



**mainroads**  
WESTERN AUSTRALIA

# EPBC 2016/7761 Annual Compliance Report

Great Northern Highway Upgrade Stage 2:  
Muecha to Wubin

29 May 2019 – 29 May 2020

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# Document Control

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# Amendments

Revision Number	Revision Date	Description of Key Changes	Section / Page No.
1	13/08/2020	Draft for internal review	N/A
2	14/08/2020	Final for publication	N/A

# 1 INTRODUCTION

Great Northern Highway forms part of the National Highway Network and provides a strategic freight link between Perth and the State's north as well as Darwin and the Northern Territory. Between 2000 and 2009, Stage One of the Great Northern Highway Muchea to Wubin Upgrade project was completed, which saw 76 km of the highway upgraded.

In 2014 a comprehensive planning review was undertaken of the full Muchea to Wubin link along the highway. A series of construction packages were prioritised following the review, which include town bypasses, wider roads, more passing lanes, flattening crests and easing curves, safer roadsides, more rest stops and additional facilities for heavy vehicles.

Jointly funded by the Australian and Western Australian Governments, the \$384.8 million project will improve road safety, increase freight efficiency and reduce traffic delays, improve travel times and access, improve roadside amenities, and enhance the environmental value of roadsides.

The key objectives for the project include:

- Improved safety
- Increased freight efficiency and reduced traffic delays
- Improved network reliability - improving travel times and enhancing network access
- Enhanced travel wellbeing - improvements in roadside amenities for rest and driver information
- Contribution to sustainable and viable communities - by balancing community concerns, economic, community safety and network access issues
- Enhancement of the environment - by undertaking practices to retain and improve the environmental value of roadsides.

## 1.1 Approval under the Environment Protection and Biodiversity Conservation Act 1999

Proposed construction of the Walebing, Miling Bypass, Pithara and Dalwallinu to Wubin packages were referred to the Department of the Environment and Energy (DoEE; 'the Department') for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The referral was determined to be a controlled action with the controlling provision being "listed threatened species and communities", namely Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) and the Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community (Eucalypt Woodlands TEC). The referred works were assessed through Preliminary Documentation. The Department issued conditional approval for these works to proceed on 19 February 2018 (EPBC 2016/7761).

### 1.1.1 Purpose of this Report

The Action commenced on 29 May 2018. This compliance report has been produced as required by Condition 10 of EPBC approval 2016/7761. Table 1 of this report outlines the compliance with each approval condition over the 12-month period between 29 May 2019 and 29 May 2020.

The Action has not yet been completed, and reporting will continue annually under Condition 10 of EPBC 2016/7761.

## 2 COMPLIANCE

Condition No.	Condition	Status
1	The approval holder must not clear more than 30 hectares of Carnaby's Black Cockatoo habitat and 15 hectares of Eucalypt Woodlands TEC within the project area shown as Attachment 1.	Compliant.  3.51 ha of Carnaby's Black Cockatoo habitat and 5.67 ha of Eucalypt Woodlands TEC was cleared within the project area during the 2019/2020 reporting (Attachment 1).
2	The approval holder must not clear any suitable nesting hollow or known nesting hollow for the Carnaby's Black Cockatoo.	Compliant.  No suitable nesting hollows or known nesting hollows for Carnaby's Black Cockatoo have been cleared.
3	<p>Within 7 days prior to clearing of any area of Carnaby's Black Cockatoo habitat, the approval holder must investigate all potential nesting trees within the area to be cleared to determine if there are any hollows additional to those identified in Condition 2 that are being utilised, or are capable of being utilised, by the Carnaby's Black Cockatoos for nesting. The investigation must be undertaken by a suitably qualified person.</p> <p>a. If any Carnaby's Black Cockatoo(s) is detected utilising any hollow in any tree, the approval holder must:</p> <ol style="list-style-type: none"> <li>i. clearly identify and mark the newly identified nesting tree; and</li> <li>ii. only clear the newly identified nesting tree, or vegetation within a 10 metre radius of the tree, if a suitably qualified person has verified that the hollows in the tree are no longer being used by Carnaby's Black Cockatoos.</li> </ol> <p>b. For each cleared hollow that is being utilised, or capable of being utilised by Carnaby's Black Cockatoo, that is additional to the nesting hollows identified in Condition 2, the proponent must install at least three (3) artificial nesting hollows, where the artificial nesting hollows must be:</p> <ol style="list-style-type: none"> <li>i. installed within a 12 km radius of the cleared nesting tree(s);</li> </ol>	<p>Compliant.</p> <p>All potential nesting trees within the approved area to be cleared were investigated no more than 7 days prior to each clearing event (Attachment 2).</p> <p>Survey and clearing commencement dates are summarised as follows:</p> <p><b>29 May 2019 – 29 May 2020</b></p> <ul style="list-style-type: none"> <li>• Walebing: <ul style="list-style-type: none"> <li>○ Inspection on 14 November 2019</li> <li>○ Clearing on 20 November 2020</li> </ul> </li> <li>• Wubin:</li> </ul>

Condition No.	Condition	Status
	<ul style="list-style-type: none"> <li>ii. constructed, positioned, erected and maintained in accordance with relevant artificial hollow guidance, to maximise the likelihood that the artificial nesting hollows are utilised by the Carnaby's Black Cockatoo;</li> <li>iii. installed before the commencement of the following breeding season for the Carnaby's Black Cockatoo; and</li> <li>iv. inspected and maintained at least annually to check for condition and evidence of Carnaby's Black Cockatoo usage.</li> </ul>	<ul style="list-style-type: none"> <li>○ Inspection on 14 November 2019</li> <li>○ Clearing on 20 November 2020</li> </ul> <p><b>Prior to current reporting period</b></p> <ul style="list-style-type: none"> <li>● Miling Bypass: <ul style="list-style-type: none"> <li>○ Inspection on 24 May 2018</li> <li>○ Clearing on 29 May 2018</li> </ul> </li> <li>● Pithara: <ul style="list-style-type: none"> <li>○ Inspection on 28 May 2018</li> <li>○ Clearing on 4 June 2018</li> <li>○ Inspection on 8 June 2018</li> <li>○ Clearing on 11 June 2018</li> </ul> </li> </ul> <p>No evidence of Black Cockatoo nesting was observed in any of the trees inspected.</p>
4	<p>To mitigate impacts to the Carnaby's Black Cockatoo and the Eucalypt Woodlands TEC, the approval holder must prepare and submit a Construction Environmental Management Plan (CEMP) for the approval of the Minister. The approval holder must not commence the action unless the Minister has approved the CEMP.</p> <p>The CEMP must be prepared in accordance with the Department's Environmental Management Plan Guidelines and include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a. design principles and practices to minimise clearing of Carnaby's Black Cockatoo habitat and the Eucalypt Woodlands TEC – for example, road micro-alignment, traffic management alternatives to side roads;</li> <li>b. measures to prevent impacts to Carnaby's Black Cockatoo habitat and the Eucalypt Woodlands TEC during construction, including to:</li> </ul>	<p>Compliant.</p> <p>The Minister approved the CEMP on 11 May 2018 (Attachment 3) and the action commenced on 29 May 2019 (see Condition 8). Main Roads has implemented the approved CEMP. No changes have been made to the CEMP since the initial approved by the Minister.</p>

Condition No.	Condition	Status
	<ul style="list-style-type: none"> <li>i. prevent and/or control site access, weeds, <i>Phytophthora</i> dieback, erosion, dust and fire;</li> <li>ii. minimise the impacts of excavation activities to the lateral root system of the Eucalypt Woodlands TEC; and</li> <li>iii. delineate vegetation to be retained through, for example, the erection of temporary fencing or signage to avoid accidental clearing or disturbance outside of the impact area.</li> </ul> <p>c. management measures, including in relation to fencing and access controls, to permanently restrict human and stock access to adjacent road reserves;</p> <p>d. objectives, targets and completion criteria for post construction rehabilitation measures such as site clean-up and weed management, including information on the mapping, monitoring and removal of noxious weeds;</p> <p>e. objectives, targets and completion criteria for landscaping and revegetation works on cleared areas of land and redundant sections of carriageway, with flora species to be planted that are identified as known foraging and breeding habitat for the Carnaby's Black Cockatoo (this should include detail on site preparation works, seedling planting programs, success rates, ongoing management post establishment and details of replanting requirements if success rates are not achieved):</p> <ul style="list-style-type: none"> <li>i. flora species identified as known foraging and breeding habitat for the Carnaby's Black Cockatoo must not be planted within 10 metres of the road carriageway to reduce the risk of vehicle strike.</li> </ul> <p>f. clear objectives and performance indicators for all management actions, mitigation measures and practices prescribed by the CEMP including details of the monitoring to be undertaken to demonstrate the effectiveness of the measures;</p> <p>g. corrective actions for circumstances where an action, mitigation measure or practice prescribed by the CEMP fails to meet, or is unlikely to meet, its prescribed objective, and trigger action points at which these corrective actions will be implemented; and</p> <p>h. timeframes for implementing the above measures.</p>	

