



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: CPS 8983/2

File Number: DWERVT6177~6

Duration of Permit: From 26 November 2020 to 26 January 2024

### PERMIT HOLDER

City of Cockburn

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 508 on Deposited Plan 414835, Bibra Lake

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.01 hectares of native vegetation within the area cross-hatched yellow in Schedule 1 Plan 8983/2(a).

### CONDITIONS

#### 1. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

#### 2. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

#### 3. Fauna management (black cockatoo habitat tree retention)

The permit holder shall not clear the nine *black cockatoo habitat trees* identified red in Schedule 2 Plan 8983/2(b).

#### 4. Fauna management (black cockatoo habitat tree mitigation)

(a) Within 48 hours of undertaking any clearing authorised under this permit within the area cross-hatched yellow in Schedule 1 Plan 8983/2(a) the permit holder must engage a *fauna specialist* to conduct a fauna survey to inspect the tree (ID#09) identified in red in Schedule 2 Plan 8983/2(c) for:

- (i) suitability as a *black cockatoo habitat tree* for use as breeding by *black cockatoo species*; and
  - (ii) evidence of current or past breeding use by *black cockatoo species*.
- (b) if the tree (ID#09) identified in red in Schedule 2 Plan 8983/2(c) is characterised as suitable as a *black cockatoo habitat tree* by a *fauna specialist* in accordance with condition 4(a), the permit holder must install an artificial black cockatoo nest hollow.

- (c) For a tree characterised as suitable as a *black cockatoo habitat tree* by a *fauna specialist* in accordance with condition 4(a) with no evidence of current or past use by *black cockatoo species* that tree must only be cleared immediately after the inspection.
- (d) Where a *black cockatoo habitat tree* is identified with evidence of current or past breeding use by *black cockatoo species* under condition 4(a), and clearing of that tree cannot be avoided, that tree must be monitored by a *fauna specialist* to determine when it is no longer in use for that breeding season.
- (e) Any *black cockatoo habitat tree* with evidence of current breeding use by *black cockatoo species* must not be cleared whilst it is in use for that breeding season as determined by the *fauna specialist* under condition 4(d).
- (f) Any artificial black cockatoo nesting hollow required by condition 4(b) must be installed prior to commencement of the next black cockatoo breeding season following clearing of the related *black cockatoo habitat tree*.
- (g) Any artificial black cockatoo nest hollow required by condition 4(b) of this permit must be
  - (i) installed within Lot 508 on Deposited Plan 414835, Bibra Lake.
  - (ii) be designed and placed in accordance with the specifications detailed in Schedule 3; and
  - (iii) be monitored and maintained in accordance with the specifications detailed in Schedule 4 for a period of at least ten years.
- (h) Within two months of clearing authorised under this permit within the area cross-hatched yellow in Schedule 1 Plan 8983/2(a), the permit holder must provide the results of the fauna survey in a report to the *CEO* including the methodology used and whether the *black cockatoo habitat tree* identified shows current or past use by *black cockatoo species*.

#### 5. Fauna management (directional clearing)

Clearing shall be conducted in a slow, progressive manner towards adjacent remnant vegetation to allow fauna to move out of the clearing area and into adjacent remnant vegetation.

#### 6. Land degradation (wind erosion)

The Permit Holder must begin construction works within 2 months of the cessation of clearing to mitigate against *land degradation* through wind erosion.

#### 7. Offset – Land acquisition

Prior to 1 August 2021, the Permit Holder shall provide to the *CEO* a copy of the executed change in purpose of Lot 500 on Plan 413034 (being Crown Reserve 1820) from ‘Recreation’ to ‘Conservation’ in Schedule 2 Plan 8983/2(d).

#### 8. Offset - Vegetation management - fencing

- (a) Within six months of clearing, the Permit Holder shall construct a fence enclosing the area coloured orange in Schedule 2 Plan 8983/2(e).
- (b) Prior to the expiry of this Permit, the Permit Holder shall construct a fence enclosing the area coloured grey in Schedule 2 Plan 8983/2(e).
- (c) Fences should allow for the movement of wildlife by being raised 15cm from the ground.
- (d) Within one month of installing the above fences, the Permit Holder shall notify the *CEO* in writing that the fence has been completed.

#### 9. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (b) the date that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) the direction that clearing was undertaken;
- (e) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1, condition 3, and condition 4 of this Permit;

- (f) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 of this Permit; and
- (g) evidence supporting compliance with conditions 2, 3, 4, 5, 6, 7 and 8 of this Permit.

## 10. Reporting

- (a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
  - (i) the records required to be kept under condition 9; and
  - (ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.
- (c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 9, where these records have not already been provided under condition 10(a).

