MGA 94/Z50)	406005 mE	6211961 mN	Tree Species	Dead Marri	Survey Date	14/09/2022
25	Comments	Dead marri - no hollows evident.				Classification	No Hollows.



ID	Coordinates (MGA 94/Z50)	405993 mE	6211967 mN	Tree Species	Marri	Survey Date	14/09/2022
26	Comments	Marri – no hollows evident.				Classification	No Hollows.



ID	Coordinates (MGA 94/Z50)	405986 mE	6211957 mN	Tree Species	Marri	Survey Date	14/09/2022
27	Comments	Marri – no hollows evident.				Classification	No Hollows.



ID	Coordinates (MGA 94/Z50)	405978 mE	6211948 mN	Tree Species	Karri	Survey Date	14/09/2022
28	Comments	Karri – no hollows evident.				Classification	No Hollows.

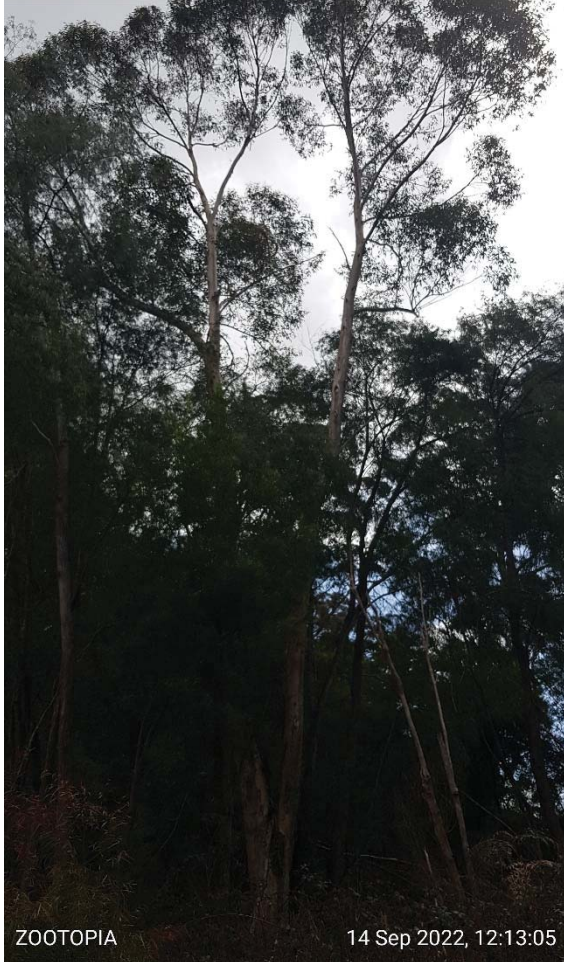


ID	Coordinates (MGA 94/Z50)	405994 mE	6211954 mN	Tree Species	Karri	Survey Date	14/09/2022
29	Comments	Karri – no hollows evident.				Classification	No Hollows.



ID	Coordinates (MGA 94/Z50)	405944 mE	6211953 mN	Tree Species	Karri	Survey Date	14/09/2022
30	Comments	Karri – no hollows evident.				Classification	No Hollows.

📍 320°NW (M) ● 50S 405940 6211949 ±48 m



ZOOTOPIA

14 Sep 2022, 12:13:05



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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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