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WESTERN AUSTRALIA

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Western Australia.*

## **EPBC Act**

# **Annual Compliance Report**

Toodyay Road Widening and Upgrade  
Project (EPBC 2016/7665)

Reporting Period: 21 January 2022 to 20 January 2023

D23#342054  
April 2023

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# 1 INTRODUCTION

## 1.1 Project Background and Status

Main Roads Western Australia (Main Roads) is currently undertaking widening and upgrade of Toodyay Road between 12.71 and 40.14 Straight Line Kilometre (SLK), in the Shire of Toodyay (the Project). The upgrade intends to improve the safety and efficiency of Toodyay Road by widening the road to meet current design standards, realigning sections to remove substandard curves and increase sightlines, intersection improvements, new overtaking lanes and drainage improvements.

Project implementation commenced on 21 January 2019. The Main Roads Wheatbelt Region is delivering the Project in stages based on funding availability. During the reporting period, the following activities were undertaken:

- Relocation of Telstra network infrastructure in the section of road between 13.5 and 23 SLK.

## 1.2 Approval under the *Environment Protection and Biodiversity Conservation Act 1999*

The Project was referred to the former Department of the Environment (now the Department of Climate Change, Energy, the Environment and Water (the Department)) in March 2016 for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The project was determined to be a controlled action on 8 April 2016 due to its potential impacts on listed threatened species and communities. The Department granted approval for the project on 4 December 2018 (EPBC 2016/7665), which included a number of conditions that Main Roads is required to fulfil.

## 1.3 Purpose of this Report

This compliance report has been produced to satisfy Condition 12 of approval EPBC 2016/7665.

Table 1 of this report details the Project's compliance with regard to each approval condition over the 12-month period: 21 January 2022 to 20 January 2023. Conditions deemed completed or no longer required (applicable) are shaded grey.

## 2 COMPLIANCE

**Table 1: Compliance with Conditions of EPBC Approval 2016/7665**

Condition Number	Condition	Status	Evidence/Comments
1	<p>For the protection of the protected matters in the project area, the approval holder must not clear more than:</p> <ul style="list-style-type: none"> <li>a. 54.87 hectares within the project area; and</li> <li>b. 94 suitable nesting hollows.</li> </ul>	Compliant	<ul style="list-style-type: none"> <li>a. A total of 0.24 ha of clearing was undertaken during the reporting period (Appendix A). A total of 8.09 ha has been cleared for the project to date.</li> <li>b. No suitable nesting hollows were cleared in the reporting period. A total of two (2) suitable nesting hollows have been removed for the project to date.</li> </ul>
2	<p>If the approval holder intends to clear one or two known nesting hollows, it must demonstrate that all avoidance and mitigation measures have been implemented and obtain separate written agreement of the Department before commencing such clearing.</p>	Not applicable	<p>No known nesting hollows were cleared during the reporting period. No known nesting hollows have been cleared for the project to date.</p>
3	<p>The approval holder must establish and maintain a register of the locations and other relevant details of all suitable nesting hollows and known nesting hollows identified within the project area. Within 48 hours prior to clearing of suitable nesting hollows and known nesting hollows during the Black Cockatoo breeding season (between 1 June and 28 February of every year) the approval holder must:</p> <ul style="list-style-type: none"> <li>a. Clearly identify suitable nesting hollows and known nesting hollows within the project area and update the register;</li> <li>b. ensure that a suitably qualified person monitors all known nesting hollows to determine when chick(s) have fledged.</li> </ul>	Compliant	<p>A register of all suitable nesting hollows and known nesting hollows identified within the project area has been established. (A copy can be made available to the Department upon request.)</p> <p>No suitable or known nesting hollows were removed during the reporting period.</p>

Condition Number	Condition	Status	Evidence/Comments
4	The approval holder must not clear any vegetation within a 10 metre radius of known nesting hollows until a suitably qualified person has verified that the Black Cockatoo chick(s) in that known nesting hollow has fledged.	Compliant	No works were undertaken within 10 metres of a known nesting tree during the reporting period.

<p>5</p>	<p>To mitigate and offset the impacts to Black Cockatoos, within six months of clearing suitable nesting hollows and known nesting hollows, the approval holder must install at least two artificial nesting hollows for each suitable nesting hollow cleared and five artificial nesting hollows for each known nesting hollow cleared. Each artificial nesting hollow must:</p> <ol style="list-style-type: none"> <li>a. be installed either within the offset area, DBCA legislated lands and Waters or another location approved in writing by the Minister;</li> <li>b. be inspected by a suitably qualified person on at least two days (separated by at least a week) during the peak breeding season every year for the life of the approval. The suitably qualified person must record any evidence of use by Black Cockatoos and identify and report to the approval holder any maintenance required to ensure that all artificial nesting hollows remain suitable for use by Black Cockatoos;</li> <li>c. be installed, monitored and maintained in accordance with artificial hollow guidance for the life of the approval, with maintenance actions, if required, undertaken outside of the peak breeding season and before the commencement of the next breeding season; and</li> <li>d. not be installed in a manner that requires clearing of Black Cockatoo habitat or (to reduce the risk of vehicle strike) within 10 metres of the edge of any road corridor.</li> </ol>	<p>Compliant</p>	<p>No suitable or known nesting hollows were cleared or artificial nesting hollows installed during the reporting period.</p> <p>As previously reported, a total of two (2) suitable nesting hollows have been cleared for the project to date. These hollows were cleared on 4 December 2020. Thirty artificial nesting hollows were installed during the week of 23 May 2021.</p> <ol style="list-style-type: none"> <li>a. No artificial nesting hollows were installed in the reporting period. To date, 30 artificial nesting hollows have been installed in DBCA legislated lands (Julimar State Forest).</li> <li>b. During the reporting period, the artificial hollows were inspected by Rick Dawson from Australian Black Cockatoo Specialists on 24 October 2022 and 19 December 2022. The outcome of annual nest monitoring and recommended maintenance actions are provided in Attachment 1 and Attachment 2.</li> <li>c. The installation and ongoing monitoring and maintenance of artificial hollows is in accordance with DBCA <i>Fauna Note Artificial Hollows for Carnaby's cockatoo</i> (2016). During the reporting period, maintenance actions following the previous breeding season were undertaken on 23 March 2022. A summary of maintenance actions undertaken is provided in Attachment 3.</li> <li>d. No artificial nesting hollows were installed in the reporting period. To date, no Black Cockatoo habitat has been cleared to install the artificial hollows. The hollows are more than 10 metres from the edge of any road corridor.</li> </ol>
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Condition Number	Condition	Status	Evidence/Comments
6	<p>To offset residual significant impacts to the protected matters, within one year of the commencement of the action the approval holder must provide the following to the Department:</p> <ul style="list-style-type: none"> <li>a. title search results demonstrating that the title for at least 196 ha of Black Cockatoo habitat and at least 128 ha of Chuditch habitat within the offset area has been transferred by the approval holder to the DBCA;</li> <li>b. evidence that the offset area contains at least 196 ha of Black Cockatoo habitat and at least 128 ha of Chuditch habitat;</li> <li>c. the offset attributes and a shapefile for the offset area required by condition 6.a;</li> <li>d. documentation demonstrating that the DBCA is satisfied with the amount and timing of management funding to be provided by the approval holder for the ongoing management of the offset area.</li> </ul>	Completed	<ul style="list-style-type: none"> <li>a. As reported in the April 2021 compliance report, the title search results were provided to the Department on 12 March 2020.</li> <li>b. Evidence of the suitability of the offset site for Black Cockatoos and the Chuditch was provided to the Department on 29 March and 19 November 2018, and 12 March 2020.</li> <li>c. The final offset attributes and a shapefile of the offset area were provided to the Department on 12 March 2020.</li> <li>d. Evidence of DBCA’s management requirements and Main Roads agreement to these was provided to the Department on 12 March 2020. A Memorandum of Understanding (MoU) between Main Roads and DBCA to formalise this agreement was signed in September 2020. A copy of this MoU was provided to Main Roads in March 2021 and was provided to the Department separately.</li> </ul> <p>Main Roads previously reported partial non-compliance with this condition to the Department on 5 March 2020 (D20#287984). This related to the submission of all relevant documentation later than one year of the commencement of the action.</p>
7	The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action.	Completed	The action commenced on 21 January 2019. Main Roads notified the Department of commencement of the action in writing on 31 January 2019.
8	If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not commence the action without the prior written agreement of the Minister.	Not applicable	The project was approved on 4 December 2018 and the action was commenced on 21 January 2019.

Condition Number	Condition	Status	Evidence/Comments
9	The approval holder must maintain accurate and complete compliance records.	Compliant	Main Roads has maintained records in accordance with this condition and their legal obligations, under the <i>State Records Act 2000</i> (Western Australia).
10	If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request.	Not applicable	To date, no direction has been received from the Department to provide electronic copies of any compliance records.
11	The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps, and other spatial and metadata required under conditions of this approval, is prepared in accordance with the Department's <i>Guidelines for biological survey and mapped data</i> (2018) and submitted electronically to the Department within three months of the submission of the compliance report.	Not applicable	To date, no biological survey data has been required to be submitted under conditions of this approval.

