GOVERNMENT OF
WESTERN AUSTRALIA

Section 70(2)
Environmental Protection Act 1986.

VEGETATION CONSERVATION NOTICE

CPS 9559/1

Person to whom this vegetation conservation notice is given (The Owner):
(being the owner of the land described below)

2 Thomas Road PTY LTD ACN 614456165
1, 8 Parliament Place
WEST PERTH WA 6005

Land to which this vegetation conservation notice relates ("the land"):

Lot 1 on Diagram 29600 as comprised on Certificate of Title Volume 1996 Folio 510 and Lot 2 on Diagram 30119 as comprised on Certificate of Title Volume 584 Folio 41A.

Reasons for which this vegetation conservation notice is served:

This vegetation conservation notice is given because I suspect on the following grounds that unlawful clearing has taken place on the land:

(a) Examination of aerial and satellite imagery has shown the land contained native vegetation.

(b) Satellite imagery from 26 April 2021 showed native vegetation present on the property.

(c) Satellite imagery on the 5 August 2021 showed the native vegetation as not being present.

(d) A site inspection of the land by Department of Water and Environmental Regulation (DWER) Inspectors on 15 December 2021 confirmed that clearing had been carried out.

(e) I suspect on reasonable grounds that the clearing was not authorised by:

- a clearing permit; or
- by exemption under the *Environmental Protection Act 1986;* or
- by exemption under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*; or

- by a notice issued under section 51DA(5) of the *Environmental Protection Act 1986.*

(f) I suspect on reasonable grounds that unlawful clearing of native vegetation, constituting a contravention of section 51C of the *Environmental Protection Act 1986*, has taken place.

Requirements of this Notice:

The person(s) to whom this vegetation conservation notice is given, and each subsequent owner and or occupier of the land who is bound by this vegetation conservation notice, are required to undertake the following specified measures: for a period of ten (10) years from the date this notice is given to re-establish and maintain vegetation on any area affected by the clearing to a condition as near as possible to the condition of the vegetation before the clearing occurred.

1. No unlawful clearing

Ensure that no further unlawful clearing takes place on the land.

2. Cultivation prohibited

From the date this notice is given, ensure no cultivation, including harvesting, mowing, scraping, raking, ploughing or mechanical movement of soil or seeding of non-native crops, is carried out within the *specified areas* other than purposes required under this vegetation conservation notice or for the purpose of complying with a written firebreak notice.

3. Fencing

(a) From the date of the giving of this vegetation conservation notice, maintain the fence in a condition adequate to exclude livestock from the *specified areas*.

4. Exclusion of stock

(a) Ensure that *livestock* are excluded from the *specified areas* and not cause or permit *livestock* to enter or remain within the *specified areas.*

5. Revegetation

Revegetate the *specified areas* so as to achieve a species composition, structure, density and *vegetation condition* of native vegetation similar to the pre-clearing species composition, structure, density and *vegetation condition* by:

(a) deliberately planting and/or seeding native vegetation; and

(b) ensure only *local species* are used in the *revegetation*; and

(c) revegetation must include *Adenanthos cygnorum, Allocasuarina fraseriana, Banksia attenuata, Banksia ilicifolia, Banksia menziesii, Calytrix flavescens, Dasypogon*

bromelifolius, Eremaea pauciflora, Eucalyptus marginata, Scholtzia involucrata and Xanthorrhoea preissii;

(b) Ensure initial *revegetation* has been completed across all *specified areas* by 30 September 2024.

6. Success of Revegetation

Where, for any reason, *revegetation* undertaken under measure 5(a) of this notice does not result in a species composition, structure, density and *vegetation condition* of native vegetation similar to the preclearing species composition, structure, density and *vegetation condition,* each and every year after the giving of this notice continue to *revegetate* the *specified areas;*

OR

Until, in the opinion of the *CEO*, the vegetation species composition, structure, density and *vegetation condition* of native vegetation in the *specified areas* is similar to a condition as near as possible to the condition of the vegetation before the clearing occurred, whichever is the lesser period.

7. Weed control

Each and every year after the giving of this notice;

(a) Remove or kill *weed species* within the *specified areas* during the month of June or July of each year so that the *percentage cover* that is *weed species* is within the condition score of fair to good under the Kaesehagen Bushland Condition Score;

(b) Complete initial weed control by 30 September 2023.