Condition No.	Condition	Status
	If the Minister approved the CEMP, then the approved CEMP must be implemented.	
5	To mitigate impacts to habitat for the <i>Eremophila pinnatifida</i> the approval holder must implement condition 8 of Clearing Permit CPS 7231/1.	Not applicable.  Works triggering the implementation of Condition 8 of Clearing Permit CPS 7231/3 (clearing of Population 3 of <i>Eremophila pinnatifida</i> ) have not occurred to date during construction of the Action.
6	To compensate for the loss of up to 30 hectares of Carnaby's Black Cockatoo habitat, the approval holder must, within one (1) year after the commencement of the action, provide the Department with the offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the offset area identified in Attachment 3, that the approval holder has transferred to the DBCA.	Compliant.  Main Roads allocated 159 ha of the previously acquired Lot 1, 1395 Banovich Road, Hill River to meet the requirements of this offset. The property has been added to the conservation estate and is being managed by the DBCA. The details of this site as required under this condition, including offset attributes, shapefiles and a textual description, were provided to the Department by email (Post Approvals) on 8 November 2018 (Attachment 4).
7	To compensate for the loss of up to 15 hectares of Eucalypt Woodlands TEC, the approval holder must, within one (1) year of the commencement of the action, or as otherwise agreed to by the Minister: <ul style="list-style-type: none"> <li>a. submit to the Minister for approval the details of an offset site(s) that:                             <ul style="list-style-type: none"> <li>i. is to be acquired and managed for conservation;</li> <li>ii. includes a minimum of 155 hectares of Eucalypt Woodlands TEC; and</li> <li>iii. meets the requirements of the EPBC Environmental Offsets Policy.</li> </ul> </li> </ul>	Compliant.  Main Roads has acquired Lot 500, Yenyening Lakes Road, Brookton, on which 134.1 ha of Eucalypt Woodlands TEC occur. Offset attributes, shapefiles and a textual description of the offset area were provided to the Department by email (Vaughn Cox and Post Approvals) on 24 May 2019 (Attachment 5).

Condition No.	Condition	Status
	<ul style="list-style-type: none"> <li>b. make a financial contribution to an approved conservation fund to fully fund the purchase and management for conservation of the approved offset site(s);</li> <li>c. provide written evidence to the Department that the financial contribution:                             <ul style="list-style-type: none"> <li>i. has been made to the approved conservation fund; and</li> <li>ii. has fully funded the purchase and management of the offset site(s).</li> </ul> </li> <li>d. provide the Department with the offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the offset site(s).</li> </ul>	<p>The reduced offset area of 134.1 ha from 155 ha was requested by Main Roads as a variation to EPBC 2016/7761 Condition 7 in accordance with EPBC Act Section 143(1B) (email from Main Roads to Post Approvals 7 October 2019). The reduced offset area was considered appropriate by the Department (email correspondence from Rodd Dann to Main Roads 18 November 2019) as a result of offset calculator inputs being adjusted in line with actual conditions at the offset site, and negotiated between the Department and Main Roads.</p> <p>The Department confirmed that the revised offset calculator inputs, subsequent reduced offset area of 134.1 ha, and Main Roads' request to vary EPBC 2016/7761 Condition 7 would be recommended to the Department variation team and the delegate, and formal approval of the variation request would be provided to Main Roads.</p> <p>The Department varied the Condition as confirmed in a letter to Main Roads on 18 July 2020 which included a Variation of Conditions Attached to Approval (Attachment 5).</p>
8	<p>Within 30 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.</p>	<p>Compliant.</p> <p>The action commenced on 29 May 2018, with written notification provided to the Department by email on 31 May 2018 (Attachment 6).</p>



Condition No.	Condition	Status
9	<p>The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plan required by this approval (Condition 4), and make them available upon request to the Department. Such records may be subject to audit by the Department of an independent auditor in accordance with section 458 of the EPBC Act or used to verify compliance with the conditions of this approval. Summaries of audits will be posted on the Department’s website. The results of audits may also be publicised through the general media.</p>	<p>Compliant.</p> <p>Main Roads has maintained records in accordance with this condition and their legal obligations under the <i>WA State Records Act 2000</i>.</p>
10	<p>Within three months of every 12-month anniversary of the commencement of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. Reports must remain on the website for the life of this approval. The approval holder must continue to comply with this condition until such time as agreed to in writing by the Minister.</p>	<p>Compliant.</p> <p>This 2019/2020 Compliance Assessment Report will be published on the Main Roads website at the same time as the provision of this report to the Department.</p>
11	<p>Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.</p>	<p>Not applicable.</p> <p>The Minister has not yet directed Main Roads to conduct an independent audit of compliance with EPBC 2016/7761’s conditions of approval.</p>
12	<p>The approval holder may choose to revise a management plan approved by the Minister under condition 4 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact. If the approval holder makes this choice they must notify the Department in writing that the approved plan has been revised and provide the Department, at least four weeks before implementing the revised plan, with:</p> <p>a. an electronic copy of the revised plan;</p>	<p>Not applicable.</p> <p>The approved CEMP has not been revised to date.</p>

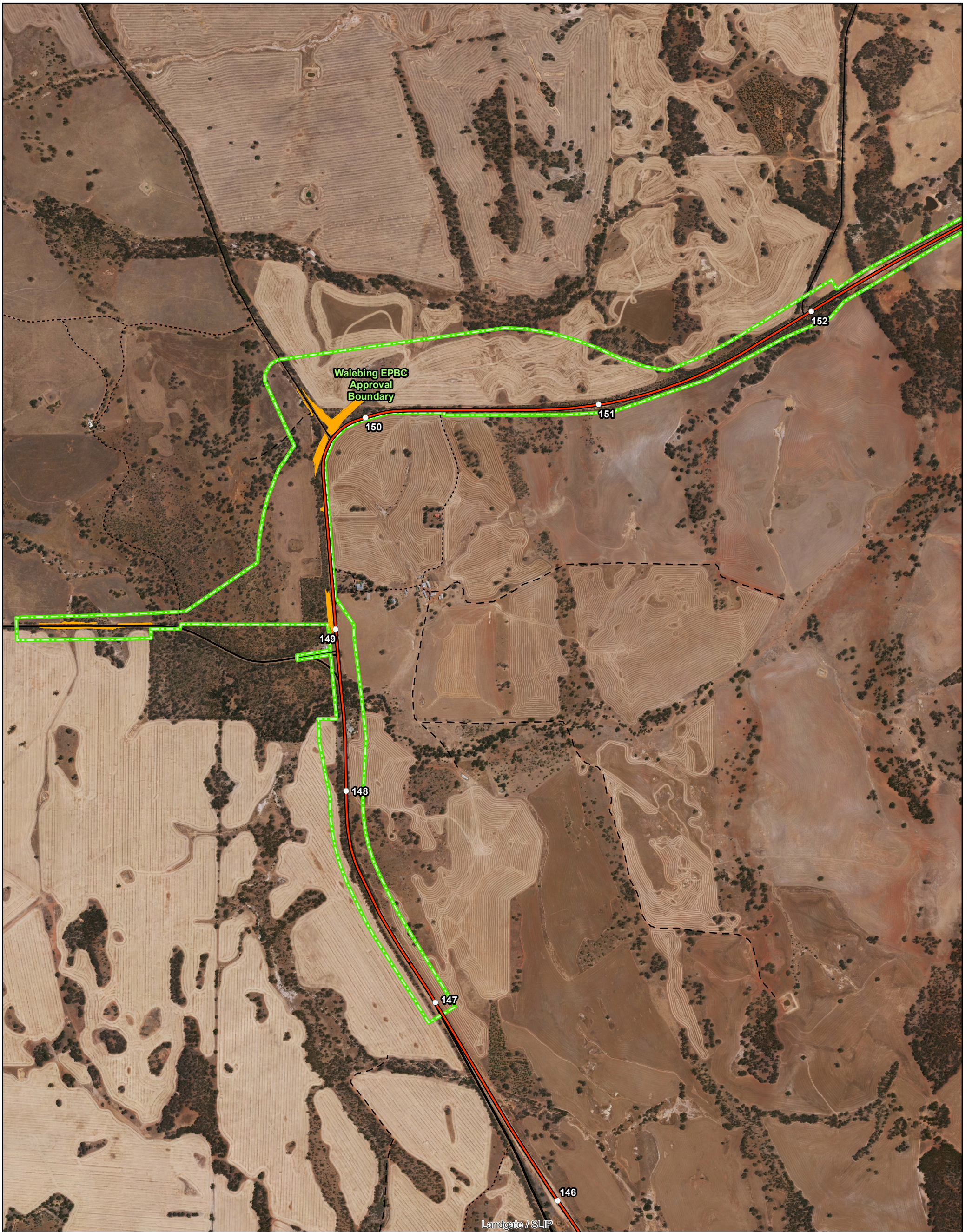
Condition No.	Condition	Status
	<ul style="list-style-type: none"> <li>b. an explanation of the differences between the revised plan and the approved plan; and</li> <li>c. the reasons the approval holder considers that taking the action in accordance with the revised plan would not be likely to have a new or increased impact.</li> </ul>	
13	<p>The approval holder may revoke their choice under condition 12 at any time by notice to the Department. If the approval holder revokes the choice to implement a revised plan, without approval under section 143A of the Act, the plan approved by the Minister must be implemented.</p>	<p>Not applicable.</p> <p>Main Roads has not elected to revoke their choice under Condition 12.</p>
14	<p>If the Minister gives a notice to the approval holder that the Minister is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then:</p> <ul style="list-style-type: none"> <li>a. Condition 12 does not apply, or ceases to apply, in relation to the revised plan; and</li> <li>b. The approval holder must implement the plan approved by the Minister.</li> </ul> <p>To avoid any doubt, this condition does not affect any operation of conditions 12 and 13 in the period before the day the notice is given.</p>	<p>Not applicable.</p> <p>The approved CEMP has not been revised to date.</p>
15	<p>Conditions 12, 13 and 14 are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised plan to the Minister for approval.</p>	<p>Not applicable.</p> <p>The approved CEMP has not been revised to date.</p>
16	<p>Unless otherwise agreed to in writing by the Minister, the approval holder must publish all management plans referred to in these conditions of approval on their website for the duration of this approval. Each management plan must be published on the website within 1 month of being approved by the Minister or being submitted under condition 12 and must remain on the website for the life of this approval.</p>	<p>Compliant.</p> <p>The approved CEMP was first published on Main Roads' website on 25 May 2018. <a href="#">The plan is available here.</a></p>