Condition Number	Condition	Status	Evidence/Comments
12	<p>The approval holder must prepare a compliance report for each 12 month period following the date of commencement of the action, or as otherwise agreed to in writing by the Minister. The approval holder must:</p> <ul style="list-style-type: none"> <li>a. publish each compliance report on the website within 60 business days following the relevant 12 month period;</li> <li>b. notify the Department by email that a compliance report has been published on the website within five business days of the date of publication;</li> <li>c. keep all compliance reports publicly available on the website until this approval expires;</li> <li>d. exclude or redact sensitive ecological data from compliance reports published on the website; and</li> <li>e. where any sensitive ecological data has been excluded from the version published, submit the full compliance report to the Department within 5 business days of publication.</li> </ul>	Compliant	<ul style="list-style-type: none"> <li>a. To date, reports have been published on the Main Roads website within the relevant timeframes (refer <a href="https://www.mainroads.wa.gov.au/community-environment/environment/construction-project-reports/">https://www.mainroads.wa.gov.au/community-environment/environment/construction-project-reports/</a>). This compliance report will be published on the Main Roads website by 17 April 2023.</li> <li>b. The Department has been (D20#308510; D21#402217; D22#422811) and will be notified by email within five business days of publication of this report.</li> <li>c. This report and other previous reports will remain publicly available on the Main Roads website until the expiration date of the project approval (refer Main Roads website).</li> <li>d. No sensitive ecological data has been included in this report.</li> <li>e. No sensitive ecological data has been included in this report.</li> </ul>

Condition Number	Condition	Status	Evidence/Comments
13	<p>The compliance report prepared under condition 12 must include, but is not limited to:</p> <ul style="list-style-type: none"> <li>a. the avoidance and mitigation measures applied under condition 2, where applicable;</li> <li>b. the location of the suitable nesting hollows and known nesting hollows identified under condition 3;</li> <li>c. the evidence by which it was determined that known nesting hollows were being utilised, including the date each such determination;</li> <li>d. the evidence by which it was determined any chick(s) had fledged including the date of each such determination and location of the particular hollow(s);</li> <li>e. the installation date, location and a photo of each artificial nesting hollow installed under condition 5;</li> <li>f. a description of how the design and placement of each artificial nesting hollow was determined;</li> <li>g. the dates, methodology, maintenance activities and results of artificial nesting hollow monitoring undertaken; and</li> <li>h. the relevant qualifications and experience of the suitably qualified person(s) involved.</li> </ul>	Compliant	<ul style="list-style-type: none"> <li>a. No known nesting hollows were cleared during the reporting period. (Historic avoidance and mitigation measures required under Condition 2 have been reported previously.)</li> <li>b. No suitable or known nesting hollows were removed during the reporting period.</li> <li>c. Not applicable to this reporting period.</li> <li>d. Not applicable to this reporting period.</li> <li>e. No artificial nesting hollows were installed during the reporting period.</li> <li>f. No artificial nesting hollows were installed during the reporting period.</li> <li>g. Dates, methodology, maintenance activities and results of monitoring undertaken during the reporting period are provided in Attachments 1 – 3.</li> <li>h. Artificial installation, monitoring and maintenance is undertaken by Rick Dawson, Director, Australian Black Cockatoo Specialists (ABCS). ABCS has over 23 years' experience in conducting black cockatoo nesting surveys and repairs, and has installed and monitored over 350 artificial hollows. Rick Dawson is black cockatoo specialist with over 20 years of experience as a DBCA Wildlife Officer and member of the Carnabys Cockatoo and Forest Red-tailed Black Cockatoo recovery teams. Rick managed all DBCA black cockatoo breeding and rehabilitation for 15 years.</li> </ul>

Condition Number	Condition	Status	Evidence/Comments
14	<p>The approval holder must notify the Department in writing of any: incident; non-compliance with the conditions; or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than five business days after becoming aware of the incident or non-compliance. The notification must specify:</p> <ul style="list-style-type: none"> <li>a. the condition which is or may be in breach; and</li> <li>b. a short description of the incident and/or non-compliance.</li> </ul>	Not Applicable	No incidents or non-compliances are known to have occurred within this reporting period.
15	<p>The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:</p> <ul style="list-style-type: none"> <li>a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future;</li> <li>b. the potential impacts of the incident or non-compliance; and</li> <li>c. the method and timing of any remedial action that will be undertaken by the approval holder.</li> </ul>	Not applicable	No incidents or non-compliances are known to have occurred within this reporting period.
16	<p>The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.</p>	Not applicable	To date, no direction has been received from the Minister to undertake an independent audit.
17	<p>For each independent audit, the approval holder must:</p> <ul style="list-style-type: none"> <li>a. provide the name and qualifications of the independent auditor and the draft audit criteria to the Department;</li> <li>b. only commence the independent audit once the audit criteria have been approved in writing by the Department; and</li> <li>c. submit an audit report to the Department within the timeframe specified in the approved audit criteria.</li> </ul>	Not applicable	To date, no direction has been received from the Minister to undertake an independent audit.

Condition Number	Condition	Status	Evidence/Comments
18	The approval holder must publish the audit report on the website within 10 business days of receiving the Department's approval of the audit report and keep the audit report published on the website until the end date of this approval.	Not applicable	To date, no direction has been received from the Minister to undertake an independent audit
19	Within 30 days after the completion of the action, the approval holder must notify the Department in writing and provide completion data.	Not applicable	The action has not yet been completed.