8. Installation and Maintenance of Artificial Nesting Hollows

To install artificial nesting hollows by:

(a) Constructing or obtaining 5 artificial nesting hollows to the design specifications detailed in Annexure 1 of this Notice, How to design and place artificial hollows for Carnaby's black cockatoo (DPaW, 2015);

(b) Installing 5 artificial nesting hollows in the specified area ensuring that mountings and placement are in accordance with Annexure 1 of this Notice;

(c) Mounting artificial nesting hollows that cannot be viewed from a gazetted road so that the base is a minimum of four metres from the ground;

(d) Mounting artificial nesting hollows that can be viewed from a gazetted road so that the base is a minimum of seven metres from the ground; and

(e) Completing the installation of all artificial nesting hollows by the 30 June 2024

(f) Using a GPS device record the GPS coordinates of each artificial hollow installed;

(g) Prior to 30 June each year after 2023 carry out a maintenance program of the installed hollows to ensure each hollow is still habitable. This maintenance is to be carried out in accordance with Annexure 2 of this Notice, How to monitor and maintain artificial hollows for Carnaby's cockatoo (DPaW, 2015).

9. Establish Monitoring Quadrats

Prior to 30 September 2023;

(i) establish 3 square monitoring quadrats, ten metre by ten metre, within the southwest corner of each quadrat located at the following coordinates set out in the table below;

Quadrats	Easting (m)	Northing (m)
Monitoring Quadrat 1	395458	6434743
Monitoring Quadrat 2	395602	6434770
Monitoring Quadrat 3	395581	6434983

(ii) permanently mark the southwest corner of each quadrat with a steel post or picket and record the GPS location of the picket.

10. Monitoring

Engage an *environmental specialist* to;

(a) In the month of September or October 2023, carry out one vegetation survey within each monitoring quadrat as defined in measure 9 of this VCN to determine:

(i) the species composition, structure, density and *vegetation condition* of native vegetation;

(ii) the *percentage cover* of vegetation that is *weed species;* and

(iii) the *percentage cover* of vegetation that is native vegetation; and

(iv) from the southwest marker of each quadrat obtain four photographs facing North, East, South and West.

(b) In the month of September or October biennially for a period of ten (10) years, carry out one vegetation survey within each quadrat as defined in measure 9 of this VCN to determine:

(i) the species composition, structure, density and *vegetation condition* of native vegetation;

(ii) the *percentage cover* of vegetation that is *weed species*;

(iii) the *percentage cover* of vegetation that is native vegetation;

(iv) the first vegetation survey to be carried out in the month of September or October 2024;

(v) from the southwest marker of each quadrat obtain four photographs facing North, South, East and West.

11. Records must be kept

Maintain the following records from the date of the giving of this vegetation conservation notice.

a) in relation to the *revegetation* of the *specified areas*:

(i) the date or dates of *revegetation* activities undertaken;

(ii) species planted or seeded;

(iii) the number of each species planted or the quantity of seed for each species sown;

(iv) a description of the *revegetation* activities undertaken;

(v) the species composition, structure, density and *vegetation condition* of native vegetation in the *specified areas* as determined by the monitoring carried out under measure 10 of this notice;

(vi) the percentage cover of native vegetation in each quadrate as required in measure 10;

(vii) the photographs taken as required in measure 10.

b) in relation to weed control:

(i) the date or dates on which *weed species* control activities were carried out;

(ii) a description of the *weed species* control activities carried out on each date;

(iii) the *percentage cover* of vegetation that is *weed species* as determined by monitoring carried out under measure 10 of this notice.

c) in relation to artificial hollows:

(i) the date/s that the artificial nesting hollows were installed;

(ii) the *coordinates* of the location/s that the artificial nesting hollows have been installed;

(iii) the height that each artificial nesting hollow has been mounted measuring from the ground to the base of the artificial nesting hollow; and

(iv) three digital images of each installed artificial nesting hollow depicting in the case of a tree mount the entire tree, in the case of a pole mount the entire pole and an internal and external close-up of the constructed artificial nesting hollow;

(v) the date/s annual maintenance was carried out on each artificial nesting hollow;

(vi) specify what maintenance was carried out on each artificial hollow.