### 3 ATTACHMENTS

Attachment	Title
<b>Attachment 1</b>	Carnaby's Black Cockatoo habitat and Eucalypt Woodlands TEC clearing
<b>Attachment 2</b>	Reports for inspection of potential Carnaby's Black Cockatoo nesting trees before clearing
<b>Attachment 3</b>	Ministerial approval of the CEMP
<b>Attachment 4</b>	Notification to the Department of offset property: Carnaby's Black Cockatoo habitat
<b>Attachment 5</b>	Correspondence with and Confirmation from the Department of offset property: Eucalypt Woodlands TEC
<b>Attachment 6</b>	Notification of commencement of action

## **Attachment 1: Carnaby's Black Cockatoo habitat and Eucalypt Woodlands TEC clearing**



**Legend**

- GNH Design Alignment Marker (1km)
- Cleared Carnaby's Black Cockatoo Habitat
- ▭ EPBC Approval Boundary
- GNH Design Alignment

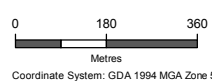
Data Source: Main Roads WA, Landgate



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Client  
 Project  
**Great Northern Highway  
 Muchea to Wubin Upgrade Stage 2**

**Walebing - Location of Carnaby's  
 Black Cockatoo habitat clearing  
 (29 May 2019 - 28 May 2020)**

Drawing No: **GNH-CN00-EN01-GIS-0076** Issue: **A**

Task No: **GNH-XXX** Drawing Status / Other: **Draft / Other Info**

Date	By	Chkd	Appd
12/08/2020	JR	GJ	GJ



**Legend**

- Straight Line Kilometre Marker (100m)
- GNH Design Alignment
- - - EPBC Approval Boundary
- Cleared Carnaby's Black Cockatoo Habitat

Data Source: Main Roads WA, Landgate

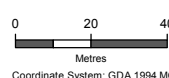


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Scale at A3  
 1:2,000

Coordinate System: GDA 1994 MGA Zone 50



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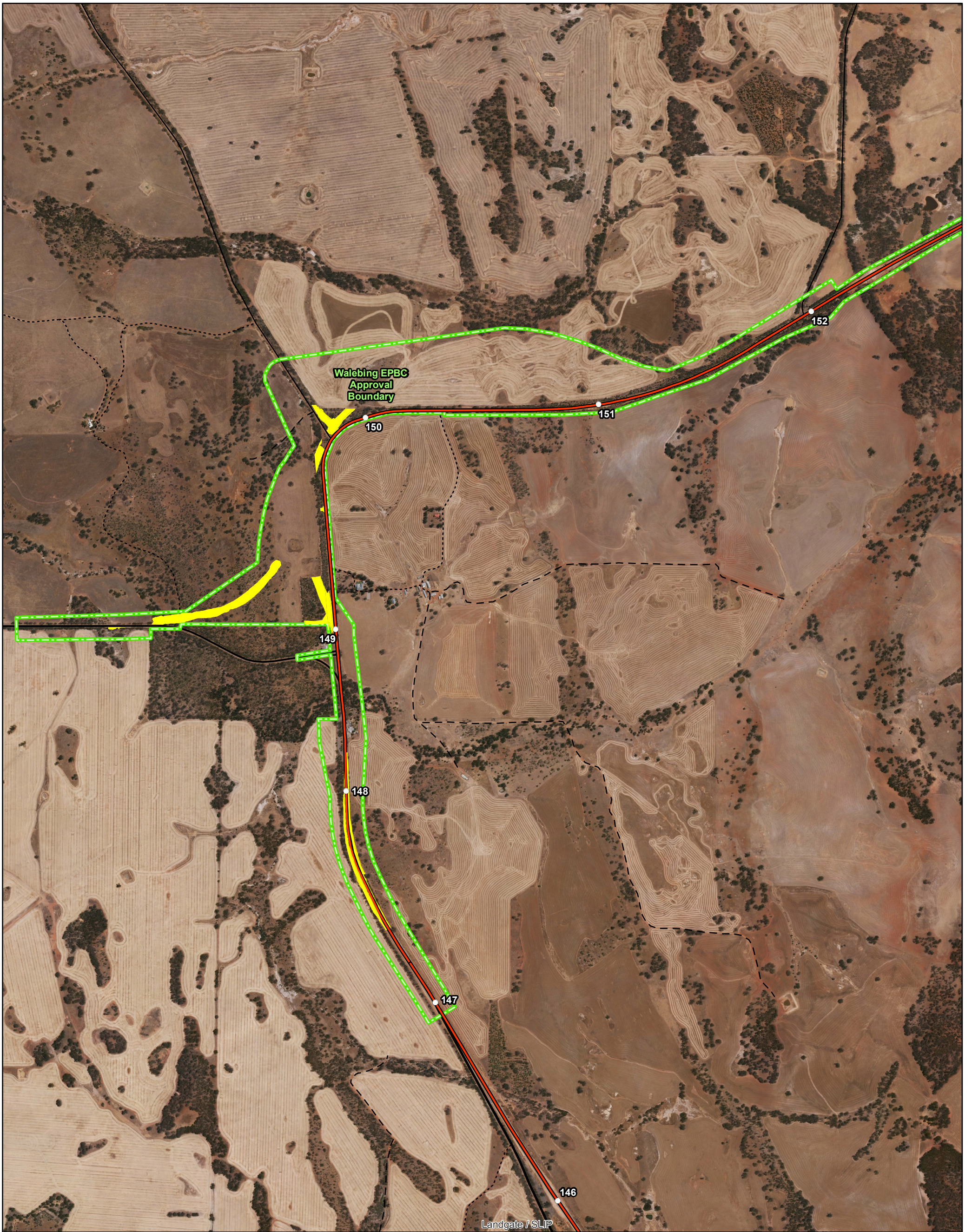
Client  
 Project  
**Great Northern Highway  
 Muchea to Wubin Upgrade Stage 2**