## DEFINITIONS

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

***black cockatoo habitat tree/s***: means trees that have a diameter, measured at 130 centimetres from the base of the tree, of 50 centimetres or greater (or 30 centimetres or greater for *Eucalyptus salmonophloia* or *Eucalyptus wandoo*) that contain hollows suitable for breeding by black cockatoo species;

***black cockatoo species***: means one or more of the following species:

- (a) *Calyptorhynchus lateriosis* (Carnaby's cockatoo);
- (b) *Calyptorhynchus baudinii* (Baudin's cockatoo); and/or
- (c) *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).

***CEO***: means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

***dieback***: means the effect of *Phytophthora* species on native vegetation;

***fauna specialist***: means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.

***fill***: means material used to increase the ground level, or fill a hollow;

***land degradation***: includes salinity, erosion, soil acidity and waterlogging;

***mulch***: means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

***weed/s***: means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

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**END OF CONDITIONS**



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Mathew Gannaway  
MANAGER  
NATIVE VEGETATION REGULATION






*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

27 June 2022

Schedule 1 - The boundary of the area authorised to be cleared

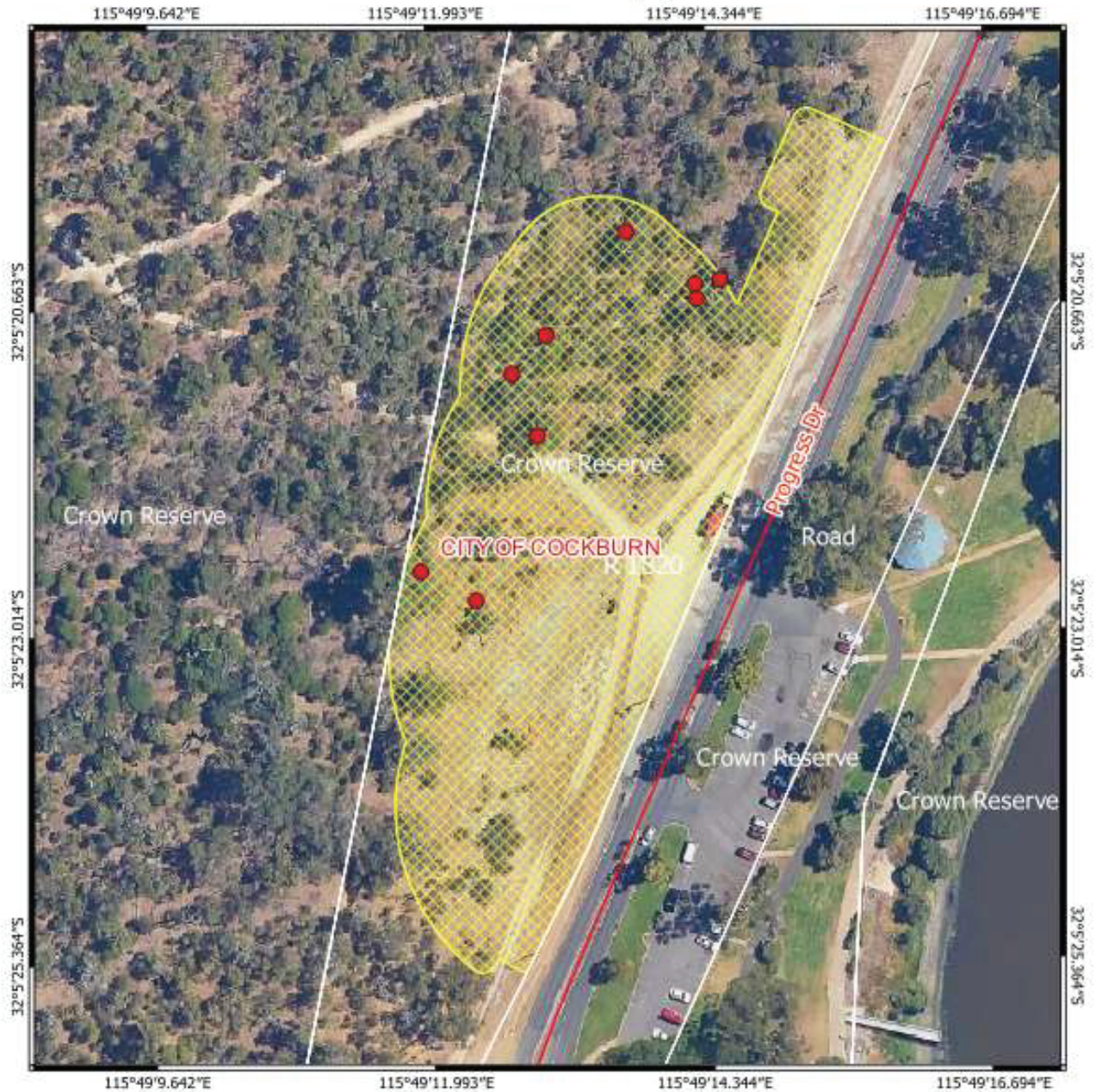
Plan 8983/2 (a)