12. Reporting

For the period of ten (10) years after the giving of this notice, provide to the *CEO*, a biennial written report of records kept under measure eleven (11) of this notice for the proceeding two calendar years (1 January to 31 December the following year). The first report is to be provided to the *CEO* on or before 30 June 2025.

DEFINITIONS

The following meanings are given to terms used in this Notice:

CEO means the Chief Executive Officer of the Department of the Public Service of the State through which the *Environmental Protection Act 1986* is administered.

coordinate means a Map Grid of Australia (Geocentric Datum of Australia 2020) coordinate for zone 50.

environmental specialist means a person who holds a tertiary qualification in environmental science or equivalent, and has experience in the assessment of Western Australian native vegetation.

Keighery scale means the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia.

livestock means any animal kept for domestic or commercial purposes and includes any horse, donkey, mule, cattle, sheep, swine, goat, buffalo, deer, camel or alpaca.

local species means indigenous species within 20 kilometres of the land.

percentage cover means the area of ground covered by the canopy of each and every species of flora, including native flora, *weed species* within the *specified areas* expressed as a percentage of the total cover of all species within the *specified areas*.

revegetate, revegetated* and *revegetation means the re-establishment of a cover of native vegetation in an area such that the species composition, structure, density and *vegetation condition* is similar to pre-clearing vegetation as defined in the approved revegetation plan, and can involve natural regeneration, direct seeding and/or planting.

vegetation condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density, and species present in the particular vegetation in comparison to undisturbed vegetation of the same type.

weed species means any plant species that is not indigenous within 20 kilometres of the land. The percentage of weed species can be determined using the Kaesehagen (1995) Bushland condition scale as set out in the below table;

Very good to excellent 80 – 100% native flora Vegetation structure intact or nearly so Cover / abundance of weeds less that 5% Minor signs of disturbance.	**Fair to good** 50 – 80% native flora Vegetation structure modified or nearly so Cover / abundance of weeds 5 - 20% Disturbance influence minor
Poor 20 – 50% native flora Vegetation structure completely modified Cover / abundance of weeds 20 - 60% Disturbance incidence high	**Very poor** 0 -20% native flora Vegetation structure disappeared Cover / abundance of weeds 60 - 100% Disturbance incidence very high

specified areas means the portions of Lot 1 on diagram 29600 and Lot 2 on Diagram 30119 bounded by a line joining the Zone 50 GDA 2020 points set out in the tables below consecutively then directly to the point of commencement:

Specified area 1

Point	Easting (m)	Northing (m)
1	395652	6434671
2	395547	6434673
3	395537	6434816
4	395648	6434817

Specified area 2

Point	Easting (m)	Northing (m)
5	395654	6434949
6	395534	6434947
7	395532	6435128
8	395650	6435130

Specified area 3

Point	Easting (m)	Northing (m)
9	395546	6434560
10	395402	6434479
11	395397	6434806
12	395520	6434811

Kelly Faulkner
Executive Director
Compliance and Enforcement

Officer delegated under Section 20
of the Environmental Protection Act 1986

21 June 2023

Important Information:

A PERSON WHO IS BOUND BY THIS VEGETATION CONSERVATION NOTICE AND WHO DOES NOT COMPLY WITH THIS VEGETATION CONSERVATION NOTICE COMMITS AN OFFENCE UNDER THE *ENVIRONMENTAL PROTECTION ACT 1986*.