**Wubin - Location of Carnaby's Black  
 Cockatoo habitat clearing between  
 29 May 2019 and 28 May 2020**

Drawing No: GNH-CN00-EN01-GIS-0076 Issue: A

Task No: GNH-XXX Drawing Status / Other: Draft / Other Info

Date	By	Chkd	Appd
12/08/2020	JR	GJ	GJ



- Legend**
- GNH Design Alignment Marker (1km)
  - Cleared TEC Eucalypt Woodlands
  - ▭ EPBC Approval Boundary
  - GNH Design Alignment

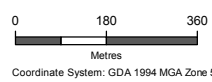
Data Source: Main Roads WA, Landgate



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Great Northern Highway  
 Muchea to Wubin Upgrade Stage 2

**Walebing - Location of Eucalypt Woodlands TEC Clearing between 29 May 2019 and 28 May 2020**

Drawing No: GNH-CN00-EN01-GIS-0076 Issue: A

Task No: GNH-XXX Drawing Status / Other: Draft / Other Info

Date	By	Chkd	Appd
12/08/2020	FK	GJ	GJ



**Attachment 2: Reports for inspection of potential Carnaby's Black Cockatoo nesting trees before clearing**

## MEMORANDUM

<b>Date</b>	28 May 2018	<b>Title</b>	Black-cockatoo Nesting Tree Survey Results – Miling Bypass, Great Northern Highway
<b>Ref.</b>	WATP18002/02	<b>Distribution</b>	Matthew Della Bosca Watpac Civil & Mining Pty Ltd
<b>Author</b>	Kellie Bauer-Simpson Principal Ecologist	<b>Review</b>	Mike Bamford, Supervising Zoologist Tim Gamblin, Senior Zoologist

### Background

Main Roads Western Australia (Main Roads) is upgrading the 218 km section of Great Northern Highway (GNH) between Muchea and Wubin. As part of the project, an eastern bypass around the townsite of Miling will be constructed. Watpac Civil and Mining Pty Ltd (Watpac) is undertaking the construction of the Miling Bypass, and as part of the works, commissioned Focused Vision Consulting Pty Ltd (FVC) to undertake Black-cockatoo nesting tree surveys within selected areas along the alignment, as presented in **Figure 1**.

Black-cockatoos include three species of listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). A major factor contributing to their conservation significance is decline in numbers due to significant habitat loss across their range. Accordingly, their habitat is protected under the EPBC Act. Habitat for Black-cockatoos includes trees within which they nest and breed, referred to as 'nesting trees'. Trees of suitable species (selected *Eucalyptus*), with adequate trunk diameter (diameter at breast height (DBH)) are considered suitable, or potentially suitable nesting trees, depending on the presence and suitability of hollows. Trees are of greatest significance if they possess hollows with evidence of nesting birds utilising them, and a scale of nesting (or potential nesting) tree status descending from this greatest significance is summarised in **Table 1**.

**Table 1 Ranking System for Black-cockatoo Potential Nesting Trees**

A potential nest-tree is any tree with a diameter at breast height >500 mm (or >300 mm for *Eucalyptus salmonophloia* and *E. wandoo*).


Rank	Description of tree and hollows/activity
1	Active nest observed; adult (or immature) bird seen entering or emerging from hollow.
2	Hollow of suitable size and angle (i.e. near-vertical) visible with chew marks around entrance.
3	Potentially suitable hollow visible but no chew marks present; or potentially suitable hollow present (as suggested by structure of tree, such as large, vertical trunk broken off at a height of >10m).
4	Tree with large hollows or broken branches that might contain large hollows but hollows or potential hollows are not vertical or near-vertical; thus a tree with or likely to have hollows of sufficient size but not to have hollows of the angle preferred by black-cockatoos.
5	Tree lacking large hollows or broken branches that might have large hollows; a tree with more or less intact branches and a spreading crown.
x	Where a hollow that is (otherwise) potentially suitable for black-cockatoo nesting has been colonised by feral Honey Bees ( <i>Apis mellifera</i> ), and therefore rendered unusable, the nest-tree rank is preceded by 'x' (e.g. x2, x3, x4).



0 125 250 375 500 m  
 GDA 94 / MGA Zone 50



**Legend**

 Study Area



**Figure 1 - Study Area**

This correspondence presents the findings of the field assessment for Black-cockatoo nesting trees within the designated sections of the project site (**Figure 1**), as recorded by FVC, supported by specialist partner consultants, Bamford Consulting Ecologists (BCE).

### Scope of Work

The scope of work was to undertake a site inspection, to observe and if appropriate, measure and record relevant data for suitable trees within the survey areas as provided by Watpac, and present these findings in a suitable report. All work was to be undertaken in accordance with the Referral Guideline for Threatened Black Cockatoos.

### Methodology

The field survey took place on 24 May 2018, over a single day, by Senior Zoologist, Tim Gamblin, assisted by Technician, Will Bauer-Simpson. Tim has significant experience in surveys for Black-cockatoos and their habitat.

The designated study areas were traversed on foot and surveyed in exhaustive detail, to observe and record all suitable trees for Black-cockatoo nesting.

The Commonwealth Department of the Environment and Energy (DEE; formerly the Department of Sustainability, Environment, Water, Population and Communities) provides guidelines for the referral to the DEE of actions that may result in impact to Black-cockatoos (for assessment under the EPBC Act). The survey and analysis reported here have been conducted with strong reference to both the existing guidelines (DSEWPaC 2012) as well as the recently revised draft guidelines (DEE 2017). In addition, survey methodology followed the recommendations listed on the DEE's Species Profile and Threats Database (DEE 2018a, c).

Within the survey area, the following information was recorded for every suitable tree<sup>1</sup> (Wandoo, *Eucalyptus wandoo* and Salmon Gum, *Eucalyptus salmonophloia*) with a diameter at breast height (DBH) equal to or greater than 300 mm:

- tree location
- tree species
- life status
- DBH
- nest-tree rank (trees were assessed (from the ground) for the potential presence/quality of nest-hollows and allocated a nesting rank (developed by BCE) as described in Error! Reference source not found.).

BCE has also developed a tree measurement protocol, based on Commonwealth guidelines which is outlined in **Appendix 1**.

---

<sup>1</sup> the draft revised EPBC Act referral guidelines (DEE 2017) stress that any tree species may provide suitable hollows.

## Results

A total of nine trees considered potential current or future nesting trees were recorded within the areas surveyed within the study area, as summarised in **Table 2**.

**Table 2 Summary of Recorded Potential Nest Trees**

Tree No.	Species	DBH (cm)	Tree Rank/Category	Value/ Concern
1	<i>Eucalyptus wandoo</i>	34	5 – Sufficient DBH, no hollows	Low-Medium
2	<i>Eucalyptus wandoo</i>	37	5 – Sufficient DBH, no hollows	Low-Medium
3	<i>Eucalyptus wandoo</i>	46	5 – Sufficient DBH, no hollows	Low-Medium
4	<i>Eucalyptus wandoo</i>	42	4 – Potential hollow but unsuitable angle/orientation	Medium
5	<i>Eucalyptus wandoo</i>	76	3 – Potential hollow, no chew marks	Medium
6	<i>Eucalyptus salmonophloia</i>	33	5 – Sufficient DBH, no hollows	Low-Medium
7	<i>Eucalyptus salubris</i>	30	3 – Potential hollow, no chew marks	Medium
8	<i>Eucalyptus salmonophloia/wandoo</i>	35	3 – Potential hollow, no chew marks	Medium
9	<i>Eucalyptus wandoo</i>	34	5 – Sufficient DBH, no hollows	Low-Medium

The locations of the recorded potential nest trees are presented in **Figure 2**.

The potential nest trees all occur in the northern of the two areas surveyed, with no trees of any concern occurring within the southern designated survey areas.

All recorded trees are *Eucalyptus wandoo* (six confirmed trees), *Eucalyptus salmonophloia* (one confirmed tree) or *Eucalyptus salubris* (one tree). A ninth tree is either *Eucalyptus wandoo* or *Eucalyptus salmonophloia*, and the confirmed identification is not important, since Black-cockatoos demonstrate equal preference for both species.