## **APPENDIX A: FIGURE OF CLEARING UNDERTAKEN DURING REPORTING PERIOD**

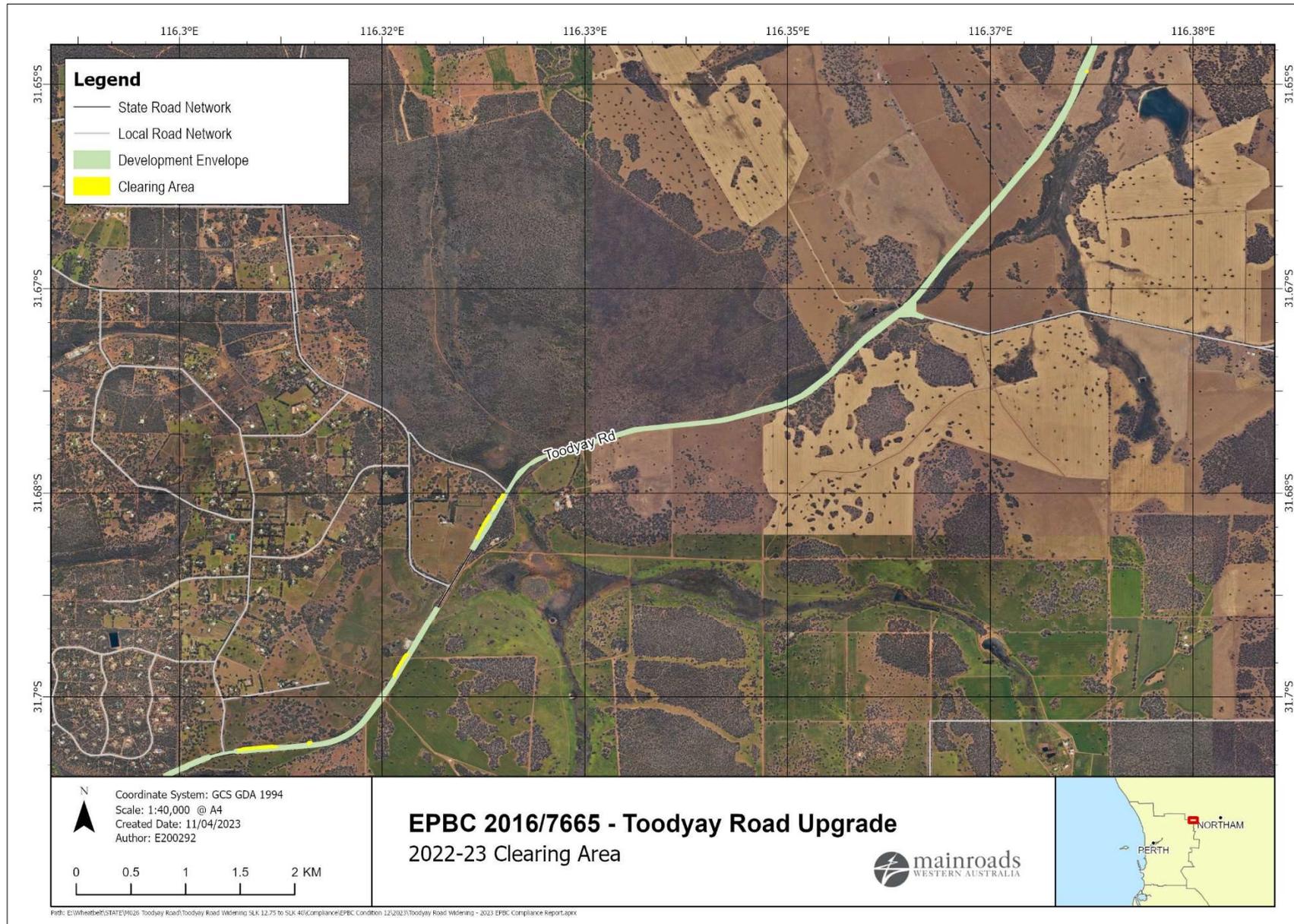


Figure 1 – 2022-23 Clearing area overview

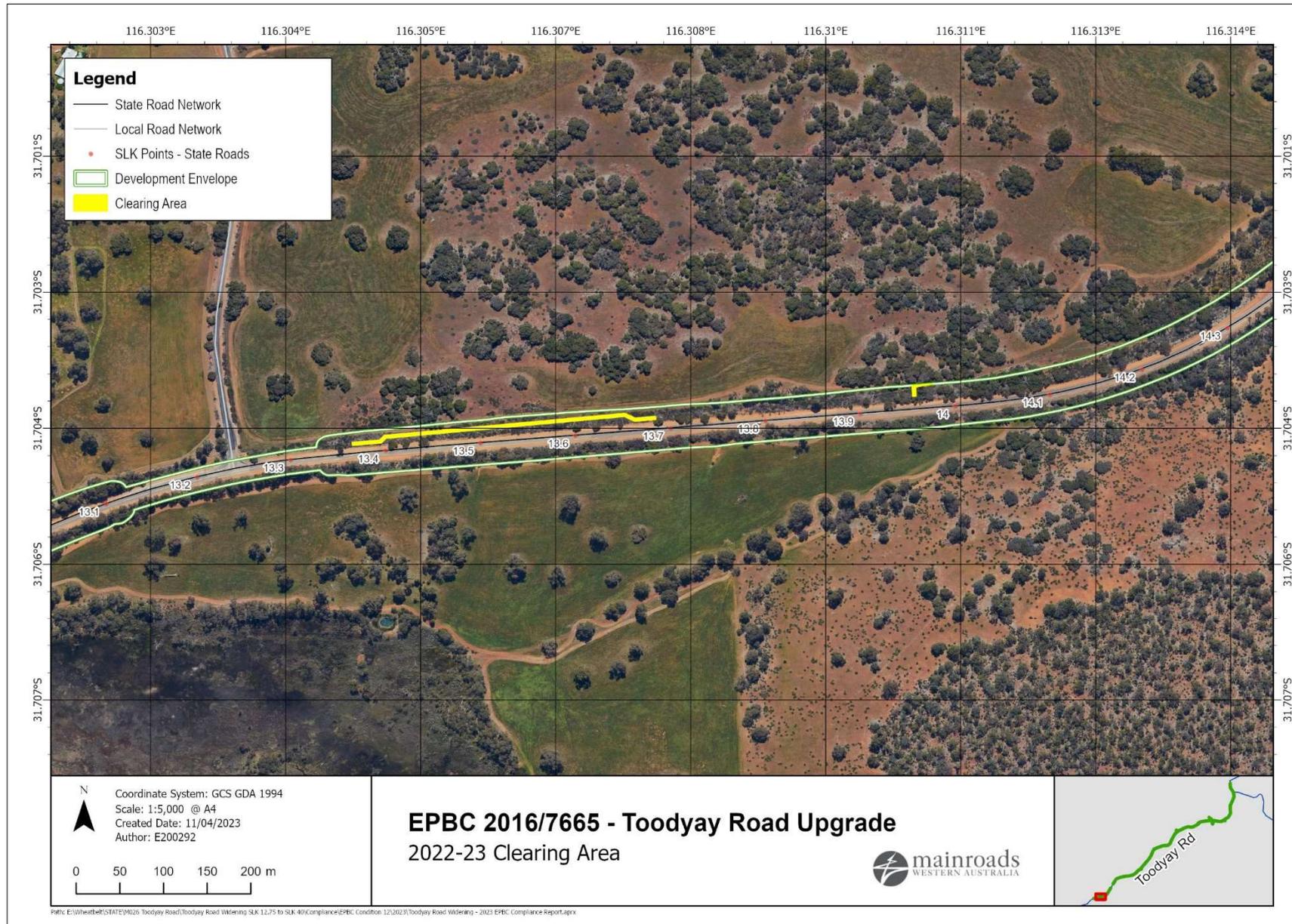


Figure 2 – 2022-23 Clearing area 13.4-14 SLK

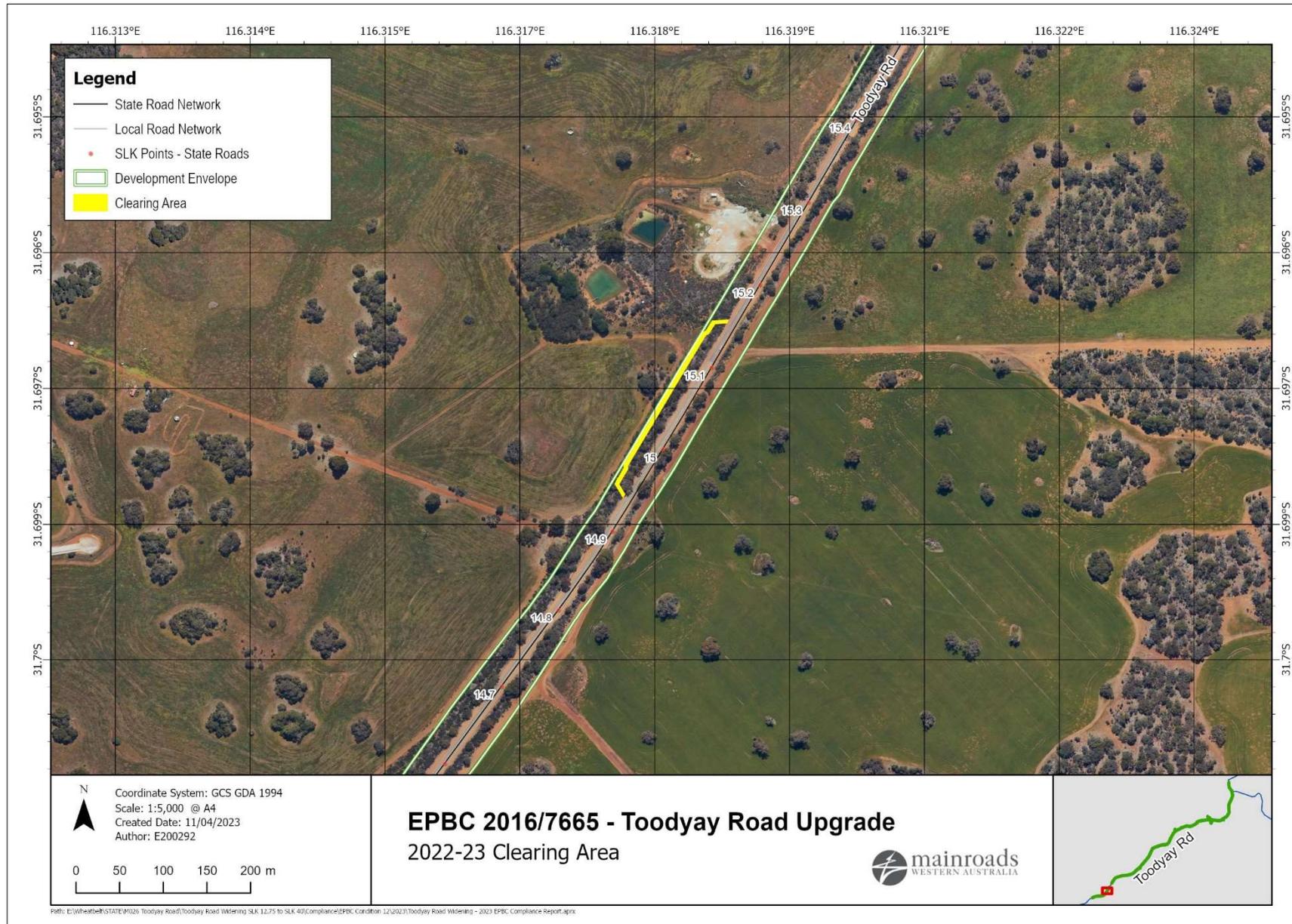


Figure 3 – 2022-23 Clearing area 14.95-15.15 SLK

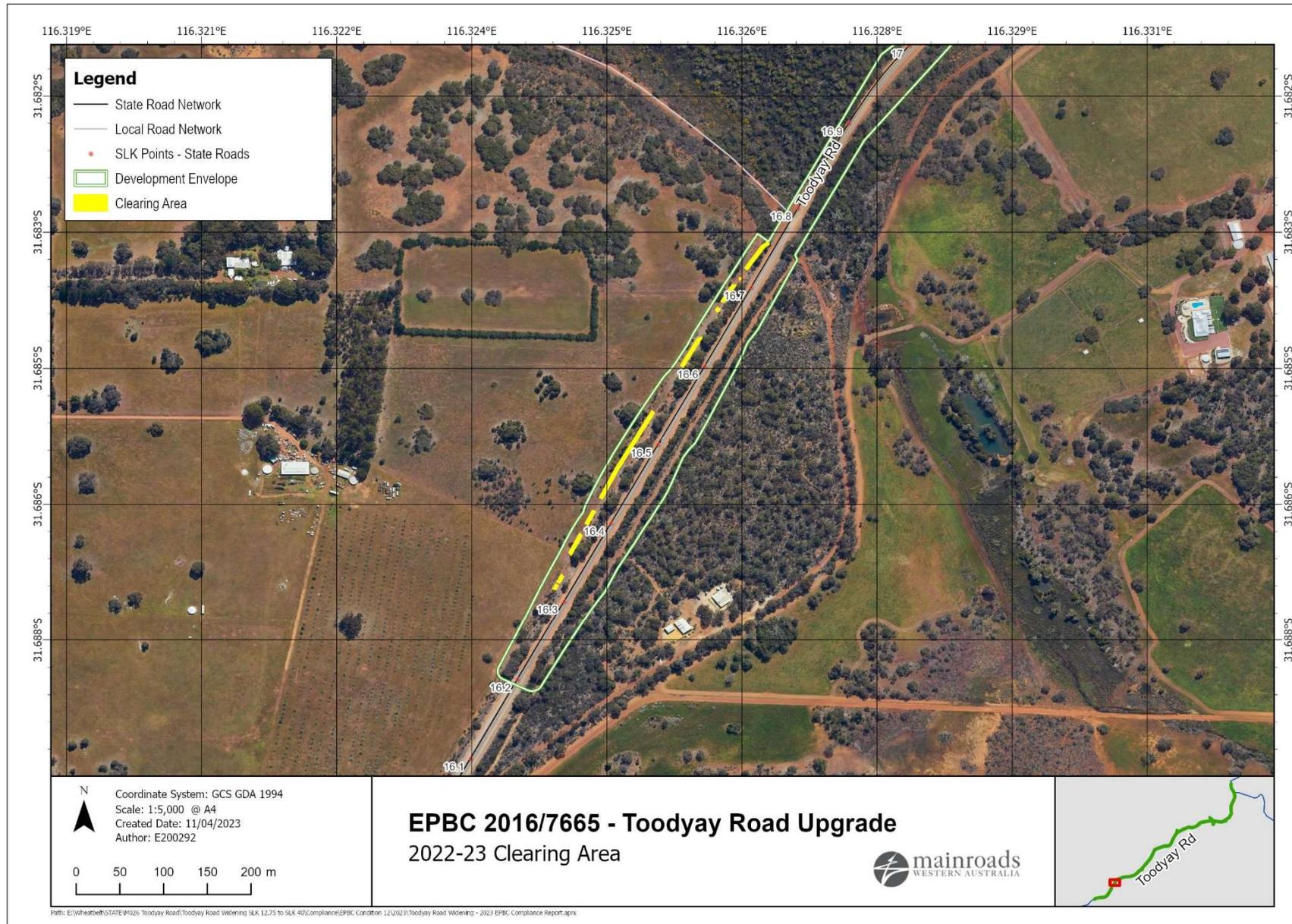


Figure 4 – 2022-23 Clearing area 16.3-16.75 SLK

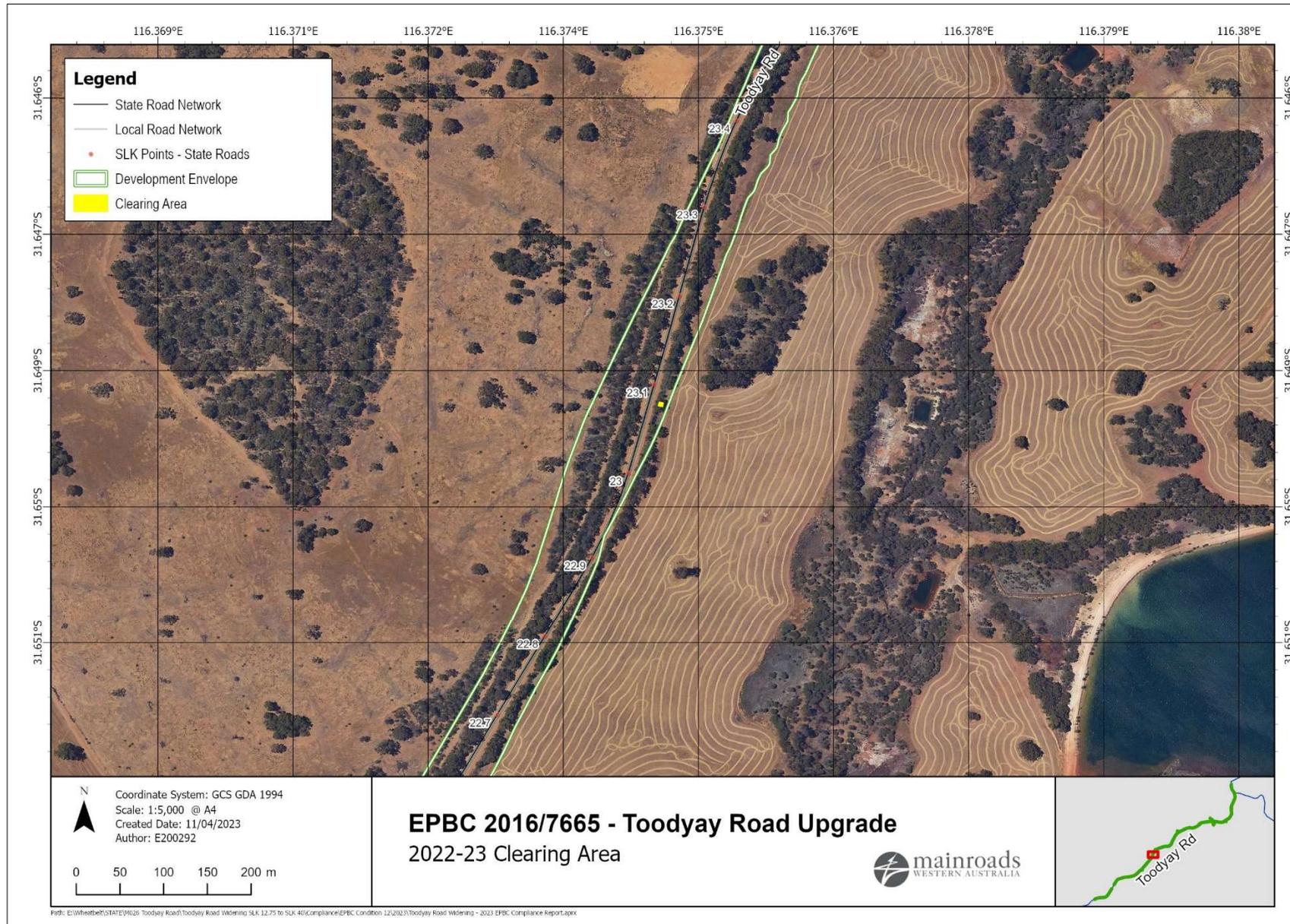


Figure 5 – 2022-23 Clearing area 23.1 SLK

## ATTACHMENTS

1	Nesting Survey October 2022
2	Nesting Survey December 2022
3	Report Repairs of 19 Artificial Hollows March 2022



Australian Black Cockatoo Specialists

# Report: Nesting survey of 30 artificial hollows Julimar State Forest W.A

Main Roads  
Western Australia

26 October 2022





# Australian Black Cockatoo Specialists

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All images source: Rick Dawson

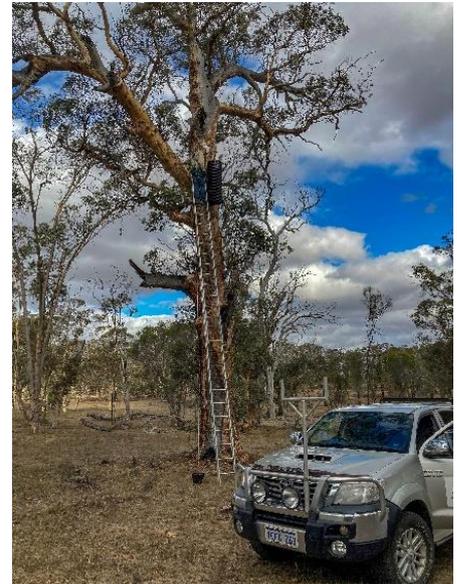
## INTRODUCTION

Australian Black Cockatoo Specialists (ABCS) are pleased to submit this report to the Department of Main Roads Western Australia (MRWA) regarding the inspection/nesting survey of 30 Artificial hollows in Julimar State Forest on Monday 24 October 2022.

## INSPECTION METHOD

The objective of the survey was to establish if there has been Black Cockatoo 'prospecting' and/or nesting activity. The scope of this project included:

- undertaking a close visual inspection of all artificial hollows via camera pole and or ladder, any activity detected was then photographed. **(This required two staff).**
- Inspect tree, fixings and hollow condition.
- Any Black Cockatoo nestlings observed, will be photographed, leg banded, measured, weighed, aged (this will give us the date egg laid) and DNA taken, under licences from DPAW.
- Details of any use including non-target species was recorded.



All 30 artificial hollows were inspected in accordance with protocols used by CSIRO and the Department of Biodiversity, Conservation and Attractions. The inside of each artificial hollow was viewed using a pole camera and photographs taken of any chipping detected, nesting activity or obstructions. A photograph was also taken from the ground using a 600mm lens of the sacrificial post detailing any chipping or signs of prospecting. Details of observations were recorded and are attached at Annex 2.