<b>Legend</b>	N	
<p> CPS 8983/2</p> <p>Land Tenure LGATE - 226</p> <p> Local Government Authorities</p> <p> Road Centrelines</p>	<p>0 10 20 30 40 m</p> 	
<p>MGA Zone 50 Geocentric Datum of Australia 1994</p>		<p><b>GOVERNMENT OF WESTERN AUSTRALIA</b></p>

Schedule 2 – Areas where conditions apply









Plan 8983/2 (b)



<b>Legend</b>	N	<p><b>GOVERNMENT OF WESTERN AUSTRALIA</b></p>
<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid yellow; margin-right: 5px;"></span> CPS 8983/2</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: red; border-radius: 50%; margin-right: 5px;"></span> CPS 8983/2 - Habitat trees retained</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid lightblue; margin-right: 5px;"></span> Land TenureLGate - 226</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid pink; margin-right: 5px;"></span> Local Government Authorities</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid red; margin-right: 5px;"></span> Road Centrelines</li> </ul>	<p>0 10 20 30 40 m</p>	
<p>MGA Zone 50 Geocentric Datum of Australia 1994</p>		

# Plan 8983/2 (c)



<b>Legend</b>	N 	
 CPS 8983/2	0 10 20 30 40 m 	<b>GOVERNMENT OF WESTERN AUSTRALIA</b>
 CPS 8983/2 - Habitat tree	MGA Zone 50 Geocentric Datum of Australia 1994	
 Land TenureLGATE - 226		
 Local Government Authorities		
 Road Centrelines		

# Plan 8983/2 (d)




<b>Legend</b>		
<ul style="list-style-type: none"> <li> CPS 8983-2_Offset Site</li> <li>Land TenureLGATE - 226</li> <li> Local Government Authorities</li> <li> Road Centrelines</li> </ul>		<p><b>GOVERNMENT OF WESTERN AUSTRALIA</b></p>
	<p>MGA Zone 50 Geocentric Datum of Australia 1994</p>	






## Schedule 3 – How to design and place artificial hollows for Carnaby's cockatoo





Department of  
Parks and Wildlife



# Fauna notes

### Artificial hollows for Carnaby's cockatoo






## 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)

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### **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.

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### **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. Zincolume ®), 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.



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

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### **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.

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### **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*

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### **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<sup>2</sup>

- 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.

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### 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.

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### 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*.

#### 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>

#### Further information


Last updated 28/04/2015

Contact [sewina@dpaw.wa.gov.au](mailto:sewina@dpaw.wa.gov.au) or your local office of the Department of Parks and Wildlife


See the department's website for the latest information: [www.dpaw.wa.gov.au](http://www.dpaw.wa.gov.au)

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## Schedule 4 - How to monitor and maintain artificial hollows for Carnaby's cockatoo





Department of  
Parks and Wildlife



# Fauna notes

### Artificial hollows for Carnaby's cockatoo




## 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 ([wildlifelicencing@dpaw.wa.gov.au](mailto:wildlifelicencing@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.

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*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.

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*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)

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*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).

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*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.

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*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.

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*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.

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### *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.

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### *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.

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*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)	<ul style="list-style-type: none"> <li>• Observing behaviour of adults around hollow</li> <li>• Tapping to see if female will flush from hollow (best undertaken between 10am and 3pm when females most likely to be sitting)</li> <li>• Listening for nestlings</li> <li>• Looking for evidence of chewing</li> <li>• Looking inside nest</li> </ul>
To confirm use by Carnaby's cockatoo	At least two visits during peak breeding season (i.e. between September and December)	<p>To observe at least two of the following:</p> <ul style="list-style-type: none"> <li>• Breeding behaviour of adults around hollow or evidence of chewing</li> <li>• Female flushed from hollow</li> <li>• Noises from nestlings in hollow</li> </ul> <p>Or to observe:</p> <ul style="list-style-type: none"> <li>• Nestlings or eggs in nest</li> </ul>
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.	<ul style="list-style-type: none"> <li>• Looking inside nest to observe eggs or nestlings.</li> </ul>
To determine use by any species	As often as possible.	<ul style="list-style-type: none"> <li>• Inspection from ground as a minimum.</li> <li>• Looking inside nest for detailed observations.</li> </ul>
To determine maintenance requirements	At least every two years and preferably annually if hollow fitted with sacrificial chewing posts, can be longer if without.	<ul style="list-style-type: none"> <li>• 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</li> </ul>

*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. The updated version was compiled by Rick Dawson (Department of Parks and Wildlife) with assistance from Denis Saunders.