Under section 103 of the *Environmental Protection Act 1986:*

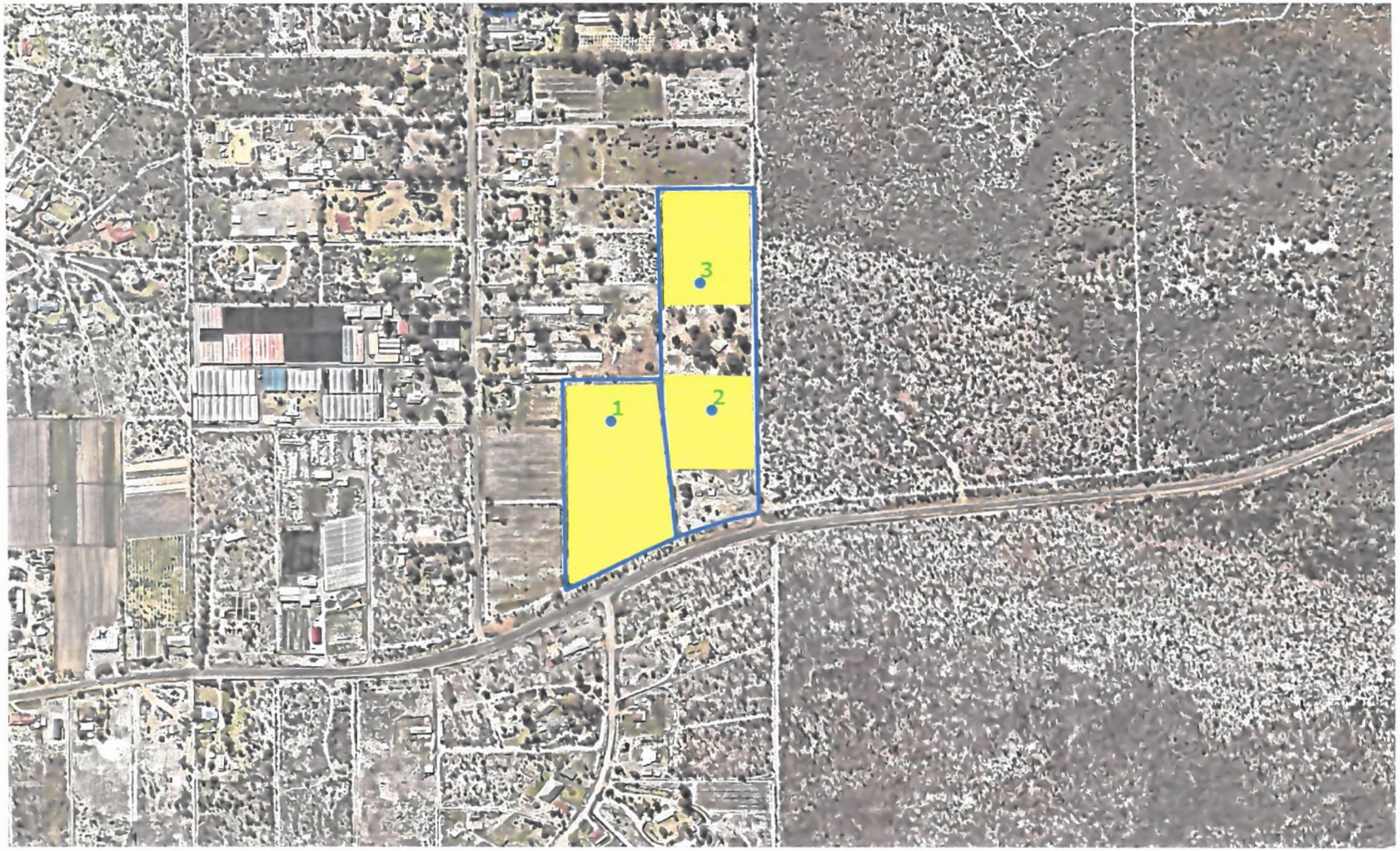
- a person who is aggrieved by a requirement contained in this vegetation conservation notice may within 21 days of being given this notice lodge with the Minister for Environment an appeal in writing setting out the grounds of that appeal; and

- any other person who disagrees with a requirement contained in this vegetation conservation notice may within 21 days of the making of that requirement lodge with the Minister for Environment an appeal in writing setting out the grounds of that appeal.

PENDING THE DETERMINATION OF AN APPEAL REFERRED TO ABOVE, THE RELEVANT REQUIREMENTS CONTAINED IN THIS VEGETATION CONSERVATION NOTICE CONTINUE TO HAVE EFFECT.

