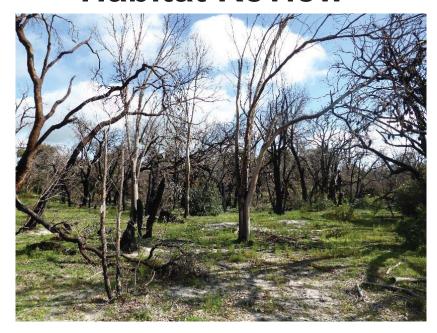
Black Cockatoo Habitat Review



Lot 3 Buller Road Waroona

August 2018 Version 2

On behalf of:

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1. INTRODUCTION

The following reports details the results of a black cockatoo habitat assessment of a section of Lot 3 Buller Road, Waroona. The survey area represents the section of Lot 3 the subject to a clearing permit application (CPS 7516/1) submitted by AMG (WA) Pty Ltd. It is understood that AMG (WA) Pty Ltd and the Pandanus Park Aboriginal Community have entered into a joint venture (JV) and are proposing to extract sand from the area. Sand extraction will require clearing of approximately 14 hectares (ha) of remnant vegetation

The area was originally assessed for black cockatoo habitat values in 2015 (Terrestrial Ecosystems 2015) prior to the area being severely burnt during the Waroona fire in early 2016. Accendo Australia have, of the JV partners, requested the habitat values be reassessed to determine the current condition of the site and in particular the status of previously identified trees with possible large hollows.

2. SCOPE OF WORKS

The scope of works has been defined as:

- 1. Carry out a review of black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat).
- 2. Provide a report detailing methods and results.

Note: For the purposes of this proposal the term Black Cockatoo is in reference to Baudin's Black Cockatoo *Calyptorhynchus baudinii*, Carnaby's Black Cockatoo *Calyptorhynchus latirostris* and the Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*.

3. METHODS

The field survey work carried out as part of this review was undertaken on the 26 July 2018 by Greg Harewood (zoologist) and Kristopher Harewood (field assistant).

3.1 Black Cockatoo Habitat Tree Review

The black cockatoo breeding habitat assessment has involved the re-inspection of all 73 of the previously identified black cockatoo breeding trees (any suitable tree species with a Diametre at Breast height (DBH) ≥50cm) (Terrestrial Ecosystems (TE) 2015) within the defined survey area, with an emphasis on the 14 trees previously reported as possibly having hollows of a size suitable for nesting.

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). A drone (DJI Mavic Air) was also utilised to examine and photograph hollows whenever possible.

3.2 Black Cockatoo Foraging Habitat Review

The location and nature of black cockatoo foraging evidence (e.g. chewed fruits around base of trees) observed during the field survey were recorded. The nature and extent of potential foraging habitat present will also be documented irrespective of the presence of any actual foraging evidence.

3.3 Black Cockatoo Roosting Habitat Review

Direct and indirect evidence of black cockatoos roosting within trees within the survey area was noted if observed (e.g. branch clippings, droppings or moulted feathers).

3.4 Regional Habitat Extent

An estimate of the amount of black cockatoo habitat within 12km of the subject site is provided based on available mapping data.