Most (five) of the recorded trees are of adequate DBH, but do not support observable hollows, and are therefore not nesting trees, but potential nesting trees only. One tree, a *Eucalyptus wandoo*, was observed to provide a hollow, however the orientation of the hollow is not suitable for Black-cockatoos and therefore, would be unlikely to be a nesting tree, and is classed as a potential nesting tree only. The remaining three trees recorded a rank of '3', with observable hollows of suitable angle and orientation, but with no evidence (e.g. chew marks) of Black-cockatoo use. These trees are also only considered potential nesting trees, since hollows do not support active nests. Active nests would be observable between July and December, when Carnaby's Black-cockatoos are known to breed and nest.



0 125 250 375 500 m

GDA 94 / MGA Zone 50



**Legend**

- Study Area
- Potential Nesting Tree



**Figure 2 - Recorded Potential Nesting Trees**

## **Conclusion**

A survey to determine the status of potential nesting trees with hollows (rank of '3' or higher) would be required to be carried out during the breeding season (July to December), if such trees are proposed to be impacted.

Further advice should be sought regarding the need for approvals (which would commence with referral to the DEE) to clear any of the above trees, before proceeding with clearing activities.

## **Closing**

Should you require further information or clarification regarding the information provided in this report, please do not hesitate to contact the undersigned.

Best regards,

Kellie Bauer-Simpson  
Director & Principal Ecologist/Environmental Manager  
Focused Vision Consulting Pty Ltd

## **Appendix 1 Bamford Consulting Ecologists black-cockatoo nesting-tree assessment protocol**

Bamford Consulting Ecologists base black-cockatoo nesting-tree assessments on Federal guidelines (DEE 2017; DotE 2018a, b, c) but also refer to the following when undertaking field surveys.

### ***Measuring DBH***

While black-cockatoos generally nest towards the crown of a tree, the diameter of a tree at breast-height (DBH) can be indicative of the likelihood of hollow-formation in the upper trunk and can be used in the assessment of the 'value' of a tree to breeding black-cockatoos. A DBH threshold of 500 mm (or 300 mm for Wandoo, *Eucalyptus wandoo*, and Salmon Gum, *E. salmonophloia*) is commonly used to delineate 'potential' nest-trees (DotE 2018a, b, c), however the tree has to be *functionally capable of supporting a nest hollow* and there are several exceptions where trees that meet a strict DBH threshold are excluded (e.g. those with low-forking into narrow-diameter trunks, or those that have been hollowed-out and 'opened' by fire). Thus some discretion needs to be used when assessing trees.

The international standard for 'breast height' is 1.3 m (James and Shugart Jr 1970).

Only occasionally are trees close to perfectly cylindrical. As such, wherever possible, DBH should be 'representative' of the tree. In cases where the tree is approximately oval in cross-section, BCE measures the diameter of the shorter axis. Note that other methods such as circumference, or the quadratic average of the long and short axes are used in some applications, but logistic constraints generally require a more pragmatic approach. DBH should be reflective of the trunk above the nesting threshold (see below). Where a tree spreads at the base along one axis, the axis that best represents the trunk above is chosen for measurement.

### ***Nest height minima***

For Carnaby's Black-Cockatoo, the minimum height of known nests is c. 3 m (Saunders 1979)<sup>2</sup>. For Forest Red-tailed Black-Cockatoo, the minimum height of a known nest is 6.5 m (Johnstone *et al.* 2013a). Thus, a 3-4 m threshold seems a pragmatic "general" one to use for the purposes of field surveys where both species are likely and multiple tree species are under consideration.

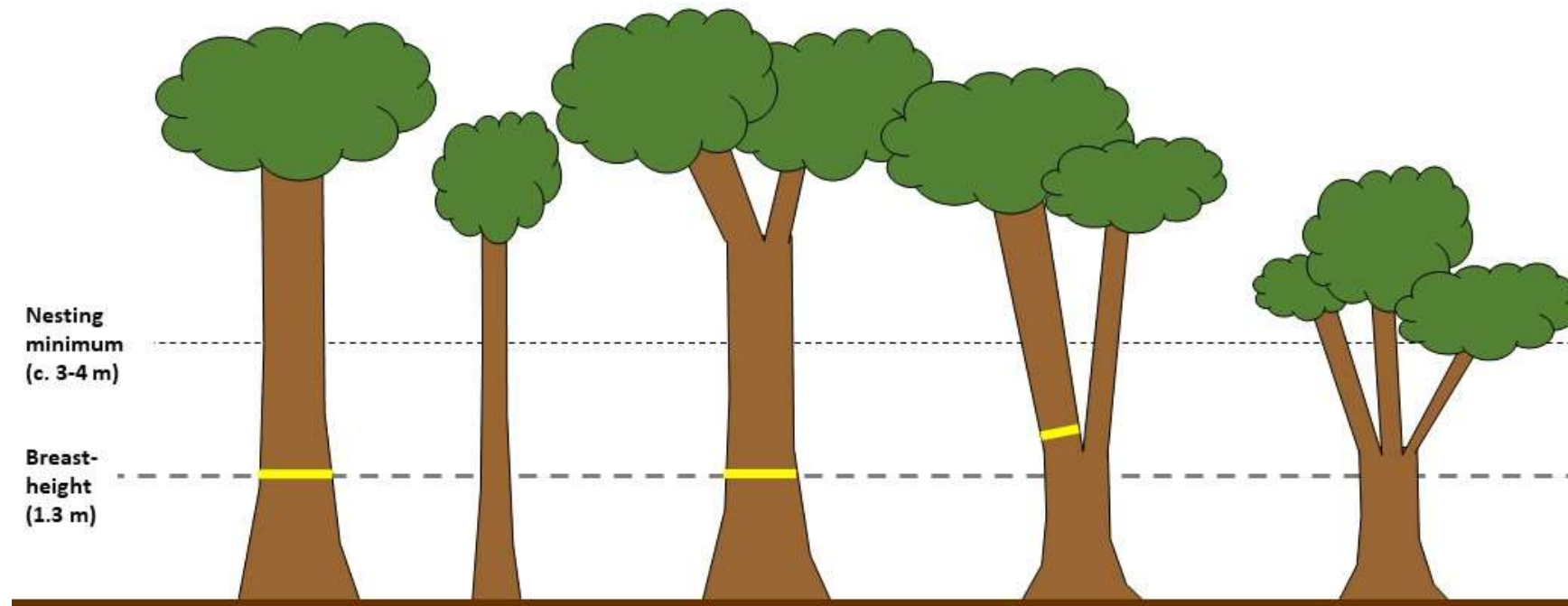
### ***Tree forms***

Quite obviously, trees have a range of forms and growth-habits. These can occasionally affect black-cockatoo nesting-tree surveys. As such, the following table has been developed (with reference to the information above) to guide tree assessment.

---

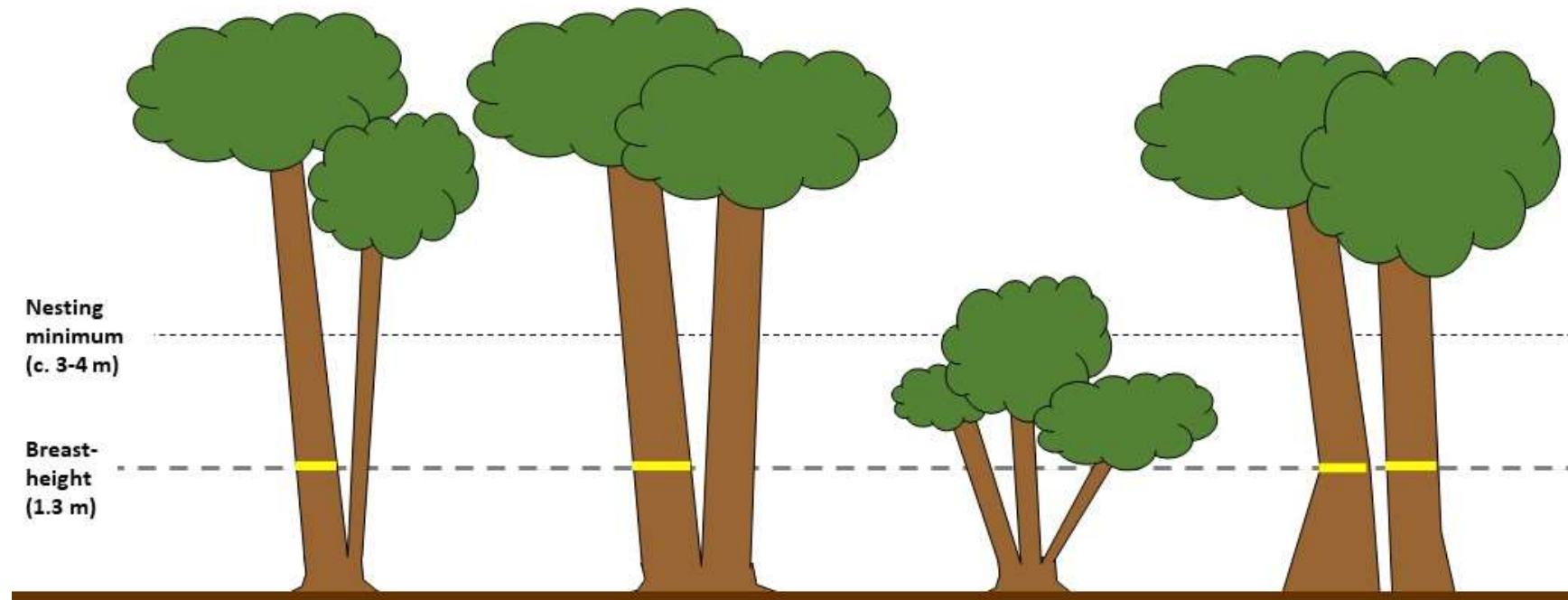
<sup>2</sup> Although nests as low as 2 m (in Wandoo or Salmon Gum) were recorded, 95% of nests were above 3 m.