Government of **Western Australia**
Department of **Water and Environmental Regulation**

INDICATIVE PLAN CPS 9559/1
Job Ref: ICMS 62271
Lot 1 and Lot 2



62271 boundaries
Quadrats
VCN Specified Area

NEARMAP_Date20210824

Produced by Daniel Hunter
Department of Water and Environmental Regulation
20 January 2022
Projection MGA zone 50
Datum GDA 2020

0 100 200 m

Annexure 1

Department of Parks and Wildlife

Fauna notes

Artificial hollows for Carnaby's cockatoo



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How to design and place artificial hollows for Carnaby's cockatoo

Artificial hollows can be used to help conserve the threatened Carnaby's cockatoo by enabling the cockatoos to breed in areas where natural hollows are limited.

A wide variety of artificial hollow designs have been used with mixed success. Evidence suggests that, while the hollow must meet some basic requirements, other factors such as proximity to existing breeding areas may be more important in determining the success of artificial hollows. Before using this information sheet to construct or install an artificial hollow, you should refer to the criteria listed in the separate information sheet; *When to use artificial hollows for Carnaby's cockatoo*.

This information sheet contains broad guidelines for the design and placement of artificial hollows for Carnaby's cockatoo.

Below are three examples of successful artificial hollows used by Carnaby's cockatoo for nesting. Artificial hollows made from a natural log with cut side entrance (left), white industrial pipe with top entrance (centre) and natural log with natural side entrance (right).



Photos by Christine Groom (left and right) and Rick Dawson (centre)

Walls

The walls of the artificial hollow need to be constructed from a material that is;

- Durable enough to withstand exposure to elements for an extended period of time (i.e. 20+ years).
- Able to simulate the thermal properties of a natural tree hollow.
- Not less than 380 mm in internal diameter.
- Preferably 1.2 m deep overall and 1m deep to top of substrate/nesting material.

Successful artificial hollows have been constructed from sections of salvaged natural hollow, black and white industrial pipe. When using non-natural materials care must be taken to ensure there are no toxic residues and that the materials are safe to ingest.

Base

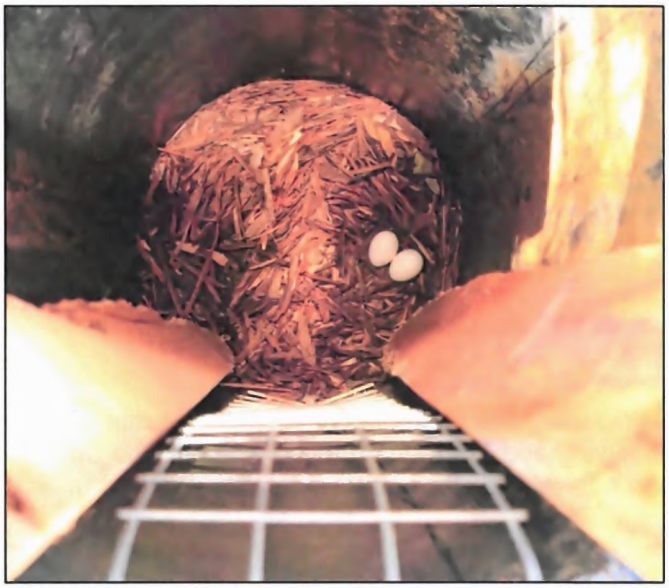
The base of the artificial hollow must be;

- Able to support the adult and nestling(s).
- Durable enough to last the life of the nest.
- Free draining.
- At least 380 mm in diameter.
- Covered with 200 mm of sterile, dry, free draining material such as charcoal, hardwood woodchips or wood debris.

  ***Do not use*:**

  - Saw dust or fibre products that will retain moisture.

Example materials that could be used for artificial hollow bases include heavy duty stainless steel, galvanised or treated metal (e.g. Zincalume ®), thick hardwood timber slab or marine ply (not chipboard or MDF). The base material must be cut to size to fit internally with sharp or rough edges ground away or curled inwards and fixed securely to the walls.



Carnaby's cockatoo eggs in an artificial hollow.
Photo by Rick Dawson

Entrance

The entrance of the artificial hollow must;

- Have a diameter of at least 270 mm).
- Preferably be top entry which will minimise use by non-target species.

Top entry hollows are unattractive to nest competitors such as feral bees, galahs and corellas. Side entry hollows have been successful in areas where feral bees are not a problem and where galahs and corellas are deterred.