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

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

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<http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals/208-saving-carnaby-s-cockatoo>

## Further information

Last updated 26/04/2015

Contact [cauoha@dpaw.wa.gov.au](mailto:cauoha@dpaw.wa.gov.au) or your local office of the Department of Parks and Wildlife

See the department's website for the latest information: [www.dpaw.wa.gov.au](http://www.dpaw.wa.gov.au)

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# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

Permit number:	CPS 8983/2
Permit type:	Area permit
Applicant name:	City of Cockburn
Application area:	1.01 hectares of native vegetation
Purpose of clearing:	Building or structure
Method of clearing:	Mechanical
Property:	Lot 508 on Deposited Plan 414835, Bibra Lake
Location (LGA area):	City of Cockburn
Locality (suburb):	Bibra Lake

### 1.2. Decision on application

Decision:	Granted
Decision date:	27 June 2022
Decision area:	1.01 hectares including native vegetation within a portion of Lot 508 on Deposited Plan 414835, Bibra Lake. Section 1.4 and Figure 1 below.

### 1.3. Description of clearing activities

On 3 November 2020, Clearing Permit (Area Permit) CPS 8983/1 was granted to clear up to 0.89 hectares of native vegetation within Lot 508 on Deposited Plan 414835, Bibra Lake, in the City of Cockburn for the purpose of constructing an Aboriginal Cultural and Visitors Centre.

An application for an amendment to Area Permit CPS 8983/1 was received by the Department of Water and Environmental Regulation (DWER) on 22 December 2021. DWER advertised the application for public comment and no submissions were received. The Land Use Planning Policy (LUPP) team of the Department of Planning, Lands and Heritage (DPLH) provided comments on the amendment (DPLH 2022).

The purpose of the proposed amendment is to extend the CPS 8983/1 permit duration and to increase the area of native vegetation authorised to clear (Figure 1) to allow for the implementation of an updated Development Layout Plan.

### 1.4. Reasons for decision

The Delegated Officer has determined that:

- The applicant has suitably demonstrated avoidance and minimisation measures through the location of clearing required for the Centre within areas of predominantly Degraded vegetation, and the retention of nine habitat trees to mitigate impacts to potential black cockatoo breeding habitat.
- The proposed clearing is likely to have a significant impact on the environmental values of a conservation area, that being the loss of, and/or significant impact to, up to 0.73 hectares of native vegetation in a Degraded to Good condition within Bush Forever Site No. 244 and the Beelihar Regional Park.
- The provision of an offset will adequately counterbalance the significant residual impacts to a conservation area.
- The implementation of weed and dieback management will mitigate any impact to adjacent vegetation associated with a conservation area.