## RESULTS

There was chipping by black cockatoos observed in 19 of the 30 hollows with most in three separate areas, indicating that there were at least three to four females prospecting in the different areas. A score of 0-10 was used to rate the amount of chipping with '0' being none detected. Two sacrificial post had chipping rated at '5' (not replaced as still nesting) and one at '3', three at '2' with the other thirteen rated at '1'. The Tuart sacrificial post with bark on have or are starting to part from the limb.

On close inspection of artificial hollow J01 the following observations were noted:

- Female was flushed from hollow,
- 2 x Carnaby's eggs in the bottom of the hollow,
- Heavy chipping on post by a female Carnaby's.

On close inspection of artificial hollow J30 the following observations were noted:

- Female was flushed from hollow,
- 2 x hatched eggs, and one 6-7-day old nestling,
- Heavy chipping at base of post by a female Carnaby's.

The nestling in J30 will fledge in the last week of December therefore the second survey will need to be in mid-December, to ensure that the nestling can be processed.

Carnaby's were heard calling in Julimar State forest on two separate occasions during the survey, near J23 to J28 and also near J8.

## REPAIRS

The following repairs are recommended prior to the start of next year's breeding, this will be update in the second survey:

- At the time of this survey no hollows require woodchips.
- The sacrificial post in J30 and J01 need to be replaced post breeding.
- Obstruction in J20 removed.
- All 30 trees are in good condition and there is no need to relocate any hollows at this stage.
- All fixings and the hollows are in very good condition.

## RECOMMENDATIONS

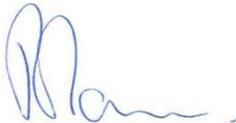
- That the nestling in J30 and J01 be processed during the December survey
- That next year's nesting survey should be conducted **in late October and December 2022**, to enable data to be taken from nestlings to provide valuable information on the health of the birds using the area.

## CONCLUSIONS

These results are very encouraging and consistent with other sites that have had artificial hollows installed for the first time in known breeding sites. In these sites it has taken a couple of years for the birds to become comfortable enough to breed in them. As there has been one nesting attempt last and two breeding attempts and prospecting in another 16 hollows this year, it is very likely that nesting attempts will continue to grow with each year.