Ladder

For artificial hollows made of non-natural materials, or of processed boards, it is necessary to provide a ladder to enable the birds to climb in and out of the hollow easily.

The ladder must be;

- Securely mounted to the inside of the hollow.
- Made from an open heavy wire mesh such as WeldMesh™ with mesh size of 30 - 50 mm, or heavy chain.

Do not use:

- A material that the birds can chew.
- Galvanized because the birds may grip or chew the ladder and ingest harmful compounds.

If using mesh for the ladder, the width will depend on the curvature of the nest walls. A minimum width of about 60 - 100 mm is recommended.

Sacrificial chewing posts

For artificial hollows made of non-natural materials, or of processed boards, it is necessary to provide sacrificial chewing posts. The birds chew material to prepare a dry base on which to lay their egg(s).

The sacrificial chewing posts must:

- Be made of untreated hardwood such as jarrah, marri or wandoo
- Be thick enough to satisfy the birds' needs between maintenance visits.
- Extend beyond the top of the hollow as an aid to see whether the nest is being used.
- Be placed on the inside of the hollow.
- Be attached in such a way that they are easy to replace e.g. hook over the top of hollow or can slide in/out of a pair of U bolts fitted to the side of the hollow.

It is recommended that at least two posts are provided. Posts 70 x 50 mm have been used, but require replacing at least every second breeding season when the nest is active. Birds do vary in their chewing habits and therefore the frequency at which the chewing posts require replacement will also vary.

Bottom of an artificial hollow showing ladder that is fixed to the wall and a chewed sacrificial post which is 200 mm from the floor.

Photo by Rick Dawson

Mountings

The artificial hollows must be mounted such that:

- The fixings used will last the duration of the nest e.g. galvanized bracket or chain fixed with galvanized coach screws.
- It is secured by more than one anchor for security and stability.
- It is positioned vertically or near vertically.

Placement

Sites should be chosen within current breeding areas and where they can be monitored, but preferably not conspicuous to the general public. It is important that artificial hollows are placed where they will be accessible for future monitoring and maintenance. For more detail refer to the separate information sheet; *When to use artificial hollows for Carnaby's cockatoo*.

The height at which artificial hollows should be placed is variable. The average height of natural hollows in dominant tree species in the area is a good guide. Natural hollows used by Carnaby's cockatoos have been recorded as low as 2 m above the ground. If located on private property the hollows can be placed lower to the ground so they are accessible by ladder or a rope and pulley system can be used. Where public access is possible artificial hollows should be placed at least 7 m high (i.e. higher than most ladders) and on the side of the tree away from public view to reduce the chance of interference or poaching.

Carnaby's cockatoo show no preference for aspect of natural hollows, however, it may still be beneficial to place artificial hollows facing away from prevailing weather and where they receive the most shade and protection.

Artificial hollows to be placed in trees require:

- Accessibility of the tree for a vehicle, elevated work platform or cherry picker.
- A section of trunk 2-3 m long suitable for attaching the hollow

If necessary, artificial hollows may be placed on poles, but this may result in excessive exposure to sun during very hot weather. When erected on poles there should be"

- A hinge at the bottom of the pole that can be secured when the pole is in the upright position.
- Access for a vehicle to assist raising the pole.

Safety

Care needs to be taken when placing artificial hollows to ensure safety is considered at all times. Artificial hollows are heavy and require lifting and manoeuvring into position up to 7 m above the ground.

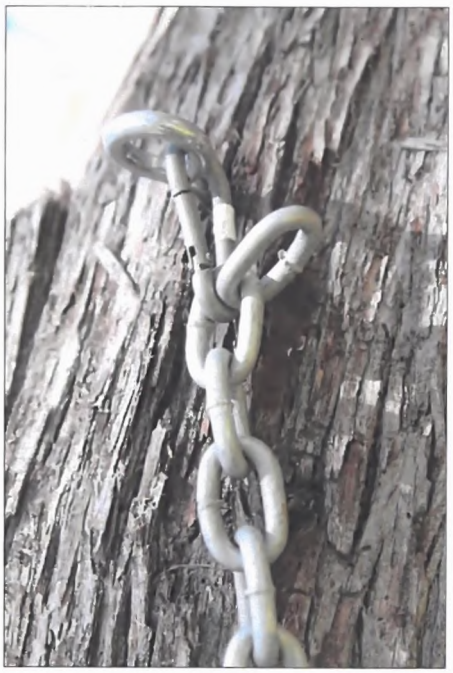
Maintenance and monitoring

Once artificial hollows have been placed they require monitoring and maintenance to ensure they continue to be useful for nesting by Carnaby's cockatoo. It is important to monitor artificial hollows to determine use by Carnaby's cockatoo, other native species as well as pest species. By undertaking monitoring the success of the design and placement of artificial hollows can be determined and areas for improvement identified for future placement of artificial hollows.