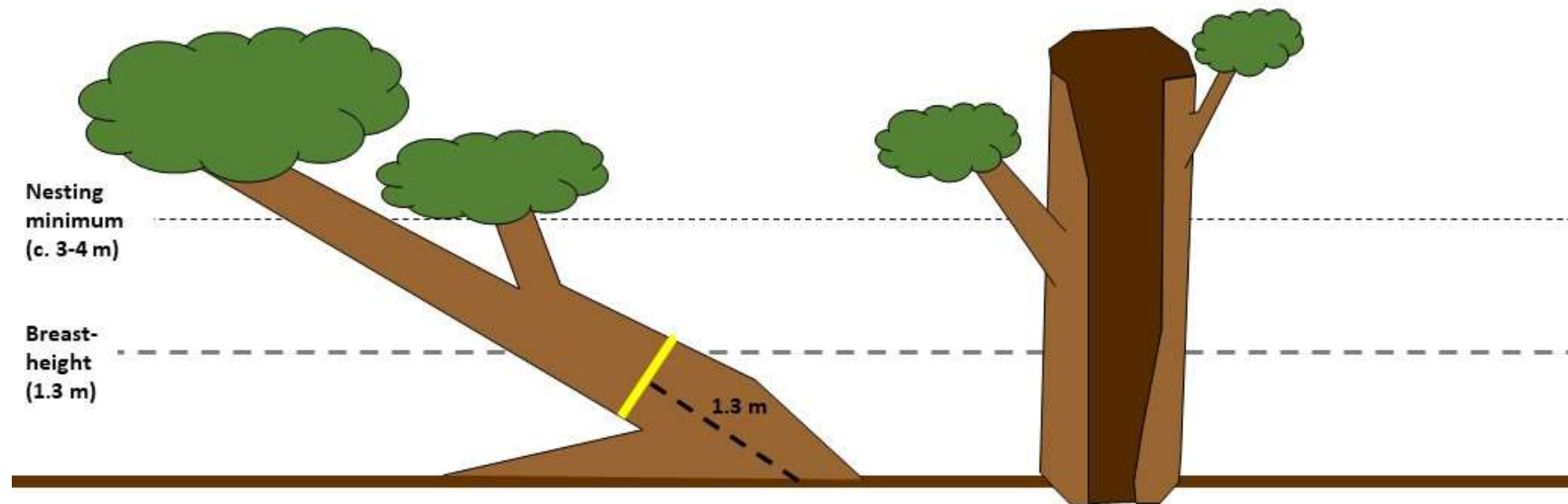
<b>Tree Description:</b>	Straight trunk. DBH > 500 mm*.	Straight trunk. DBH < 500 mm*.	Trunk forks above 3 m. DBH > 500 mm*.	Trunk forks between 1.3 m & 3 m. Diameter of at least one trunk above fork > c. 500 mm*.	Trunk forks between 1.3 m & 3 m. DBH > 500 mm* but <u>no</u> trunks above fork have diameter > c. 500 mm*.
<b>Actions:</b>	Measure DBH. Record species, life status and score for hollows. Waypoint tree.	Do not record.	Measure DBH. Record species, life status and score for hollows. Waypoint tree.	Measure/estimate diameter of <u>widest</u> trunk above fork. Note number of trunks. Record species, life status and score for hollows. Waypoint tree.	Do not record.

\* Or 300 mm DBH for Wandoo, Salmon Gum.



<b>Tree Description:</b>	Trunk forks below 1.3 m. Diameter of <u>one</u> trunk above fork > 500 mm*.	Trunk forks below 1.3 m. Diameter of <u>multiple</u> trunks above fork > 500 mm*.	Trunk forks below 1.3 m. DBH of all trunks < 500 mm*.	Two <u>separate</u> trees in very close proximity. Both with DBH > 500 mm.
<b>Actions:</b>	Measure DBH of relevant trunk above fork. Note number of trunks. Record species, life status and score for hollows. Waypoint tree.	Measure DBH of <u>widest</u> trunk above fork. Note number of trunks. Record species, life status and score for hollows. Waypoint tree.	Do not record.	For <u>both</u> trees... Measure DBH. Record species, life status and score for hollows. Waypoint <u>each</u> tree (i.e. 2 separate records).

\* Or 300 mm DBH for Wandoo, Salmon Gum.



Tree Description:	Trunk leans dramatically. Diameter > 500 mm* at 1.3m from centre of tree base.	Trunk has been burnt out internally to create an <u>open</u> half-pipe shape (no potential nesting sites). DBH > 500 mm*.
Actions:	Measure diameter at 1.3 m from the central base point, along the midline of the tree. Record species, life status and score for hollows. Waypoint tree.	Do not record.

\* Or 300 mm DBH for Wandoo, Salmon Gum.

# Memo

To: Aaron Veale, HAJV

From: Anna Leung

Date: 1 June 2018

Subject: Carnaby's cockatoo nesting activity check at GNH-Pithara section

---



Dear Aaron,

This memo presents the results of the survey of nesting activity of Carnaby's Cockatoo (*Calyptorhynchus latirostris*) within the GNH-pithara section (Figure 1) of the Great Northern Highway, Muchea to Wubin Upgrades Project (GNH Project).

## BACKGROUND

The GNH Project comprises a significant program of works by Main Roads Western Australia to improve safety and efficiency of the GNH to meet National Highway Standards. Highway Construction and Albem Operations (HAJV) are constructing the GNH-Pithara section of the GNH Project (SLK 207.4 – 223.4), approximately 200 km north of Perth.

The GNH-Pithara section contains potential breeding trees for the Threatened species Carnaby's Cockatoo (Figure 1). These were surveyed in the area previously by Phoenix from multiple study areas over several years (Phoenix 2015<sup>1</sup>, 2016<sup>2</sup>, 2017<sup>3</sup>) and re-checked in March 2018 (Phoenix 2018<sup>4</sup>). HAJV require a check of the potential nesting trees containing hollows for presence of nesting birds prior to commencing clearing works.

## METHODOLOGY

A site visit was undertaken on 28 May 2018 by zoologists with experience conducting black cockatoo habitat assessments.

Phoenix maintains the black cockatoo habitat tree data for the GNH Project in a database. The trees requiring checking were loaded onto a digital field device to re-locate the trees in the field.

All potential breeding trees within the development envelope were inspected for presence of hollows and evidence of birds by knocking on the trunk, observing hollows with binoculars, and checking for recent chewings around hollow. Fifteen potential breeding trees were checked in the development envelope (Table 1).

---

<sup>1</sup> Phoenix (2015) Flora and fauna assessment for the Great Northern Highway – Muchea to Wubin (Stage 2) Upgrades Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Jacobs.