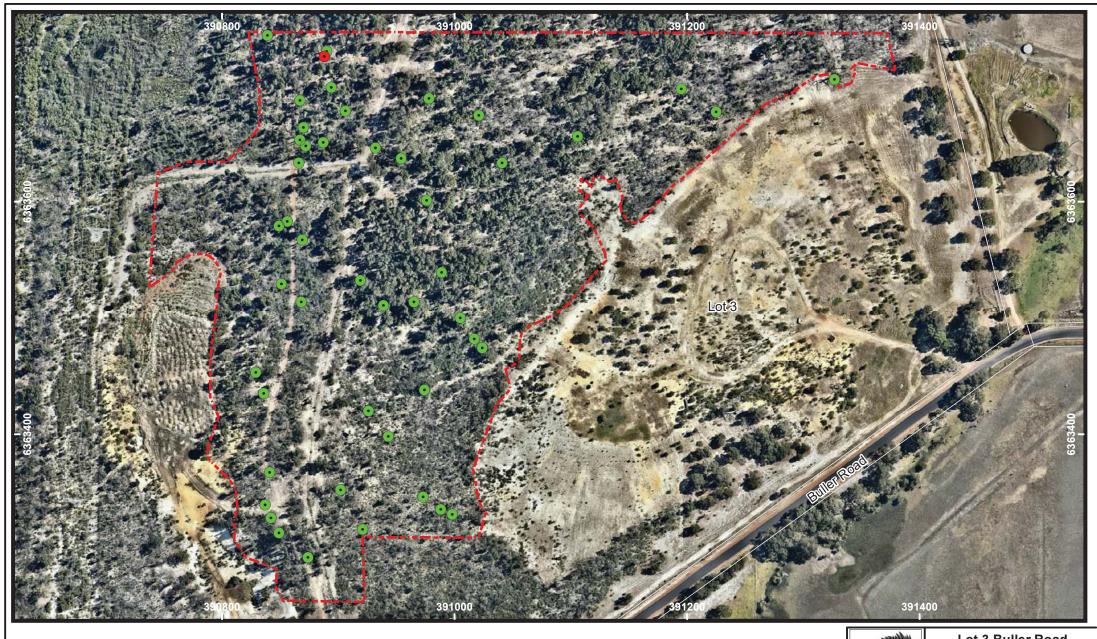
4. RESULTS

4.1 Black Cockatoo Habitat Tree Review

A summary of the results of the black cockatoo tree review are presented in Table 1 and Figure 1. Additional details on each tree inspected including their original and reviewed status are held in Appendix A. Photos and/or descriptions of all of the trees identified by TE (2015) as possibly containing large hollows and the subject of this review are held in Appendix B.

Table 1: Summary of Black Cockatoo Hollow Review Results

Reviewed Status	Number of Trees Identified	Recommended Action
Actual/Potentially suitable hollow - evidence of use	0	N/A
Potentially suitable hollow - No evidence of use	1	Retain in dataset as a tree with a potentially suitable hollow.
No hollows suitable for black cockatoo present	47	Retain in dataset as a habitat tree (DBH >50cm) but with no suitable hollows.
The tree at recorded location had a DBH <50cm and no hollows. No larger trees nearby.	15	Remove from dataset
No tree present at the recorded location (assumed burnt), almost totally burnt or fallen over.	10	Remove from dataset
Total	73	48

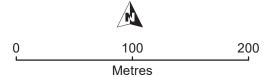






Habitat Tree - One large hollow possibly suitable for black cockatoos seen

Habitat Tree - No hollows possibly suitable for black cokatoos seen





Lot 3 Buller Road Waroona

Revised **Habitat Trees** Date: 27/07/2018 (DBH >50cm)

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

The original assessment by TE (2015) identified 114 habitat trees (any suitable trees with a DBH \geq 50cm) within the larger area they surveyed. Using the revised boundary this total was cut back to 73 trees, 14 of which were identified as having possible large hollows according to the ground based observations made by TE.

Twenty five (25) trees were found to have been totally burnt, almost totally burnt, fallen over or with a DBH <50cm and it is therefore recommended that these be removed from the original dataset leaving 48 "habitat" trees.

Of these 48 only one was found to have a possible large hollow. The other possible large hollows previously identified by TE were either confirmed as being too small and/or shallow or were absent altogether due to partial or total incineration of the tree during the fire in January 2016, with some trees being completely gone or in once instance, fallen over.

This single large hollow was hard to photograph with the drone (upward facing spout with overhanging branches) but as the base of the hollow could be seen it may be too shallow and therefore unfavourable for black cockatoos (see Appendix B for photographs). The overhanging branches may also make it difficult for a cockatoo to land and take off from the hollow, also lessening its suitability. There is also a large bee hive in very close proximity (a few metres away in a nearby tree), which again would lower the probability of it being used even if suitable in other respects. The hollow showed no signs of actual uses (e.g. chew marks around hollow rim).