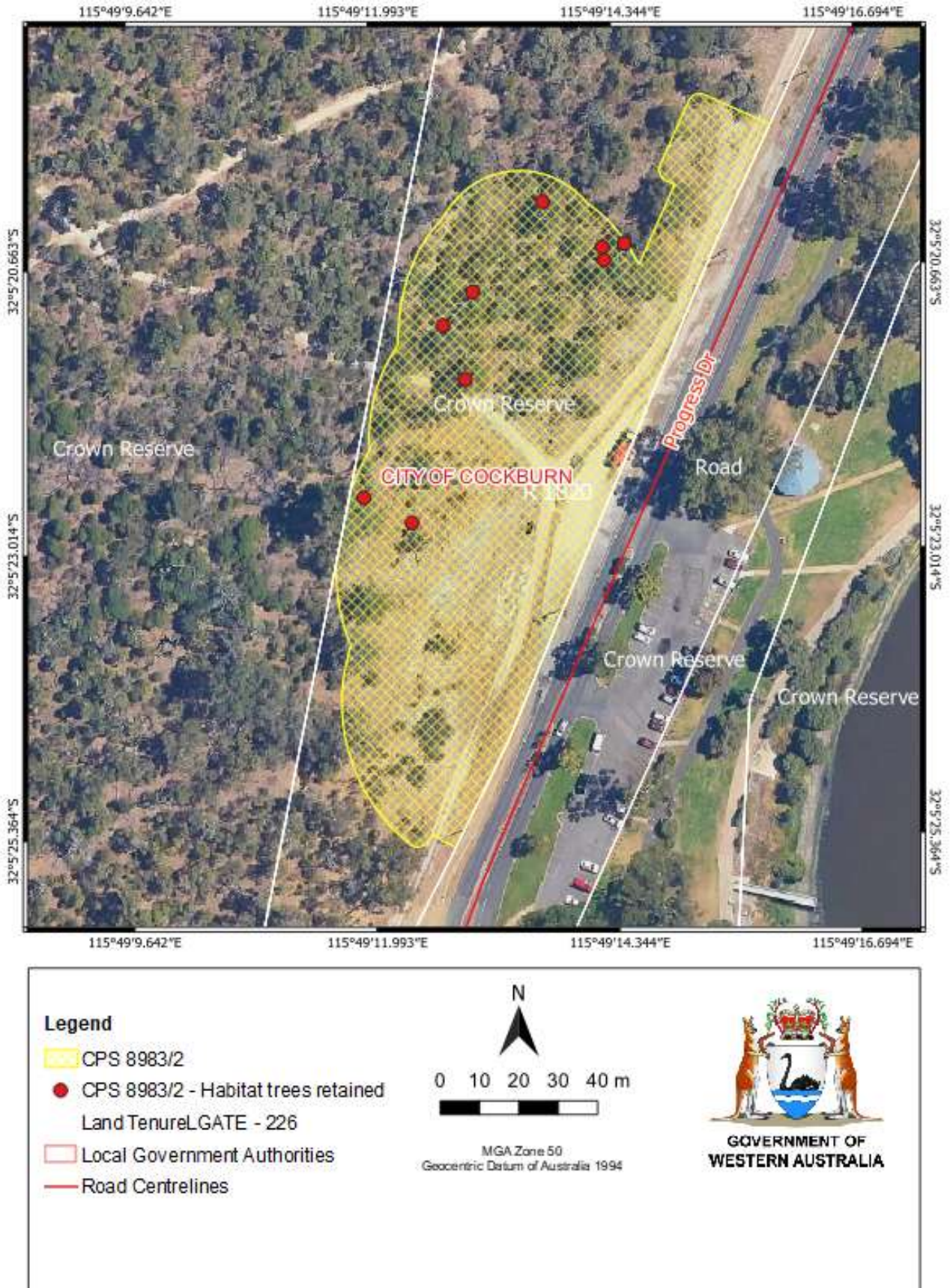
- The inspection of one potential black cockatoo breeding hollow, with contingency actions if found suitable for black cockatoo breeding purposes, and the implementation of slow and directional clearing towards areas of adjacent remnant vegetation will mitigate potential impacts to any fauna utilising the application area at the time of clearing.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed increase in clearing area and permit duration is not likely to lead to an unacceptable risk to the environment. The Delegated Officer decided to grant an amended clearing permit. Additional conditions have been imposed on the permit to:

- Increase the duration of the permit for two years to 2024.
- Authorise the clearing of up to 1.01 hectares required for the project.
- Ensure the retention of nine black cockatoo habitat trees (Figure 1).
- Inspect one dead black cockatoo habitat tree prior to clearing for suitability as a breeding hollow or any evidence of use. The tree must not be cleared if in use by black cockatoos, and if assessed as a suitable breeding hollow, the installation of an appropriate artificial nest hollow within an appropriate location will be required.

The assessment is consistent with that undertaken for clearing permit CPS 8983/1 and can be found within Decision Report CPS 8983/1.

## 1.5. Site map



**Figure 1: Map of the application area. The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit. The locations marked red indicate habitat trees to be retained.**

## 1.6. Assessment

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the information provided by the applicant, the clearing principles in Schedule 5 of the EP Act, relevant planning instruments, and any other pertinent matters deemed relevant to the assessment. The Delegated Officer also took into consideration the purpose of the clearing to establish an Aboriginal Cultural and Visitors Centre at Bibra Lake (the Centre).

The applicant has provided revised designs for the Centre by Officer Woods (2021) and a design and development package for the Centre by UDLA (2021) (Emerge 2021a; Emerge 2021b). The applicant has also provided a status of clearing activities associated with Clearing Permit CPS 8983/1 (City of Cockburn 2022), and the supporting information of Emerge (2021b) including a flora and vegetation survey (Focussed Vision 2020b), a black cockatoo habitat assessment (Focussed Vision 2020a), a tree assessment (Paperbark Technologies 2021), avoidance strategies, and an application of the mitigation hierarchy (Emerge 2021b).