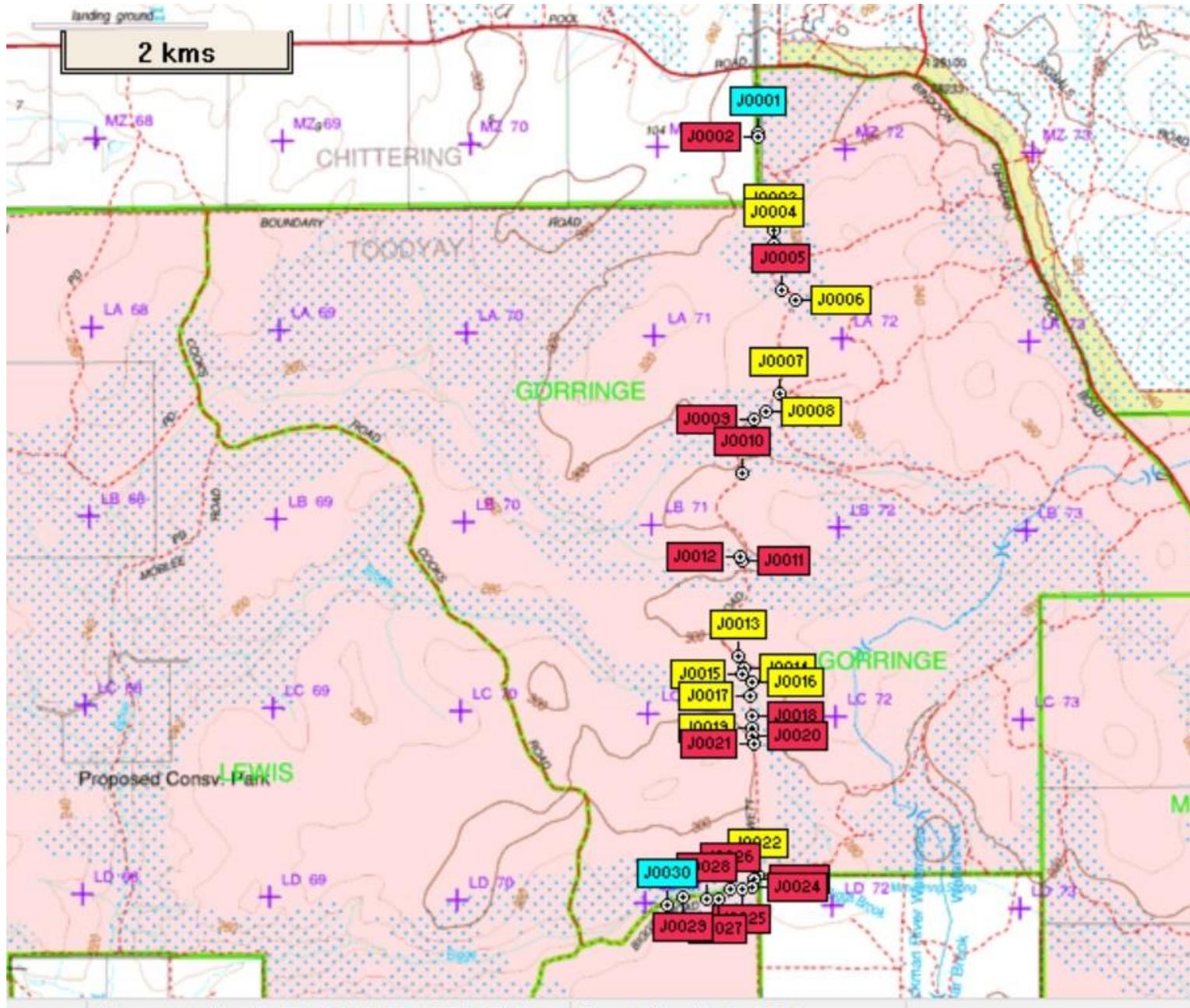
## CONTACT INFORMATION

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**Position:** Principal Consultant  
**Phone:** 0448 170 670  
**Email:** [dawsonrick60@gmail.com](mailto:dawsonrick60@gmail.com)



Rick Dawson  
Director  
Australian Black Cockatoo Specialist  
26 October 2022

APPENDIX 1 – MAP OF ARTIFICIAL HOLLOWES THAT HAVE CHIPPING (MARKED RED), NESTING (MARKED BLUE) BY BLACK COCKATOOS

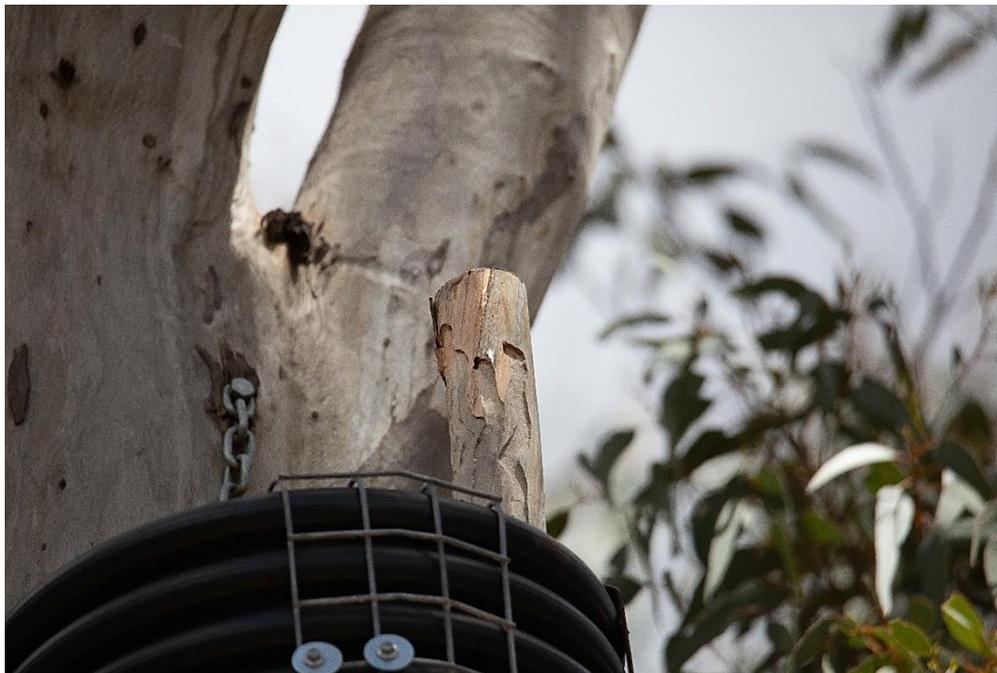


## Artificial Hollow J01



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J01	Female Carnaby's Flushed, 2 x eggs being incubated	5	Nil	Good	Good	Change post and check substrate post nesting

## Artificial Hollow J02



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J02	Chewing on post no signs of Breeding	0	Nil	Good	Good	NIL

## Artificial Hollow J03



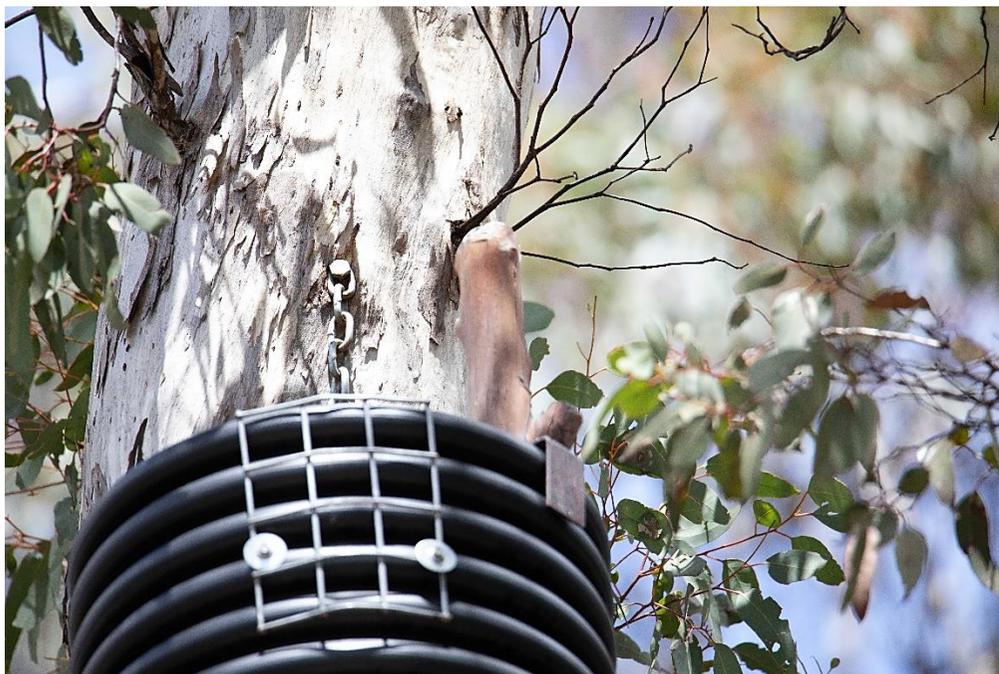
Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J03	Chewing on post no signs of Breeding	0	Nil	Good	Good	NIL

# Artificial Hollow J04



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J04	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	NIL

## Artificial Hollow J05



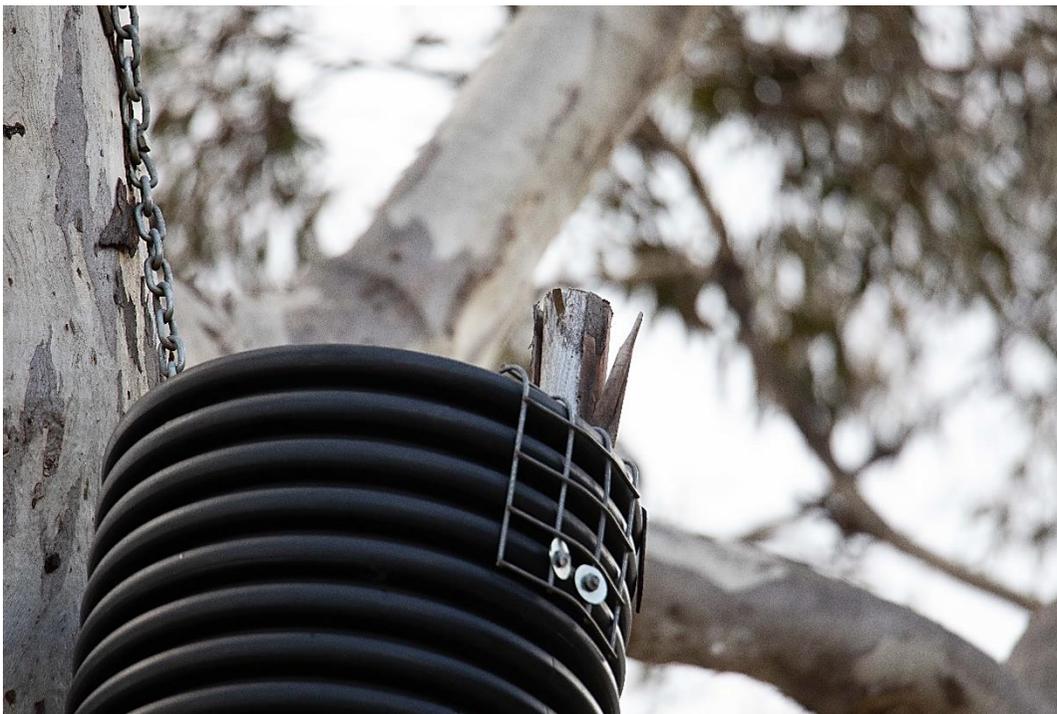
Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J05	Chewing on post no signs of Breeding	1	Nil	Good	Good	NIL