As far as the Author is aware there are no known breeding site in close proximity (5 km) of the survey area with the closest documented site being over 10 kilometres (km) to the north west (DoP 2011/Johnstone and Kirkby 2011). The current status of this nest site is unknown. The vast majority of other nest hollows identified in the past have been in the vicinity of Yalgorup National Park near Forrest Highway and in the Darling Ranges over 12 kms from the survey area.

It should be noted that the likelihood of any one particular tree species developing hollows suitable for black cockatoos to use for breeding varies considerably. For example, available data suggests that jarrah (*Eucalyptus marginata*) rarely produces hollows large enough for black cockatoos. Kirkby (2009) reports that from a database of 109 confirmed black cockatoo nest trees throughout the jarrah forest only six were located in jarrah trees. Twenty eight (~58%) of the identified habitat trees in the survey area are jarrah.

According to anecdotal records, all of the survey area was cleared about 50 years ago in preparation for sand extraction that did not end up extending as far as planned. This anecdotal record is supported by the general lack of very old large trees and the presence of tree stumps and burned-out logs (MBS 2015).

4.2 Black Cockatoo Foraging Habitat Review

All of the remnant native vegetation within the survey area has been mapped as one unit by MBS (2015) and described it as a 'Low Woodland of *Corymbia calophylla*, *Eucalyptus marginata*, *Banksia* spp. and *Allocasuarina fraseriana* over a Low Open Shrubland

dominated by *Hibbertia hypericoides* over a Grassland of native and introduced species on very low relief sand dunes'. There was variation in the density of the various tree and shrub species within the vegetation unit which appeared to be largely due to the varying degrees and types of disturbance across the site (MBS 2015). Example images of this vegetation unit are provided in Plate 1 to 6 below.

DWER (2018) incorrectly state that the clearing permit application area (i.e. the survey area) also contains Unit 2 as identified by MBS (2015). This unit does not however extend into the survey area.



Plate 1



Plate 2



Plate 3



Plate 4



Plate 5



Plate 6

The impacts of the January 2016 fire on vegetation within the survey area was highly evident with many dead trees (in particular *banksia* and jarrah) being present in all the areas examined. While it can be assumed that the burnt areas will regenerate the presence of dieback in most areas (Glevan Consulting 2015) "may reduce the ability for it to regenerate successfully without intensive management" (DWER 2018).

The following represents a list of plant species recorded within the survey area by MBS (2015) which are known (or highly likely) to be used by one or more of the black cockatoo species as a food source (i.e. foraging habitat).

- Jarrah Eucalyptus marginata seeds.
- Marri Corymbia calophylla flowers, seeds, nectar.
- Flooded Gum Eucalyptus rudis flowers, nectar.
- River Red Gum Eucalyptus camaldulensis seeds (Non-Endemic planted).
- Banksia B. attenuata, B. grandis, B. ilicifolia, B. menziesii flowers, seeds.
- Sheoak Allocasuarina fraseriana seeds.
- Grey Stinkwood Jacksonia furcellata seeds.
- Orange Wattle Acacia saligna fresh bark.

- Grass Tree Xanthorrhoea gracillis, X. brunonis seeds
- Lupins Lupinus sp. Exotic

It should be noted that the degree to which the various plant species are utilised as a foraging resource varies considerably. For example, marri is documented as being the primary food source for all three species, though jarrah and *banksia* make up a higher proportion of some black cockatoo species diets in other areas where they proliferate. Plants such as river red gum, flooded gum, grey stinkwood and orange wattle (for example) are only foraged upon rarely.

Evidence of black cockatoos foraging was observed during the field survey in the form of chewed marri fruits at several locations. This evidence was attributed to the forest redtailed black-cockatoo (Table 2). No conclusive evidence of any other foraging activity by black cockatoos on other plant species was observed. Some older banksia cones showed potential evidence of being foraged upon but due to their age it may have been the result of natural deterioration. Terrestrial Ecosystems (2015) reported on finding banksia cones that had been chewed by Carnaby's or Baudin's black cockatoos in addition to marri nuts chewed by either forest red-tailed or Carnaby's black cockatoos during their survey in 2015.