The Centre design is similar to the design previously proposed as submitted for CPS 8983/1 including a main building, car park and landscaped native gardens. The revised layout modifies the design of the carpark to fit within cleared areas parallel to Progress Drive (Figure 1; Appendix A). The building design has also been rotated so that the majority of the building footprint is now located within cleared areas, or native vegetation in lower overall condition (Keighery 1994) than the previous design, and less cut and fill will be required by orientating the building with the contours (Emerge 2021b). The revised design also reduces the clearing required of identified black cockatoo habitat trees.

An overall increase of 0.12 hectares to the application area is required. This consists of an additional 0.04 hectares of areas without any native vegetation, 0.06 hectares of Degraded vegetation, and 0.02 hectares of native vegetation in Degraded to Good condition (Keighery 1994).

Less than one per cent of the amendment area consists of native vegetation in Good condition with 76.2 per cent in Degraded condition or worse (with approximately 26.7 per cent totally cleared).

The amended 1.01 hectares required for the project can be considered in two zones:

- 0.66 hectares of clearing required to facilitate the construction of the Centre that includes the building itself, a car park, and an *Asset Protection Zone* (APZ) (Appendix A). Within the APZ tree retention will be possible and will include revegetation consisting of landscaped native gardens and replanting native species in accordance with the *Guidelines for Planning in Bushfire Prone Areas*, including the use of irrigation which will enable additional plantings (Emerge 2021b).
- The remaining areas totalling 0.35 hectares are for the use of salvaging individual *Zamias* (*Macrozamia riedlei*) and *Balgas* (*Xanthorrhoea* sp.) prior to the construction of the Centre. Salvaged plants will be replanted for use as landscaping around the Centre post-construction. Other than the salvaging of individual plants no additional clearing is required in this zone. Approximately 50 *Zamias* have been salvaged to date, and the City have submitted that no further native vegetation is proposed to be removed from these areas, with no further clearing or modification required (Emerge 2021b).

The Delegated Officer determined that whilst the amendment area is 1.01 hectares, a large proportion of this area will not require wholesale clearing. Benefits of the revised design include:

- The majority of the building footprint being located within cleared areas, or within native vegetation in lower overall condition (Keighery 1994) than the previous design.
- Nine of ten black cockatoo habitat trees being retained within the amended application area (Figure 1), as opposed to the former retention of six (of nine) identified black cockatoo habitat trees. Therefore one black cockatoo habitat tree is now required for removal as opposed to the three required in the previous design.

The one habitat tree requiring removal was assessed by Focussed Vision (2020) as containing a potentially suitable hollow (rank '3') for black cockatoos. The tree is a dead stag with the potential hollow at approximately three metres height. The stag was assessed at ground level, with the actual internal dimensions of the hollow unknown. Black cockatoos typically breed in tall eucalypts (Birdlife 2022; DAWE 2022; Johnstone *et al.* 2013) and the low height of the hollow makes it less likely to be utilised. The applicant has submitted that they will either relocate the dead stag further from the building or, if this is not possible, will salvage the portion of the tree with the hollow and attach this to an existing tree or pole (Emerge 2021c).

A small component of the additional clearing area required for the amendment was not surveyed as part of black cockatoo habitat tree assessments, however, this area was covered by an arborist assessment (Paperbark Technologies 2021). Only two trees in this small area are Eucalypt species. Neither recorded a diameter at breast height (DBH) greater than 50 centimetres, and therefore do not meet the definition of black cockatoo breeding habitat (Australian Government 2012).

Impacts to native vegetation and black cockatoo habitat trees have been appropriately avoided and minimised by the applicant, with the revised design providing improved outcomes.

The Delegated Officer determined that the proposed clearing is likely to have a significant impact on the environmental values of a conservation area. Proposed clearing is located within Bush Forever Site No. 244 and Beeliar Regional Park. Impacts of clearing to the bush forever site and regional park include:

- Clearing of 0.40 hectares of native vegetation in Degraded to better condition (Keighery 1994) required for the Centre building, carpark and *Asset Protection Zone*.
- The removal of *Zamias (Macrozamia riedlei)* and *Balgas (Xanthorrhoea sp)* from 0.33 hectares of native vegetation in Degraded or better condition (Keighery 1994).
- The removal of one dead stag with the potential to provide a breeding hollow for black cockatoos.

The applicant has committed to relocating the dead stag, or salvaging the hollow and attaching this to an existing tree or pole. The Delegated Officer determined that a significant residual impact remains being the loss of, and/or significant impact to:

- up to 0.73 hectares of native vegetation in a Degraded to Good condition within Bush Forever Site No. 244 and the Beeliar Regional Park.

DPLH (2022) have advised that overall the amended proposal is more in keeping with the intent of Bush Forever and State Planning Policy 2.8 by reducing the impact of the development. DPLH (2022) have no objections to the amended proposal subject to conditions including the provision of an offset in accordance with the WA Environmental Offsets Policy (2011) and Appendix 4 of State Planning Policy 2.8. Approval for the revised proposal has been obtained by the City from the Western Australian Planning Commission (WAPC) (Emerge 2021d).