## Artificial Hollow J06



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J06	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J07



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J07	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J08



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J08	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

# Artificial Hollow J09



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J09	Chewing on post no signs of Breeding	2	Nil	Good	Good	NIL

# Artificial Hollow J10



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J10	Chewing on post no signs of Breeding	0	Nil	Good	Good	Nil

# Artificial Hollow J11



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J11	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J12



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J12	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J13



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J13	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

# Artificial Hollow J14



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J14	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J15



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J15	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J16



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J16	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J17



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J17	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J18



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J18	No signs of nesting or inspection by Black Cockatoos	1	Nil	Good	Good	Nil

## Artificial Hollow J19



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J19	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J20



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J20	No signs of nesting or inspection by Black Cockatoos	1	Nil	Good	Good	Remove stick obstruction

# Artificial Hollow J21



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J21	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J22



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J22	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J23



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J23	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J24



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J24	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil

# Artificial Hollow J25



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J25	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil

## Artificial Hollow J26



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J26	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J27



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J27	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J28



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J28	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J29



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J29	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil

## Artificial Hollow J30



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J30	Female Carnaby's Flushed, 2 x eggs hatched One x 6-7 day old nestling	5	Nil	Good	Good	Change post and check substrate post nesting

Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J01	Female Carnaby's Flushed, 2 x eggs being incubated	5	Nil	Good	Good	Change post and check substrate post nesting
J02	Chewing on post no signs of Breeding	0	Nil	Good	Good	NIL
J03	Chewing on post no signs of Breeding	0	Nil	Good	Good	NIL
J04	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	NIL
J05	Chewing on post no signs of Breeding	1	Nil	Good	Good	NIL
J06	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J07	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J08	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J09	Chewing on post no signs of Breeding	2	Nil	Good	Good	NIL
J10	Chewing on post no signs of Breeding	0	Nil	Good	Good	Nil
J11	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J12	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

J13	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J14	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J15	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J16	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J17	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
<b>J18</b>	<b>No signs of nesting or inspection by Black Cockatoos</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
J19	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
<b>J20</b>	<b>No signs of nesting or inspection by Black Cockatoos</b>	<b>0</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Remove stick obstruction</b>
<b>J21</b>	<b>Chewing on post no signs of Breeding</b>	<b>0</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
J22	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
<b>J23</b>	<b>Chewing on post no signs of Breeding</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
<b>J24</b>	<b>Chewing on post no signs of Breeding</b>	<b>3</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
<b>J25</b>	<b>Chewing on post no signs of Breeding</b>	<b>2</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>

J26	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J27	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J28	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J29	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil
J30	Female Carnaby's Flushed, 2 x eggs hatched One x 6-7 day old nestling	5	Nil	Good	Good	Change post and check substrate post nesting



Australian Black Cockatoo Specialists

# Report: Nesting survey of 30 artificial hollows Julimar State Forest W.A



Main Roads  
Western Australia

24 December 2022



# Australian Black Cockatoo Specialists

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All images source: Rick Dawson

## INTRODUCTION

Australian Black Cockatoo Specialists (ABCS) are pleased to submit this report to the Department of Main Roads Western Australia (MRWA) regarding the inspection/nesting survey of 30 Artificial hollows in Julimar State Forest on Monday 19 December 2022.

## INSPECTION METHOD

The objective of the survey was to establish if there has been Black Cockatoo 'prospecting' and/or nesting activity. The scope of this project included:

- undertaking a close visual inspection of all artificial hollows via camera pole and or ladder, any activity detected was then photographed. **(This required two staff).**
- Inspect tree, fixings and hollow condition.
- Any Black Cockatoo nestlings observed, will be photographed, leg banded, measured, weighed, aged (this will give us the date egg laid) and DNA taken, under licences from DPAW.
- Details of any use including non-target species was recorded.



All 30 artificial hollows were inspected in accordance with protocols used by CSIRO and the Department of Biodiversity, Conservation and Attractions. The inside of each artificial hollow was viewed using a pole camera and photographs taken of any chipping detected, nesting activity or obstructions. Details of observations were recorded and are attached at Annex 2.

## RESULTS

There was **NEW** chipping by black cockatoos observed in 11 of the 30 hollows (In October there was 19 which is normal prospecting for that time of year) with most in three separate areas, indicating that there were at least three to four females prospecting in the different areas. A score of 0-10 was used to rate the amount of chipping with '0' being none detected. two sacrificial post had chipping rated at '6' and '5' (not replaced as still nesting) one at 4'', four at '3, five at '2' with the other seven rated at '1'. The Tuart sacrificial post with bark on have or are starting to part from the limb.

On close inspection of artificial hollow J01 the following observations were noted:

- No female present,
- 1 x abandoned Carnaby's eggs in the bottom of the hollow (removed),
- 1x Male nestlings 38-days old, Leg banded 32002064, it weighed 390gm which is over 100gm underweight, this is not uncommon. Feathers taken for DNA.
- **The egg was laid on or about 13 October, it hatched on 11 November and it will fledge on the week of 20 January 2023.**
- Heavy chipping on post by a female Carnaby's.

On close inspection of artificial hollow J21 the following observations were noted:

- Female was flushed from hollow,
- 2 x Carnaby's eggs in the bottom of the hollow,
- Chipping on post by a female Carnaby's.

On close inspection of artificial hollow J30 the following observations were noted:

- No female present,

- 1x Male nestlings 54-days old, Leg banded 32002065, it weighed 680gm which is over 40gm over weight – very healthy nestling. Feathers taken for DNA
- **The egg was laid on or about 27 September, it hatched on 26 October and it will fledge on the week of 04 January 2023**
- Heavy chipping on post by a female Carnaby's.

Carnaby's' were heard calling/observed in Julimar State forest on two separate occasions during the survey, near J21 to J28. A group of 10 were observed feeding on Marri on roadside verge of the Bindoon-Dewars Pool Rd.

### REPAIRS

The following repairs are recommended prior to the start of next year's breeding:

- At the time of this survey **ONLY J01 and J021** hollows require woodchips.
- The sacrificial post in J30, J01 and J21 need to be replaced/checked post breeding.
- Obstruction in J2 and J20 removed.
- All 30 trees are in good condition and there is no need to relocate any hollows at this stage.
- All fixings and the hollows are in very good condition.

### RECOMMENDATIONS

- That the repairs as detailed above should be completed prior to the winter rains and the commencement of the nesting season.
- That next year's nesting survey should be conducted **in late October and December 2023**, to enable data to be taken from nestlings to provide valuable information on the health of the birds using the area.

### CONCLUSIONS

These results are very encouraging and consistent with other sites that have had artificial hollows installed for the first time in known breeding sites. In these sites it has taken a couple of years for the birds to become comfortable enough to breed in them. As there has now been THREE nesting attempts and prospecting in another 19 hollows this year, it is very likely that nesting attempts will continue to grow with each year.

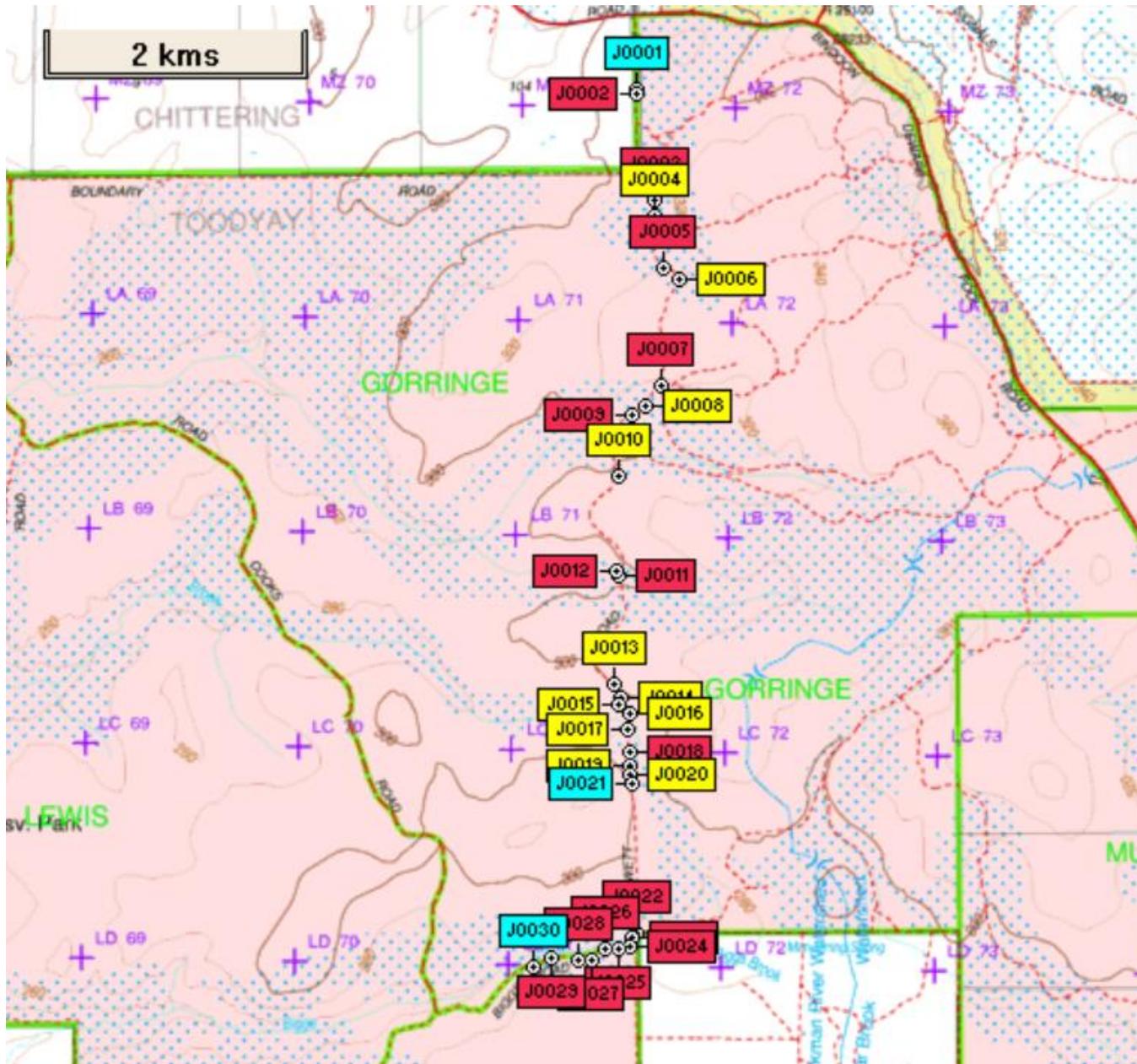
### CONTACT INFORMATION

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**Email:** [dawsonrick60@gmail.com](mailto:dawsonrick60@gmail.com)