Table 2: Foraging Evidence Examples

Foraging Evidence Description	Example Image
Marri Fruits – foraging activity attributed to the forest red-tailed black-cockatoo.	

The entire survey area contains one or more of the above listed foraging species and therefore can be regarded as foraging habitat of some type. The composition and density of individual plant species does however vary considerably from place to place and therefore its overall value is difficult to quantify. Some areas have also been severely impacted on by the 2016 fire with very high numbers of *banksia* and jarrah deaths and so overall the value of the survey area as foraging habitat has diminished considerably since the area was last assessed in 2015 (TE 2015).

4.3 Black Cockatoo Roosting Habitat Review

No evidence of black cockatoos roosting within the survey area was observed during the survey period.

A review of the 2017 Great Cocky Count database shows three documented roost sites within 12 km of the survey area though none appear to have been in use during the most recent cockatoo count survey periods (2018 results pending).

4.4 Regional Habitat Extent

Available mapping data shows that there is about 7,400 ha of remnant native vegetation within 12 km of the survey area. Of this, about 47% (3,476 ha) is contained within land subject to Department of Biodiversity and Conservation and Attractions management (i.e. national parks, reserves or state forests). The remnant native vegetation within the survey area (~14 ha) makes up less than 0.19% of the area of native vegetation within a 12 km range.

It is not possible to determine exactly how much of the regional vegetation represents black cockatoo habitat as only broad scale vegetation complex mapping is available, but a high percentage is likely to contain breeding, foraging and/or roosting habitat.

5. CONCLUSION

The review reported on here was undertaken with the primary aim of providing an update on previously identified trees within the survey area containing possible hollows considered as being possibly suitable for black cockatoos to use for nesting purposes during a 2015 assessment of the area.

Of the 73 previously identified habitat trees (DBH >50cm) inspected only one was found to contain a hollow possibly suitable for black cockatoos to use for nesting, though it showed no obvious signs of being used for this purpose. The hollow may in fact be unsuitable or at best marginal given it appears to be relatively shallow, has an entrance crowded by branches and is located in close proximity to an active bee hive.

The other possible large hollows previously identified by Terrestrial Ecosystems were either confirmed as being too small and/or shallow or were absent altogether due to partial or total incineration of the tree during the fire in January 2016, with some trees being completely gone or in once instance, fallen over.

The foraging habitat within survey area, primarily represented by marri, jarrah and *banksia*, also appears to have been severely impacted on by the 2016 fire with many tree deaths evident. While the vegetation is showing signs of regrowth its ability to regenerate to a similar quality may be hindered by the existing presence of dieback, without intensive intervention.

No evidence of black cockatoos roosting within the survey area was observed during the survey period.

On a regional scale there appears to be considerable areas of black cockatoo habitat with over 7,400 ha of remnant native vegetation occurring within 12km of the survey area, almost half of which is under DBCA management. While there is a general lack of data on black cockatoo use of these areas much of this is very likely to contain black cockatoo habitat of a similar quality at least to that found within the survey area.

6. REFERENCES

Department of Planning (DoP) (2011). 'Peel Region Scheme (PRS) - potential habitat for the Carnaby's Black Cockatoo which may require further assessment', Department of Planning: Mapping and GeoSpatial Branch January 2011.

Department of Water and Environmental Regulation (DWER) (2018). Clearing Permit Decision Report - CPS 7516/1.

Glevan Consulting (2015). Lot 3 Buller Road, Waroona. *Phytopthora* Dieback occurrence assessment- version 2.0. Prepared for KD.1 Pty Ltd.

Johnstone, R. E. & Kirkby, T. (2011). Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and the Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) on the Swan Coastal Plain (Lancelin–Dunsborough), Western Australia. Studies on distribution, status, breeding, food, movements and historical changes. Report for the Department of Planning, Western Australia.

Kirkby, T. (2009). Results of Black Cockatoo Survey at Lot 2 Dawesville. Unpublished report for WA Limestone.