Monitoring can also assess whether any maintenance is required. Without regular maintenance artificial hollows are unlikely to achieve their objective (that is, they will fail to provide nesting opportunities for threatened cockatoos). Therefore it is important to continue a regime of regular maintenance while the artificial hollow is required. It may be several (to many) decades until a natural replacement hollow is available.

For further advice on monitoring and maintenance of artificial hollows please refer to the separate information sheet; *How to monitor and maintain artificial hollows for Carnaby's cockatoo*.

Carnaby's cockatoo female prospecting an artificial hollow.
Photo by Rick Dawson



Example fixing for artificial hollow
Photo by Christine Groom

Acknowledgements

This information sheet is a joint initiative of Birdlife Australia, the Western Australian Museum and the Department of Parks and Wildlife. Many individuals have contributed to its preparation. Special acknowledgement is made for the contributions of Ron Johnstone from the WA Museum, Alan Elliott from the Serpentine-Jarrahdale Land care Centre and Denis Saunders. This updated version was compiled by Rick Dawson Department of Parks and Wildlife).

Other information sheets in the series: Artificial hollows for Carnaby's cockatoo

- *How to design and place artificial hollows for Carnaby's cockatoo*
- *How to monitor and maintain artificial hollows for Carnaby's cockatoo*

Information sheets available on the *Saving Carnaby's cockatoo* webpage:
http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals/208-saving-carnaby-s-cockatoo

Department of Parks and Wildlife

Fauna notes

Artificial hollows for Carnaby's cockatoo



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How to monitor and maintain artificial hollows for Carnaby's cockatoo

It is important to monitor and maintain artificial hollows after they have been erected. Monitoring ensures that the effectiveness of the artificial hollow can be determined. It also means that problems with pest species or any maintenance requirements can be identified and resolved.

Without regular maintenance, artificial hollows are likely to fail to achieve their objective (that is, they will fail to provide nesting opportunities for threatened cockatoos). Therefore it is important to continue a regime of regular maintenance while the artificial hollow is required. It may be several (to many) decades until a natural replacement hollow is available.

Monitoring should be undertaken in order to detect:

- Use by Carnaby's cockatoo
- Maintenance requirements
- Use by other native species
- Use by pest species (e.g. feral bees, galahs, corellas etc.)

Carnaby's cockatoo female prospecting an artificial hollow.
Photo by Rick Dawson

How do I monitor artificial hollows?

Before undertaking monitoring of artificial hollows for Carnaby's cockatoo it is recommended that you seek advice from BirdLife Australia, the WA Museum or the Department of Parks and Wildlife. It is also important to contact Parks and Wildlife, Wildlife Licensing Section, to determine if a scientific licence is required (wildlifelicensing@dpaw.wa.gov.au).

Monitoring artificial hollows requires keen observation and naturalist skills. It is often not possible to observe evidence of breeding directly (i.e. nestlings or eggs) and inferences must be made based on observation. There are many techniques available to monitor artificial hollows. A combination of several is likely to achieve the best results.

Looking for signs of use

Cobwebs covering the entrance to the hollow will indicate that the hollow has not been used recently. This would also apply to other light debris that may have fallen to cover the opening partially. Signs of recent use or interest in the hollow include evidence of chewing.

Observing parent behaviour around the hollow

The behaviour of parent birds around a hollow will indicate an approximate age of young in the nest.