The City have submitted an environmental offset proposing the ongoing protection of 2.17 hectares of native vegetation in at least 'Very Good' condition within Rose Shanks Reserve (Crown Reserve R1820), which is located within Bush Forever Site No. 390 (Fraser Road Bushland) approximately 8.2 kilometres to the south-east of the application area. The offset provides long-term security as well as ongoing vegetation management to maintain or elevate the current vegetation condition. The City have executed a change in purpose from 'Recreation' to 'Conservation' with a management order issued in favour of the City (City of Cockburn 2022).

The Delegated Officer determined that the offset proposed exceeds 100 per cent of the revised 0.73 hectares of significant residual impact associated with the amended application area based upon results of the EPBC Act offset calculator. Based on an assessment against State Planning Policy 2.8 (Appendix 4) the proposed 2.17 hectare offset is considered a 'substantial net gain', as more than two times the calculated loss of habitat hectares is being offset.

The assessment against the clearing principles and planning and other matters has not changed due to this amendment, and can be found within the Clearing Permit Decision Report CPS 8983/1.

## 1.7. References

Australian Government (2012) EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (Endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (Vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (Vulnerable) *Calyptorhynchus banksii naso*. Department of Sustainability, Environment, Water, Population and Communities (now the Department of Agriculture, Water and Environment), Canberra.

Birdlife Australia (Birdlife) (2022): Birds in Backyards project <https://www.birdsinbackyards.net/species/Calyptorhynchus-latirostris>

City of Cockburn (2022) Status of clearing activities associated with Clearing Permit CPS 8983/1 (DWERDT558613).

Department of Agriculture, Water and the Environment (DAWE) (2020a) *Calyptorhynchus latirostris* - Carnaby's Cockatoo, Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo. Department of Agriculture, Water and the Environment, Canberra. Species Profile and Threats Database. Available from: <http://www.environment.gov.au/sprat>. Accessed February 2020.

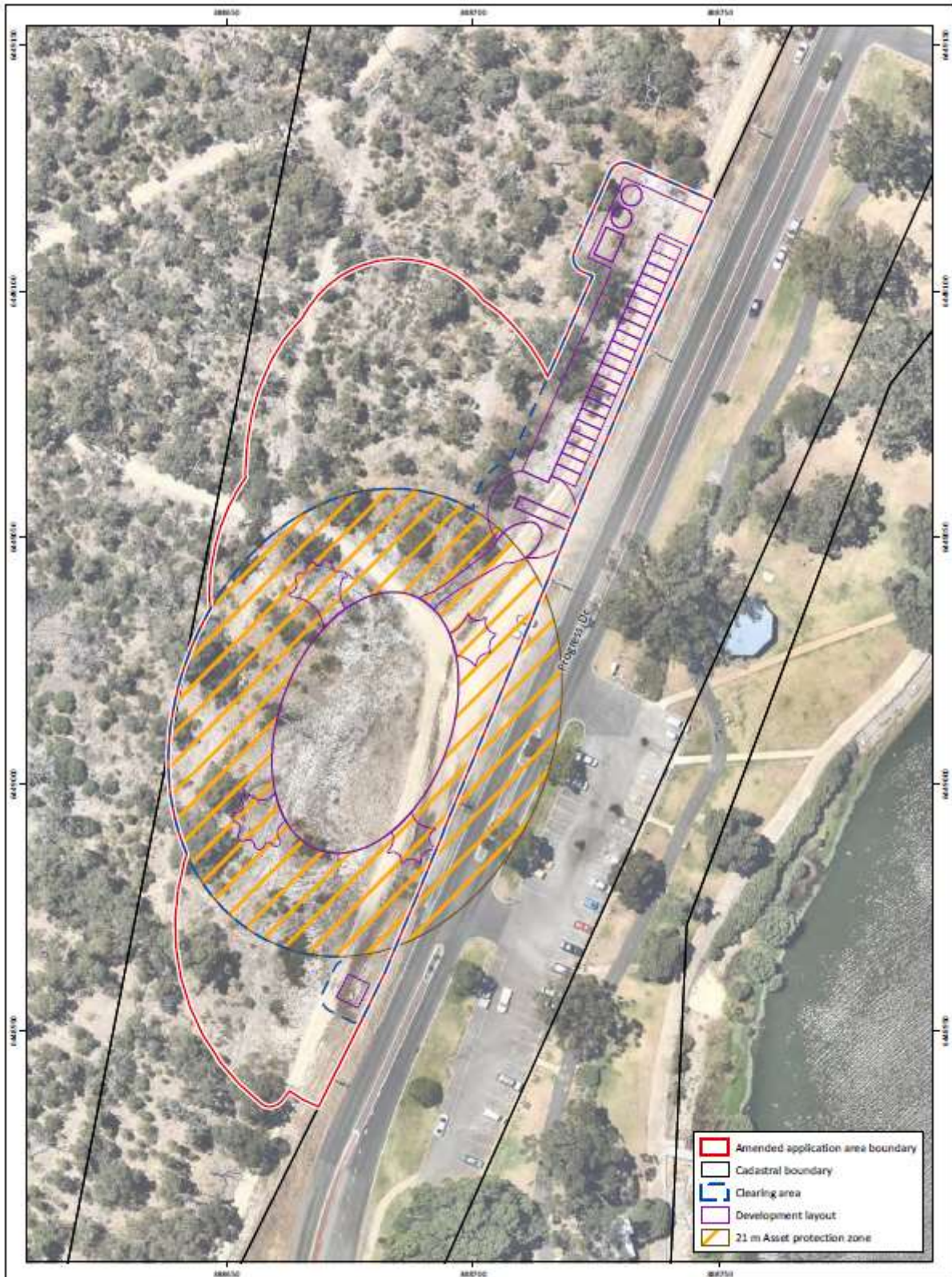
Department of Planning, Lands and Heritage (DPLH) (2022). Advice regarding Clearing Permit Application CPS 8983/2 from the Land Use Planning Policy (LUPP) team of DPLH. 08 March 2022 and 22 March 2022 (DWERDT574293; DWERDT580294).