MBS Environmental (2015) Lot 3 Buller Road Waroona, Level 1 Flora and Vegetation Survey for Jackson Block. Prepared for KD.1 Pty Ltd. June 2015.

Terrestrial Ecosystems (2015). Level 1 Fauna Risk Assessment for the 'Jackson Block' of Lot 3 Buller Road, Waroona, Version 1. May 2015. Unpublished report for MDW Environmental Services.

APPENDIX A

HABITAT TREE DETAILS

		T		T
ID mE	mN Species	Original Assessment (TE 2015)	Review Comments (GH 2018)	Recommended action
17 3913			Burnt and now dead	
18 3912			Burnt but alive	
19 3911	.95 6363697 Jarrah		Burnt and now dead	
20 3911	.91 6363696 Jarrah		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
21 3911	.45 6363651 Jarrah		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
22 3911	.06 6363656 Jarrah		Burnt but alive	
23 3910	041 6363633 Jarrah		Burnt but alive	
24 3910	021 6363674 Jarrah		Burnt but alive	
25 3909			Burnt but alive	
26 3909	981 6363624 Dead	Possible hollow suitable for black cockatoos	Burnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents potential breeding habitat	Remove from dataset
27 3909			Burnt but alive	
28 3909		Possible hollow suitable for black cockatoos	Burnt and now dead. Examined with drone - no hollows suitable for black cockatoos.	Change to no suitable hollows
29 3910			Burnt but alive	
30 3910			Burnt - near dead	
31 3910			Burnt but alive (in decline)	
32 3910			A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
33 3909			Burnt but alive	nemove nom dataset
34 3909			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
35 3909			Burnt but alive	Remove from dataset
36 3909			Burnt but alive	
37 3909		Possible hollow suitable for black cockatoos	Burnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents potential breeding habitat	Remove from dataset
38 3909		Possible flollow suitable for black cockatoos	A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
39 3909				
-			A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
40 3909			Burnt but alive	
41 3909			Burnt and now dead	
42 3909			Burnt but alive	
43 3909		Possible hollow suitable for black cokatoos	Burnt. No hollows suitable for black cockatoos.	Change to no suitable hollows
44 3909			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
45 3909			A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
46 3909		Possible hollow suitable for black cockatoos	Burnt and now dead. No hollows suitable for black cockatoos.	Change to no suitable hollows
47 3909		Possible hollow suitable for black cockatoos	A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
48 3909			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
49 3909		Possible hollow suitable for black cockatoos	Burnt and now dead. Examined with drone - no hollows suitable for black cockatoos.	Change to no suitable hollows
50 3909		Possible hollow suitable for black cockatoos	Burnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents potential breeding habitat	Remove from dataset
51 3909		Possible hollow suitable for black cockatoos	Burnt and now dead. No hollows suitable for black cockatoos.	Change to no suitable hollows
52 3909			Burnt and now dead	
56 3909	021 6363318 Jarrah		Burnt and now dead	
57 3909	002 6363352 Jarrah		Burnt but alive	
60 3908			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
61 3908	374 6363294 Marri	Possible hollow suitable for black cockatoos	Burnt and now dead. Examined with drone - no hollows suitable for black cockatoos.	Change to no suitable hollows
62 3908			Burnt but alive	
63 3908	337 6363339 Jarrah		Burnt and now dead	
64 3908	336 6363340 Jarrah		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
65 3908	326 6363358 Jarrah		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
66 3908	341 6363367 Jarrah		Burnt but alive	
67 3908	356 6363406 Dead		Burnt and almost gone	Remove from dataset
68 3908			Burnt but alive	
69 3908			Burnt but alive	
70 3908			Burnt but alive	1
71 3908			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
72 3908		Possible hollow suitable for black cockatoos	A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
73 3908			A suitably size the (bit > 30cm) could not be found at the location provided - during	nemore nom dataset
74 3908			The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
75 3908			Burnt and now dead	nemove nom dataset
76 3908				Domayo from dataset
70 3908	940 030354U Jarran		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset

ID mE		mN	Species	Original Assessment (TE 2015)	Review Comments (GH 2018)	Recommended action
77 3	90869	6363567	Jarrah		Burnt and near dead	
78 3	90831	6363550	Jarrah		The tree at this location had a DBH <50cm. No larger trees nearby.	Remove from dataset
79 3	90849	6363577	Dead	Possible hollow suitable for black cockatoos	A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
80 3	90849				Burnt but alive	
81 3	90856	6363583	Marri		Burnt but alive	
82 3	90826	6363599	Marri	Possible hollow suitable for black cockatoos	This tree has fallen over	Remove from dataset
83 3	90866	6363633	Jarrah		Burnt and near dead	
84 3	90872	6363648	Marri		Burnt and now dead	
85 3	90867	6363653	Marri		Burnt and now dead	
86 3	90870	6363664	Marri		Burnt and now dead	
87 3	90887	6363651	Marri		Burnt and now dead	
88 3	90906	6363678	Jarrah		Burnt and now dead	
89 3	90920	6363705	Marri		A suitably sized tree (DBH >50cm) could not be found at the location provided - burnt?	Remove from dataset
90 3	90888	6363725	Marri	Possible hollow suitable for black cockatoos	Large spout - difficult to photograph with drone - appears shallow (~30cm). Numerous new shoots blocking access to entrance. Bee hive in nearby tree.	
91 3	90890	6363729	Marri		Burnt but alive	
92 3	90894	6363698	Jarrah		Burnt but alive	
93 3	90867	6363687	Jarrah		Burnt but alive	
97 3	90839	6363743	Jarrah		Burnt and now dead	

APPENDIX B

DETAILS AND PHOTOGRAPHS OF HABITAT TREES INSPECTED FOR LARGE HOLLOWS

ID	Location Data (MGA 94)	390935 mE	6363379 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018			
47	Terrestrial Ecosystems' (2015) Original Classification Dead tree containing a possible hollow potentially suitable for black cockatoos.									
47	Review Comments	A suitably sized tree (DBH ≥50cm) could not be found at the location provided – assumed Burnt? Recommended Action dataset.								
	No Image									

ID	Location Data (MGA 94)	390871 mE	6363493 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018			
72	Terrestrial Ecosystems' (2015) Original Classification	Dead tree containing	d tree containing a possible hollow potentially suitable for black cockatoos.							
12	Review Comments	A suitably sized tree burnt?	A suitably sized tree (DBH ≥50cm) could not be found at the location provided – assumed action Action Recommended Action Remove from dataset.							
No Image										

ID	Location Data (MGA 94)	390849 mE	6363577 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018			
Terrestrial Ecosystems' (2015) Original Classification Dead tree containing a possible hollow potentially suitable for black cockatoos.										
79	Review Comments	•	A suitably sized tree (DBH ≥50cm) could not be found at the location provided – assumed Recommended Remove from							
		burnt?			Action	dataset.				
No Image										

ID	Location Data (MGA 94)	390988 mE	6363335 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018		
E 1	Terrestrial Ecosystems' (2015) Original Classification	Live Jarrah tree conta	ve Jarrah tree containing a possible hollow potentially suitable for black cockatoos.						
21	Review Comments	Burnt and now dead. No hollows suitable for black cockatoos. Recommended Action Change to "no suitable hollows".							
	No image								



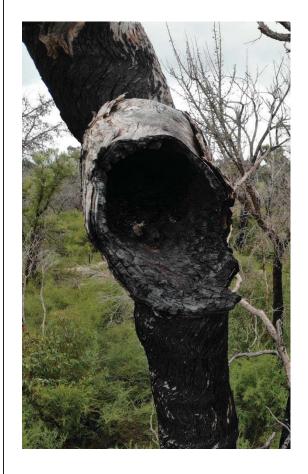
ID	Location Data (MGA 94)	390989 mE	6363539 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
20	Terrestrial Ecosystems' (2015) Original Classification	Live Marri tree conta	Live Marri tree containing a possible hollow potentially suitable for black cockatoos.					
20	Review Comments	Burnt and now dead. Examined with drone - no hollows suitable for black cockatoos. Recommended Action Change to suitable						







ID	Location Data (MGA 94)	390973 mE	6363346 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018
Terrestrial Ecosystems' (2015) Original Classification Live Jarrah tree containing a possible hollow potentially suitable for black cockatoos.					ble for black cockatoos.		
49	Review Comments	Burnt and now dead.	Examined with	drone - no hollows suita	able for black cockatoos.	Recommended Action	Change to "no suitable hollows".