<sup>2</sup> Phoenix (2016) Phoenix. 2016b. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

<sup>3</sup> Phoenix. 2017. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project - Report Addendum. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

<sup>4</sup> Phoenix (2018) Great Northern Highway Muchea to Wubin Upgrades Stage 2: Carnaby's Black Cockatoo nesting tree status check and nest box site selection, Miling Bypass and Pithara work packages. Memo prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

# Memo

Carnaby's Cockatoo nesting activity check at GNH-Pithara section

---

**Table 1 Potential breeding trees checked**

Tree number
HT00091
HT00092
HT00093
HT00098
HT00100
HT00101
HT00102
HT00106
HT00107
HT00108
HT00109
HT00110
HT00389
HT02954
HT02958

## RESULTS

All 15 potential breeding trees were checked in the development envelope. No evidence was observed that black cockatoos are currently nesting or have previously nested in any of the trees.

## RISK ASSESSMENT

It is highly unlikely Carnaby's Cockatoo will breed in the development envelope between now and July this year. This period is outside the breeding season for the species and there are currently no hollows present in the GNH-Pithara section that are considered suitable for breeding. Any clearing works undertaken in the GNH-Pithara section over this period (June–July) therefore will not interrupt breeding activity of Carnaby's Cockatoo.

It is possible Carnaby's Cockatoo breeding activity will occur in the GNH-Pithara section from August to March. However, as there are currently no hollows present that are considered suitable for breeding, suitable hollows would need to form or existing hollows become larger before breeding could take place. It is also noted that the GNH-Pithara section is at the northern extent of the known breeding range of the species. Taking both factors into account, the probability of Carnaby's Cockatoo breeding in the GNH-Pithara section in the coming breeding season (August–March) is low.

Yours Sincerely,

Anna Leung

Zoologist

[Anna.leung@phoenixenv.com.au](mailto:Anna.leung@phoenixenv.com.au)

08 6323 5410

# Memo

## Carnaby's Cockatoo nesting activity check at GNH-Pithara section



	<b>HICON - Carnaby's cockatoo nesting activity check at GNH-Pithara section</b>		
	Project No 1205	Date 29-May-18	
Drawn by AL	Map author AL	1:50,000 (at A4)	GDA 1994 MGA Zone 50
<small>All information within this map is current as of 29-May-18. This product is subject to COPYRIGHT and is property of Phoenix Environmental Sciences (Phoenix). While Phoenix has taken care to ensure the accuracy of this product, Phoenix make no representations or warranties about its accuracy, completeness or suitability for any particular purpose.</small>			

- Disturbance envelope
- Potential breeding trees

**Figure 1**  
**Carnaby's Cockatoo potential breeding trees within the development envelope**

**PHOENIX**  
 ENVIRONMENTAL SCIENCES

# Memo

To: John Powell, HAJV

From: Anna Leung

Date: 11 June 2018

Subject: Carnaby's cockatoo nesting activity check at GNH-Pithara section

---



Dear John,

This memo presents the results of the survey of nesting activity of Carnaby's Cockatoo (*Calyptorhynchus latirostris*) within the GNH-pithara section (Figure 1) of the Great Northern Highway, Muchea to Wubin Upgrades Project (GNH Project) on 11 June 2018.

## BACKGROUND

The GNH Project comprises a significant program of works by Main Roads Western Australia to improve safety and efficiency of the GNH to meet National Highway Standards. Highway Construction and Albem Operations (HAJV) are constructing the GNH-Pithara section of the GNH Project (SLK 207.4 – 223.4), approximately 200 km north of Perth.

The GNH-Pithara section contains potential breeding trees for the Threatened species Carnaby's Cockatoo (Figure 1). These were surveyed in the area previously by Phoenix from multiple study areas over several years (Phoenix 2015<sup>1</sup>, 2016<sup>2</sup>, 2017<sup>3</sup>) and re-checked in March 2018 (Phoenix 2018<sup>4</sup>) and on 1 June 2018 for HAJV. HAJV require a further check of the potential nesting trees containing hollows for presence of nesting birds due to a break in clearing works.

## METHODOLOGY

A site visit was undertaken on 8 June 2018 by zoologists with experience conducting black cockatoo habitat assessments.

Phoenix maintains the black cockatoo habitat tree data for the GNH Project in a database. The trees requiring checking were loaded onto a digital field device to re-locate the trees in the field.

All potential breeding trees within the development envelope that have not yet been cleared were inspected for presence of hollows and evidence of birds by knocking on the trunk, observing hollows with binoculars, and checking for recent chewings around hollow. Fifteen potential breeding trees were checked in the development envelope; five of these had been cleared at the time of the inspection (Table 1).

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<sup>1</sup> Phoenix (2015) Flora and fauna assessment for the Great Northern Highway – Muchea to Wubin (Stage 2) Upgrades Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Jacobs.

<sup>2</sup> Phoenix (2016) Phoenix. 2016b. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

<sup>3</sup> Phoenix. 2017. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project - Report Addendum. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

<sup>4</sup> Phoenix (2018) Great Northern Highway Muchea to Wubin Upgrades Stage 2: Carnaby's Black Cockatoo nesting tree status check and nest box site selection, Miling Bypass and Pithara work packages. Memo prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

# Memo

Carnaby's Cockatoo nesting activity check at GNH-Pithara section

---

**Table 1 Potential breeding trees checked**

Tree number	Status
HT00091	Standing
HT00092	Standing
HT00093	Standing
HT00098	Standing
HT00100	Standing
HT00101	Standing
HT00102	Standing
HT00106	Cleared
HT00107	Cleared
HT00108	Cleared
HT00109	Cleared
HT00110	Cleared
HT00389	Standing
HT02954	Standing
HT02958	Standing

## RESULTS

No evidence was observed that black cockatoos are currently nesting or have previously nested in any of the 10 remaining habitat trees.

## RISK ASSESSMENT

It is highly unlikely Carnaby's Cockatoo will breed in the development envelope between now and July this year. This period is outside the breeding season for the species and there are currently no hollows present in the GNH-Pithara section that are considered suitable for breeding. Any clearing works undertaken in the GNH-Pithara section over this period (June–July) therefore will not interrupt breeding activity of Carnaby's Cockatoo.

It is possible Carnaby's Cockatoo breeding activity will occur in the GNH-Pithara section from August to March. However, as there are currently no hollows present that are considered suitable for breeding, suitable hollows would need to form or existing hollows become larger before breeding could take place. It is also noted that the GNH-Pithara section is at the northern extent of the known breeding range of the species. Taking both factors into account, the probability of Carnaby's Cockatoo breeding in the GNH-Pithara section in the coming breeding season (August–March) is low.

Yours Sincerely,

Anna Leung

Zoologist

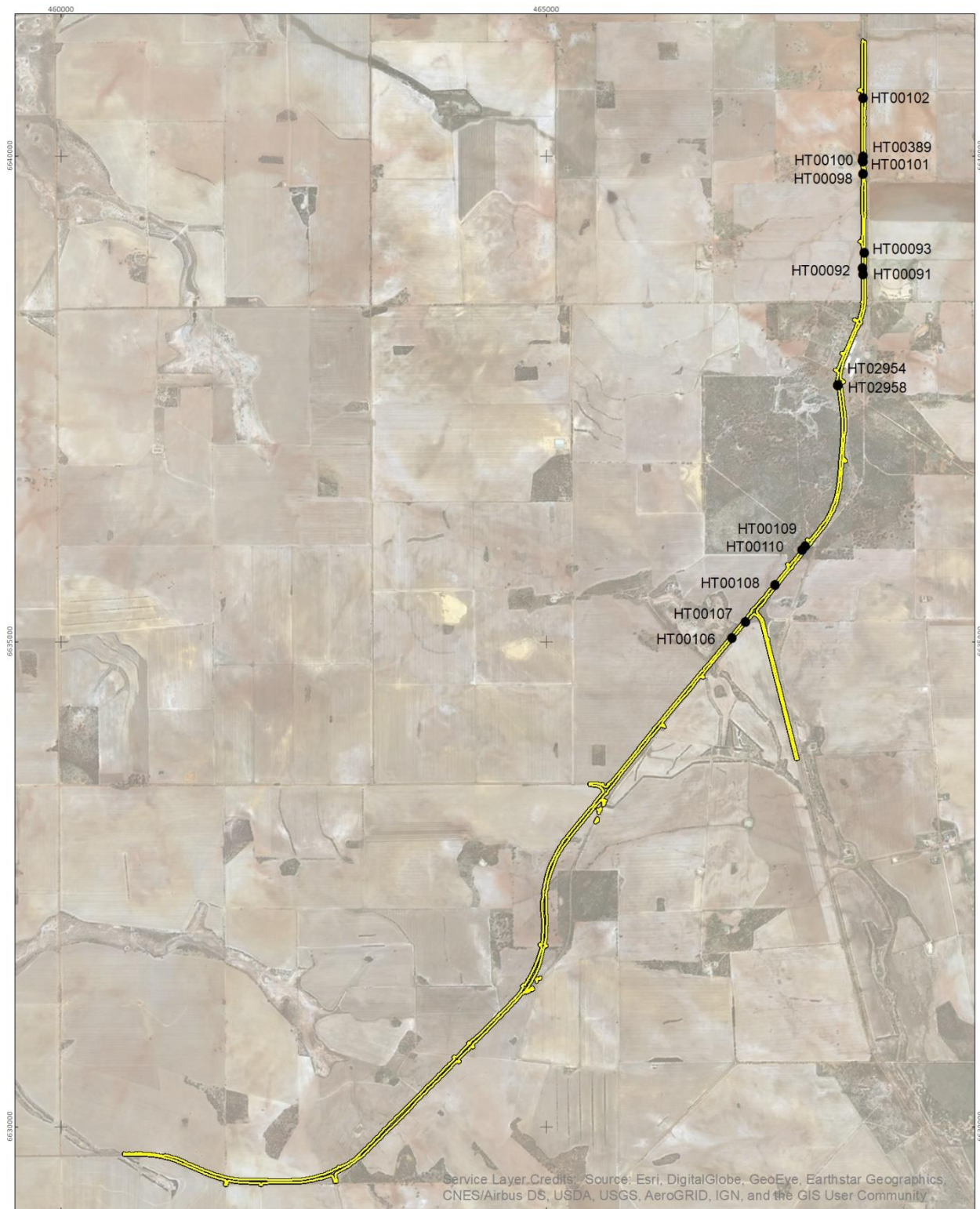
[Anna.leung@phoenixenv.com.au](mailto:Anna.leung@phoenixenv.com.au)