Rick Dawson  
 Director  
 Australian Black Cockatoo Specialist  
 24 December 2022

APPENDIX 1 – MAP OF ARTIFICIAL HOLLOWES THAT HAVE CHIPPING (MARKED RED), NESTING (MARKED BLUE) BY BLACK COCKATOOS



APPENDIX 2 – DETAILS OF NESTING SURVEY OF EACH HOLLOW

## Artificial Hollow JO1



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J01	1 x abandoned Carnaby's eggs in the bottom of the hollow, 1x Male nestlings 38 days old, Leg banded 32002064, it weighed 390gm which over <u>100gm</u> <u>underweight</u> .	5	10lt	Good	Good	Change post and check substrate post nesting

## Artificial Hollow J02



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J02	Chewing on post no signs of Breeding	1	Nil	Good	Good	Remove obstruction

## Artificial Hollow J03



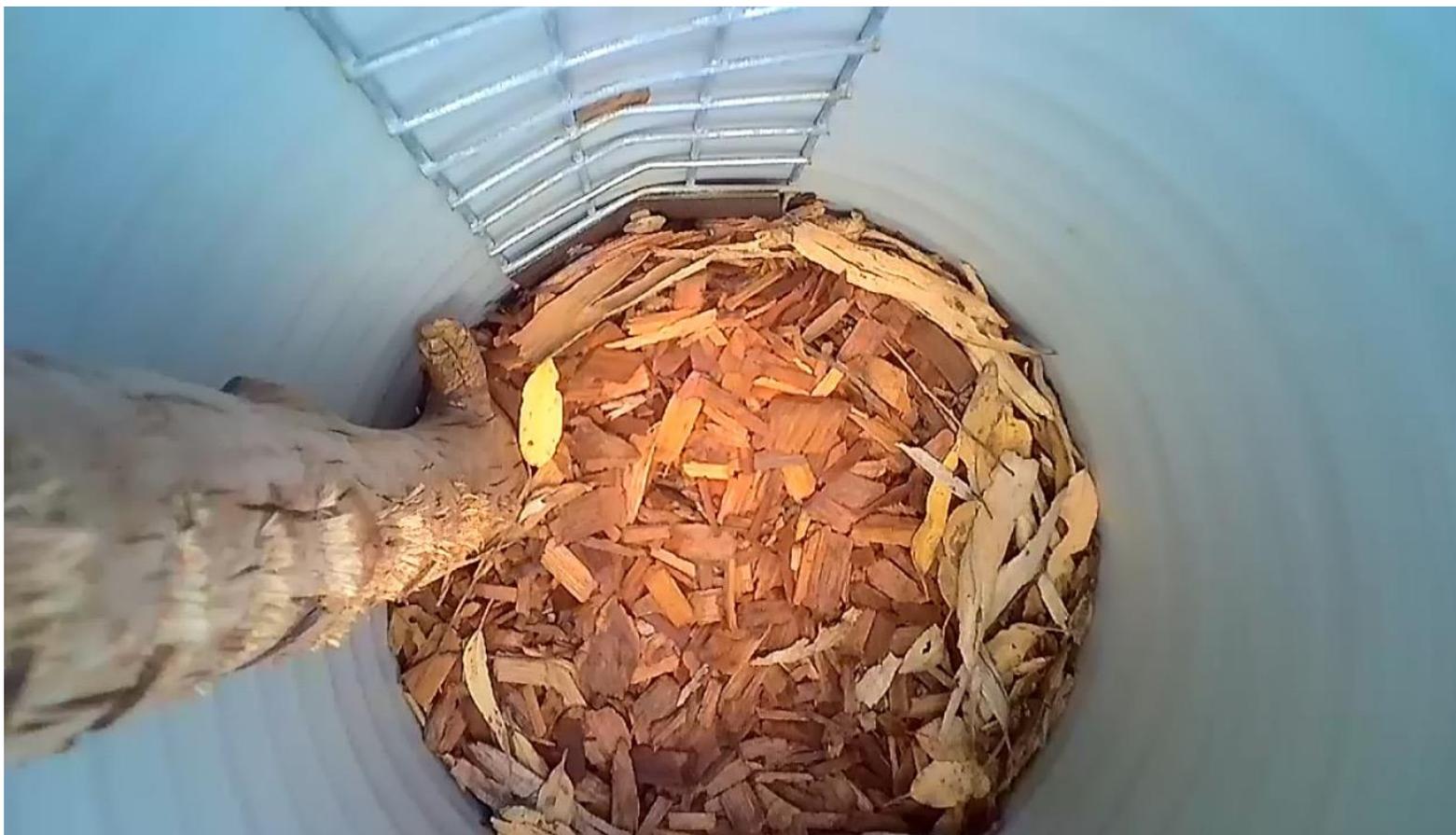
Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J03	Chewing on post no signs of Breeding	4	Nil	Good	Good	Change post

## Artificial Hollow J04



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J04	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	NIL

## Artificial Hollow J05



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J05	Chewing on post no signs of Breeding	1	Nil	Good	Good	NIL

## Artificial Hollow J06



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J06	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J07



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J07	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J08



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J08	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J09



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J09	Chewing on post no signs of Breeding	2	Nil	Good	Good	NIL

## Artificial Hollow J10



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J10	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

# Artificial Hollow J11



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J11	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J12



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J12	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

## Artificial Hollow J13



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J13	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J14



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J14	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J15



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J15	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J16



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J16	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J17



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J17	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil

## Artificial Hollow J18



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J18	No signs of nesting or inspection by Black Cockatoos	1	Nil	Good	Good	Nil

## Artificial Hollow J19



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J19	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

## Artificial Hollow J20



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J20	No signs of nesting or inspection by Black Cockatoos	1	Nil	Good	Good	Remove stick obstruction

# Artificial Hollow J21



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J21	Female was flushed from hollow, 2 x Carnaby's eggs in the bottom of the hollow, Chipping on post by a female Carnaby's.	2	Nil	Good	Good	Inspect and repair as required

## Artificial Hollow J22



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J22	No signs of nesting or inspection by Black Cockatoos	2	Nil	Good	Good	Nil

## Artificial Hollow J23



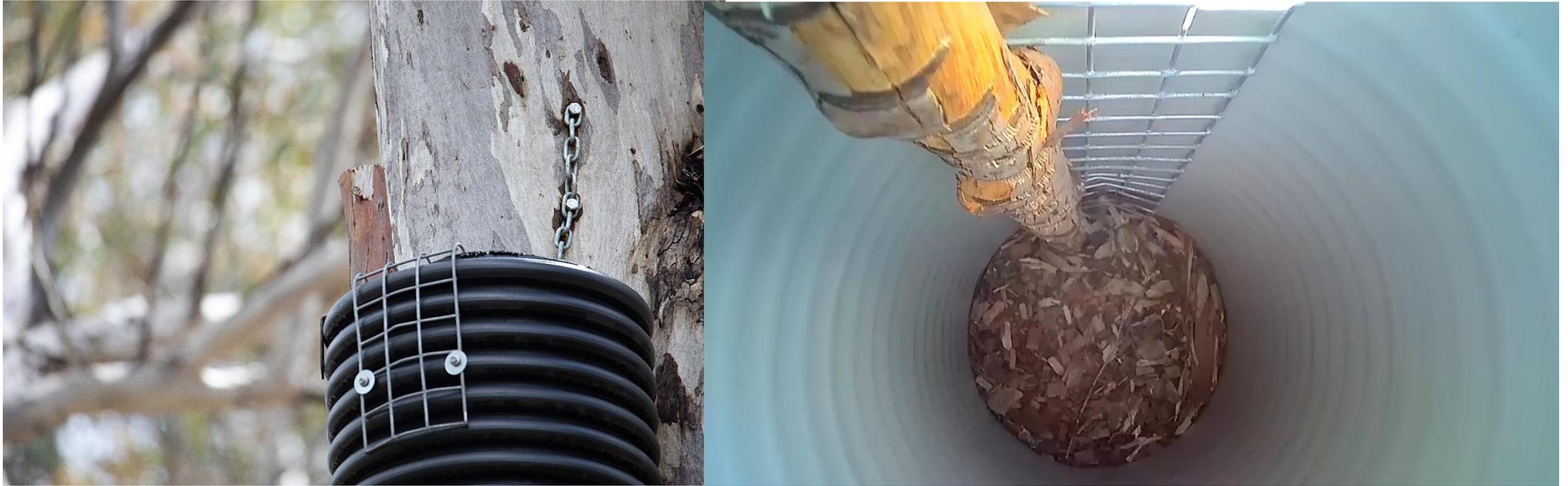
Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J23	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J24



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J24	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil

# Artificial Hollow J25



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J25	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil

## Artificial Hollow J26



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J26	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil

# Artificial Hollow J27



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J27	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil

# Artificial Hollow J28



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J28	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil

## Artificial Hollow J29



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J29	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil

## Artificial Hollow J30



Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J30	1x Male nestlings 54 days old, Leg banded 32002065, it weighed 680gm which over 40gm over weight.	6	Nil	Good	Good	Change post and check substrate post nesting