Emerge Associates (Emerge) (2021a) Application to amend a Clearing (Area) Permit (CPS 8983/1) for Lot 508 on Deposited Plan 414835, Bibra Lake (DWERDT558613).

- Emerge Associates (Emerge) (2021b) application to amend a Clearing (Area) Permit (CPS 8983/1) for Lot 508 on Deposited Plan 414835, Bibra Lake – Supporting information (DWERDT542542) including Attachment 1: Application, Attachment 2: Proposed amendments, Attachment 3: Figures, Attachment 4: Development plan layout, Attachment 5: Tree survey report, and Attachment 6: Landscape Design Development Package (DWERDT542542).
- Emerge Associates (Emerge) (2021c) Clarification received by the Department of Water and Environmental Regulation (DWER) from applicant regarding habitat tree mitigation actions received on 27 May 2022 and 8 June 2022 (DWERDT616992; DWERDT616993)
- Emerge Associates (Emerge) (2021d) Evidence provided of Planning Approval obtained by the City of Cockburn from the Western Australian Planning Commission (WAPC), received by DWER on 10 June 2022 (DWERDT618584).
- Focussed Vision (2020a) Black cockatoo Habitat Assessment – Aboriginal Cultural and Visitors Centre. Focussed Vision Consulting. 20 February 2020. (DWER Ref A1923118).
- Focussed Vision (2020b) Flora and Vegetation Assessment – Aboriginal Cultural and Visitors Centre, Bibra Lake City Of Cockburn. Focussed Vision Consulting. February 2020. (DWER Ref A1923116)
- Johnstone, R.E., T Kirby, T., and K Sarti, K. (2013) The breeding biology of the Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso* Gould in south-western Australia. I. Characteristics of nest trees and nest hollows. Pacific Conservation Biology 19(2) 121 – 142 Published: 01 June 2013
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Officer Woods (2021) Revised designs for Walliabup Aboriginal Cultural and Visitor Centre. Lot 508 on Deposited Plan 414835, Bibra Lake (DWERDT561927).
- Paperbark Technologies Pty Ltd (Paperbark Technologies) (2021). Tree assessment of Lot 508 Progress Drive (DWERDT561930).
- UDLA (2021) Walliabup Aboriginal Cultural and Visitor Centre Design Development Package / Development Application\_Rev A (DWERDT561926).



# Appendix A. Development Footprint (Emerge 2021a)



**Figure 7: Development Layout and Bushfire Asset Protection Zone Location**

**Project:** Native Vegetation Clearing Permit Amendment Application  
**Client:** Bibra Lake Aboriginal Cultural and Visitors Centre  
 City of Cockburn

**Plan Number:** EP19-144(11)-F49  
**Drawn:** GAR  
**Date:** 14/12/2021  
**Checked:** BBB  
**Approved:** KE  
**Date:** 17/12/2021



0 10 20 30  
 Metres  
**Scale: 1:1,000@A4**  
 GDA 1994 MGA Zone 50



While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used.  
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