Parent behaviour	Approximate age/stage of young
Prospecting for hollow	Unborn
Male only seen out of hollow	Egg or very young nestling (< 3 - 4 weeks)
Both parents seen entering/exiting the hollow	Nestling(s) have hatched (> 3 - 4 weeks)

Observing feeding flocks

Flocks of all male birds indicate that the females are incubating eggs. When flocks are mixed it suggests the birds have either not laid yet or that the nestlings have hatched and no longer require brooding (approximately 3 - 4 weeks old).

Tapping

When females are sitting on eggs they will usually respond to tapping at the base of their tree (or pole) by appearing at the entrance or flying from the hollow opening. This is not a guarantee of breeding activity, but an indication that it is possibly occurring in the hollow.

Observing insect activity around nest

The faecal matter produced by nestlings in a nest attracts insects, especially flies and ants. The type and number of these insects will help indicate how old any nestlings present may be. Factors such as temperature and humidity will also affect insect activity and so observations of insect activity should only be used as supporting evidence for other indications of age/use. Blowflies around a nest usually indicate that a death has occurred.

Listening for nestlings

With experience it is possible to determine if one or two nestlings are present and a broad estimate of age based on the type and loudness of noises they make.

Looking inside the nest

This can be achieved either with the aid of a telescopic pole and camera or mirror, or with the use of a ladder or other climbing equipment. This method can obtain the most detailed monitoring information for artificial hollows. However it is also the most time consuming and difficult to organise. Special equipment is likely to be needed depending on the height and positioning of artificial hollows. There are also safety issues associated with ladder or rope climbing options to reach nests to undertake observations.

How often should I monitor artificial hollows?

The minimum frequency of monitoring and the techniques used will be determined by the aims of the monitoring and the resources available. It is important to limit disturbance to breeding birds and this should be considered when determining the techniques used and frequency.

How do I maintain artificial hollows?

Artificial hollows require maintenance to ensure they continue to have the greatest chance of them being used by Carnaby's cockatoos. Periodic maintenance checks should be undertaken at least every two years, preferably annually. These checks should be undertaken prior to the breeding season which is between July and January with breeding occurring later in this period in southern areas. It is important to maintain a regime of regular maintenance as long as the artificial hollow is required. It may take several (to many) decades until a natural replacement hollow is available.

Maintenance checks should assess the following as a minimum:

- Condition of chewing posts (if present)
- Condition of attachment points
- Condition of hollow bases
- Stability of tree or pole used to mount the artificial hollow

Artificial hollow base needing repair.
Photo by Christine Groom

Repairing hollows

Any problems identified during maintenance checks should be addressed, and any repairs required done, as soon as possible. If breeding is currently occurring, maintenance may need to be delayed if it is likely to disturb the parents or nestling. Likely maintenance needs include replacement of chewing posts (frequently) or nest bases (occasionally) and repairing of any cracks (infrequently). Maintenance concerns regarding the security of attachment points or the stability of the tree or pole should be addressed as a priority for safety reasons.

For artificial hollows known to be used, spare chewing posts should be taken into the field when undertaking maintenance checks.

Monitoring of artificial hollows:

Monitoring aim	Frequency of visits	Monitoring techniques
To determine possible use by Carnaby's cockatoo	At least once during peak breeding season (i.e. between September and December)	• Observing behaviour of adults around hollow • Tapping to see if female will flush from hollow (best undertaken between 10am and 3pm when females most likely to be sitting) • Listening for nestlings • Looking for evidence of chewing • Looking inside nest
To confirm use by Carnaby's cockatoo	At least two visits during peak breeding season (i.e. between September and December)	To observe at least two of the following: • Breeding behaviour of adults around hollow or evidence of chewing • Female flushed from hollow • Noises from nestlings in hollow Or to observe: • Nestlings or eggs in nest
To determine nesting success by Carnaby's cockatoo	The more visits, the better. Preferably fortnightly visits between July and December. As a minimum, at least 3 visits spread throughout breeding season.	• Looking inside nest to observe eggs or nestlings.
To determine use by any species	As often as possible.	• Inspection from ground as a minimum. • Looking inside nest for detailed observations.
To determine maintenance requirements	At least every two years and preferably annually if hollow fitted with sacrificial chewing posts, can be longer if without.	• A basic maintenance check can be undertaken from the ground. A ladder or elevated work platform will be required for a comprehensive check and to replace sacrificial chewing posts

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