	ID	Location Data (MGA 94)	390874 mE	6363294 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
	61	Terrestrial Ecosystems' (2015) Original Classification	Live Marri tree conta	Live Marri tree containing a possible hollow potentially suitable for black cockatoos.					
Review Comments I Burnt and now dead Examined with drone - no hollows suitable for black cockations						Change to "no suitable hollows".			





	ID	Location Data (MGA 94)	390943 mE	6363398 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
	46	Terrestrial Ecosystems' (2015) Original Classification	Live Jarrah tree containing a possible hollow potentially suitable for black cockatoos.						
	40	Review Comments	Burnt and now dead.	nt and now dead. Examined with drone - no hollows suitable for black cockatoos. Recommended Action Change to " suitable hol					





ID	Location Data (MGA 94)	390981 mE	6363624 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
26	Terrestrial Ecosystems' (2015) Original Classification	Dead tree containing a possible hollow potentially suitable for black cockatoos.						
20	Review Comments	·	urnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents otential breeding habitat. Recommended darmonto					





ID	Location Data (MGA 94)	390947 mE	6363551 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
27	Terrestrial Ecosystems' (2015) Original Classification	Live Marri tree containing a possible hollow potentially suitable for black cockatoos.						
37	Review Comments	· ·	rnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents tential breeding habitat. Recommended Action dataset.					



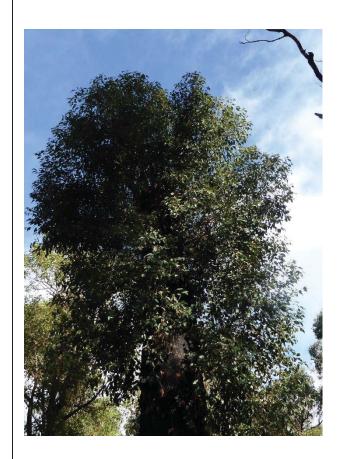


ID	Location Data (MGA 94)	390969 mE	6363333 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018	
FO	Terrestrial Ecosystems' (2015) Original Classification	Live Jarrah tree containing a possible hollow potentially suitable for black cockatoos.						
50	Review Comments	·	rnt to a shell (no solid trunk). Hollows no longer present and tree no longer represents tential breeding habitat Recommended Action dataset.					





ID	Location Data (MGA 94)	390888 mE	6363725 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018			
	Terrestrial Ecosystems' (2015) Original Classification	Live Marri tree conta	Live Marri tree containing a possible hollow potentially suitable for black cockatoos.							
90	Review Comments		ollow visible and	appears shallow (<30cm	ck - difficult to Reviewgraph with n). Numerous new shoots blocking	Recommended Action	Retain in dataset as a tree with a potentially suitable hollow.			







ID	Location Data (MGA 94)	390926 mE	6363420 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018		
12	Terrestrial Ecosystems' (2015) Original Classification	Dead tree containing	Dead tree containing a possible hollow potentially suitable for black cockatoos.						
43	Review Comments	Burnt. No hollows su	itable for black	cockatoos.		Recommended Action	Change to "no suitable hollows".		





ID	Location Data (MGA 94)	390826 mE	6363599 mN	Original Survey Date (TE 2015)	05/05/2015	Review Date	26/07/2018		
02	Terrestrial Ecosystems' (2015) Original Classification	Live Marri tree conta	ining a possible						
82	Review Comments	This tree has fallen o	ver.	Recommended Action	Remove from dataset.				
	No Image								



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