Hollow No	Comments	Chipping score 0-10	Wood Chips	Tree condition	Fixings and Hollow condition	Recommended repairs
J01	1 x abandoned Carnaby's eggs in the bottom of the hollow, 1x Male nestlings 38 days old, Leg banded 32002064, it weighed 390gm which over <u>100gm</u> <u>underweight</u> .	5	10lt	Good	Good	Change post and check substrate post nesting
J02	Chewing on post no signs of Breeding	1	Nil	Good	Good	Remove obstruction
J03	Chewing on post no signs of Breeding	4	Nil	Good	Good	Change post
J04	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	NIL
J05	Chewing on post no signs of Breeding	1	Nil	Good	Good	NIL
J06	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J07	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J08	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J09	Chewing on post no signs of Breeding	2	Nil	Good	Good	NIL
J10	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil

<b>J11</b>	<b>Chewing on post no signs of Breeding</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
<b>J12</b>	<b>Chewing on post no signs of Breeding</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
J13	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J14	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J15	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J16	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
J17	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	Nil
<b>J18</b>	<b>No signs of nesting or inspection by Black Cockatoos</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>
J19	No signs of nesting or inspection by Black Cockatoos.	0	Nil	Good	Good	Nil
J20	No signs of nesting or inspection by Black Cockatoos	0	Nil	Good	Good	<b>Remove stick obstruction</b>
<b>J21</b>	<b>Female Flushed 2 x CC eggs</b>	<b>2</b>	<b>10lts</b>	<b>Good</b>	<b>Good</b>	<b>Add wood chips check post</b>
J22	<b>No signs of nesting or inspection by Black Cockatoos</b>	2	Nil	Good	Good	Nil
<b>J23</b>	<b>Chewing on post no signs of Breeding</b>	<b>1</b>	<b>Nil</b>	<b>Good</b>	<b>Good</b>	<b>Nil</b>

J24	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil
J25	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil
J26	Chewing on post no signs of Breeding	1	Nil	Good	Good	Nil
J27	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil
J28	Chewing on post no signs of Breeding	3	Nil	Good	Good	Nil
J29	Chewing on post no signs of Breeding	2	Nil	Good	Good	Nil
J30	1x Male nestlings 54 days old, Leg banded 32002065, it weighed 680gm which over 40gm over weight.	6	Nil	Good	Good	Change post and check substrate post nesting



Australian Black Cockatoo Specialists

# Report: Repairs of 19 artificial hollows Julimar State Forest W.A



Main Roads  
Western Australia

23 March 2022



# Australian Black Cockatoo Specialists

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- **INTRODUCTION ..... 1**
- **INSPECTION AND REPAIR METHOD ..... 1**
- **REPAIRS AND RESULTS ..... 2**
- **RECOMMENDATIONS/CONCLUSIONS ..... 2**
- **CONTACT INFORMATION..... 2**
- **APPENDIX 1 – 2..... 3**

All images source: Rick Dawson

## INTRODUCTION

Australian Black Cockatoo Specialists (ABCS) are pleased to submit this report to the Department of Main Roads Western Australia (MRWA) regarding the inspection and repairs of 19 Artificial hollows in Julimar State Forest WA

## REPAIR AND INSPECTION METHOD

As a result of COVID protocols the inspection and repairs was completed in one 14hr day. As a result, there is no charge for accommodation and associate meals.

The objective was to ensure that every hollow was in peak condition, and to establish if there has been any Black Cockatoo 'prospecting' and/or nesting activity and inspect and repair the artificial hollows as required. The scope of this project included:

- undertaking a close visual inspection of all artificial hollows via ladder, any activity detected was then photographed. **(This required two staff).**
- Inspect tree, fixings and hollow condition.
- Place up to 10lts of course Jarrah wood chips in hollows as required, posts reset and obstruction removed.

Black Cockatoos are known to 'prospect' (inspect a hollow for suitability) a number of hollows in the nesting area. This can be done over many days. Prospecting can be one or all of the following:

- Chewing the top of the hollow or sacrificial post,
- Entering hollow,
- Chewing the post at base,
- Compacting hollow floor, and
- Digging a depression in the hollow floor.



All 19 artificial hollows were inspected in accordance with protocols used by CSIRO and the Department of Biodiversity, Conservation and Attractions. Each artificial hollow was viewed using a 10m ladder camera and a photographs taken of any chipping detected, nesting activity or obstructions. Details of observations were recorded and are attached at Annex 1.

## REPAIRS AND RESULTS

The following repairs were conducted:

- As part of the normal compacting/decay up to 10lts of wood chips was placed in each hollow. as per Annex 1. Research has shown that if the substrate becomes too low Carnaby's Cockatoos have chewed the base which has resulted in eggs falling through (Pers Obs Rick Dawson and Dr Denis Saunders)
- The sacrificial post in J29 was replaced, no other post required replacing at this time.
- J13 had a Carnaby's tail feather on the substrate which was removed.
- J09 had considerable chipping on post and there was a depressing in the hollow floor from a prospecting Carnaby's cockatoo.
- All 30 trees are in good condition and there is no need to relocate any hollows at this stage.



- All fixings and the hollows are in very good condition.

### RECOMMENDATIONS

- There will be no requirement to add any further substrate to the nests for at least three years.
- All fixings and hollows should last 50 years, and
- That a nesting surveys should be conducted **in October late December 2022**, to ensure all nesting attempts and recorded and to enable data to be taken from nestlings to provide valuable information on the health of the birds using the area.

### CONCLUSIONS

All hollows are now in peak condition and ready for this year's breeding season

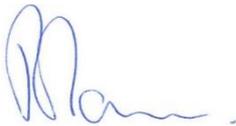
These results are very encouraging and consistent with other sites that have had artificial hollows installed for the first time in known breeding sites. In these sites it has taken a couple of years for the birds to become comfortable enough to breed in them. As there has now been a successful breeding attempt and prospecting in other hollows, it is very likely that nesting attempts will continue to grow with each year.

The area to the west of these existing hollows will support more hollows if required. To install these a licence will be required from DBCA.

MRWA are to be commended for maintaining the hollows in optimal condition and monitoring each year to date.

### CONTACT INFORMATION

**Contact Name:** Rick Dawson  
**Position:** Principal Consultant  
**Phone:** 0448 170 670  
**Email:** [dawsonrick60@gmail.com](mailto:dawsonrick60@gmail.com)



Rick Dawson  
Director  
Australian Black Cockatoo Specialist  
23 April 2022

**APPENDIX 1 – LIST OF REPAIRS.**

<b>Hollow No</b>	<b>Observations December 2021</b>	<b>Recommended Repairs.</b>	<b>Action/comments</b>
J02	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	7lts of Woodchips, no sign of nesting, Cobwebs
J03	No signs of nesting or inspection by Black Cockatoos	10Lts woodchips	10lts of Woodchips, no sign of nesting,
J04	No signs of nesting or inspection by Black Cockatoos	10Lts woodchips	10lts of Woodchips, no sign of nesting
J05	Chewing on post no signs of Breeding	10Lts woodchips	10lts of Woodchips
J08	Chewing on post no signs of Breeding	5Lts woodchips	5ts of Woodchips, lots of chewing
J09	Chewing on post no signs of Breeding	5lt woodchips	8lts of Woodchips lots of chipping on post, indent in substrate as result of female prospecting
J10	Minor Chewing on post no signs of Breeding	10Lts woodchips	10lts of Woodchips
J11	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	10lts of Woodchips, no sign of nesting
J12	Chewing on post no signs of Breeding	5Lts woodchips	5lts of Woodchips, minor chewing on post
J13	Chewing on post no signs of Breeding. Carnaby's tail feather	5Lts woodchips	5lts of Woodchips, one Carnaby's Tail feather was removed from the floor.
J14	No signs of nesting or inspection by Black Cockatoos	10Lts woodchips	5lts of Woodchip , no sign of nesting

J16	Chewing on post no signs of Breeding	10Lts woodchips	5lts of Woodchips, minor chewing on post
J17	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	5lts of Woodchips, no sign of nesting
J18	No signs of nesting or inspection by Black Cockatoos	10Lts woodchips	5lts of Woodchips, no sign of nesting
J19	No signs of nesting or inspection by Black Cockatoos.	5Lts woodchips	5lts of Woodchips, no sign of nesting
J20	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	5lts of Woodchips, minor chewing on post
J22	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	5lts of Woodchips
J27	No signs of nesting or inspection by Black Cockatoos	5Lts woodchips	5lts of Woodchips, no sign of nesting
J29	32 day old Carnaby's nestling	New post, 5 lts woodchips	Nestling has fledged. New sacrificial, 10 lts woodchips

**APPENDIX 2 – PHOTOGRAPS OF REPAIRS TO 19 HOLLOWES.**



J29 NEST EMPTY, POO ON LADDER, NESTLING FLEDGED



J29 SACRIFICIAL POST CHANGED WOODCHIPS



J27 WOODCHIPS ADDED



J22 WOODCHIPS ADDED



J20 WOODCHIPS ADDED



J19 WOODCHIPS ADDED



J18 WOODCHIPS ADDED



J17 WOODCHIPS ADDED



J16 WOODCHIPS ADDED



J14 WOODCHIPS ADDED



J12 WOODCHIPS ADDED



J13 Carnaby's feather



WOODCHIPS ADDED



J11 WOODCHIPS ADDED



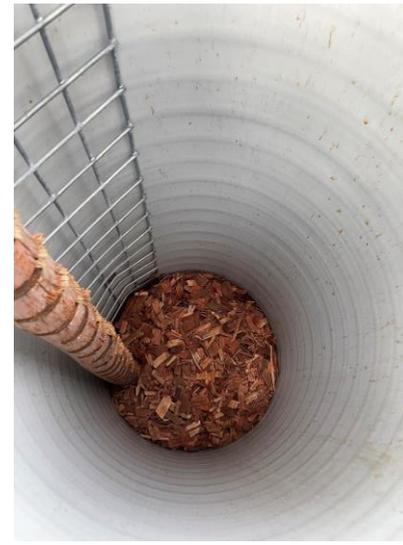
J10 WOODCHIPS ADDED



J09 WOODCHIPS ADDED



J08 WOODCHIPS ADDED



J05 WOODCHIPS ADDED



J04 WOODCHIPS ADDED



J03 WOODCHIPS ADDED



J02 WOODCHIPS ADDED