08 6323 5410



# Memo

## Carnaby's Cockatoo nesting activity check at GNH-Pithara section



	<b>HICON - Carnaby's cockatoo nesting activity check at GNH-Pithara section</b>		
	Project No 1205	Date 29-May-18	
Drawn by AL		Map author AL	1:50,000 (at A4)
GDA 1994 MGA Zone 50			
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- Disturbance envelope
- Potential breeding trees

**Figure 1**  
**Carnaby's Cockatoo potential breeding trees within the development envelope**



# Memo

To: Matthew Leader, Central Earthmoving Company Pty Ltd

From: Anna Leung

Date: 15 November 2019

Subject: Carnaby's cockatoo nesting activity check at Walebing section

---



Dear Matthew,

This memo presents the results of the survey of nesting activity of Carnaby's Cockatoo (*Calyptorhynchus latirostris*) within the GNH-Walebing section (Figure 1) of the Great Northern Highway, Muchea to Wubin Upgrades Project (GNH Project) on 14 November 2019.

## BACKGROUND

The GNH Project comprises a significant program of works by Main Roads Western Australia to improve safety and efficiency of the GNH to meet National Highway Standards. Centra's Earthmoving Company are constructing the GNH-Walebing section of the GNH Project (~ SLK 147 – 152), approximately 142 km north of Perth.

The GNH-Walebing section contains potential breeding trees for the Threatened species Carnaby's Cockatoo (Figure 1). These were surveyed in the area previously by Phoenix from multiple study areas over several years (Phoenix 2015<sup>1</sup>, 2016<sup>2</sup>, 2017<sup>3</sup>). Central Earthmoving Company require checking of the potential nesting trees for presence of nesting birds prior to clearing works.

## METHODOLOGY

A site visit was undertaken on 14 November 2019 by zoologists with experience conducting black cockatoo habitat assessments.

Phoenix maintains the black cockatoo habitat tree data for the GNH Project in a database. The trees requiring checking were loaded onto a digital field device to re-locate the trees in the field.

All potential breeding trees within the area to be cleared were inspected for presence of hollows and evidence of birds by knocking on the trunk, observing hollows with binoculars, and checking for recent chewings around hollow. A total of 49 potential breeding trees were checked in the clearing area (Table 1).

## RESULTS

No evidence was observed that black cockatoos are currently nesting or have previously nested in any of the potential habitat trees. It is highly unlikely Carnaby's Cockatoo will breed in the area to be cleared as there are currently no hollows present considered suitable for breeding. Any clearing works therefore will not interrupt breeding activity of Carnaby's Cockatoo.

---

<sup>1</sup> Phoenix (2015) Flora and fauna assessment for the Great Northern Highway – Muchea to Wubin (Stage 2) Upgrades Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Jacobs.

<sup>2</sup> Phoenix (2016) Phoenix. 2016b. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

<sup>3</sup> Phoenix. 2017. Flora and fauna assessment for Calingiri to Wubin study areas, Great Northern Highway, Muchea to Wubin Upgrade Stage 2 Project - Report Addendum. Phoenix Environmental Sciences Pty Ltd, Balcatta, WA. Unpublished report prepared for Muchea to Wubin Integrated Project Team (Main Roads WA, Jacobs and Arup).

# Memo

Carnaby's Cockatoo nesting activity check at GNH-Walebing section

---

**Table 1 Potential breeding trees checked**

Tree number	
HT03129	HT03525
HT03130	HT03550
HT03142	HT03551
HT03153	HT07336
HT03154	HT07438
HT03155	HT09183
HT03156	HT09184
HT03157	HT09219
HT03158	HT09220
HT03159	HT09221
HT03168	HT09222
HT03169	HT09223
HT03170	HT12890
HT03171	HT12895
HT03172	HT13150
HT03173	HT13151
HT03185	HT13152
HT03493	HT13153
HT03494	HT13155
HT03506	HT13156
HT03507	HT13158
HT03508	HT13160
HT03509	HT13161
HT03510	HT13162
HT03513	

Yours Sincerely,  
Anna Leung  
Zoologist  
[Anna.leung@phoenixenv.com.au](mailto:Anna.leung@phoenixenv.com.au)  
08 6323 5410



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Central Earthmoving Company Black cockatoo habitat tree inspection		
Project No	1301	
Date	15-Nov-19	
Drawn by	AL	
Map author	AL	1:16,500 (at A4)
		GDA 1994 MGA Zone 50

Area to be cleared (CN07\_2m\_Offset)

Potential habtiat trees

**Figure 1**

**Potential black cockatoo breeding trees within the area to be cleared**

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ENVIRONMENTAL SCIENCES

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## **Attachment 3: Ministerial approval of the CEMP**



Mr Todd Jess  
Environment and Heritage Manager, GNH M2W  
Jacobs  
263 Adelaide Terrace  
PERTH WA 6000

Dear Mr Jess

**EPBC 2016/7761 – Great Northern Highway, Muchea to Wubin Upgrade Stage 2 (Walebing to Wubin), WA – Construction Environmental Management Plan**

Thank you for your email dated 20 April 2018 to the Department, seeking approval of the *Great Northern Highway, Muchea to Wubin Upgrade – Stage 2, Main Roads Western Australia, EPBC 2016/7761: Walebing to Wubin – SLK 147.7 – 258, Construction Environmental Management Plan (Document No: GNH-CN00-EN01-RPT-1003), Revision 5 (CEMP)*, in accordance with condition 4 of the approval decision dated 19 February 2018.

Officers of this Department have reviewed the CEMP and advised me on the requirements of condition 4 of the approval for this project. On this basis, and as a delegate of the Minister for the Environment and Energy, I have decided to approve the *Great Northern Highway, Muchea to Wubin Upgrade – Stage 2, Main Roads Western Australia, EPBC 2016/7761: Walebing to Wubin – SLK 147.7 – 258, Construction Environmental Management Plan (Document No: GNH-CN00-EN01-RPT-1003), Revision 5*. The plan must now be implemented.

Condition 12 of the approval for EPBC 2016/7761 allows you, under certain circumstances, to implement revised plans without requiring the Minister's approval. If you require advice on whether or not to submit a revised approved plan for approval, please contact the officer below. When submitting any revised approved plan to the Minister under condition 12, please provide a 'tracked changes' version of the revised plan. I also attach a fact sheet providing guidance on 'new or increased impact' relating to changes to approved management plans under EPBC Act environmental approvals.

Should you require any further information please contact Kahli Beissner on (02) 6274 1472 or by email: [post.approvals@environment.gov.au](mailto:post.approvals@environment.gov.au).

Yours sincerely

Greg Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch  
Environment Standards Division

11 May 2018

Attachment: Guidance on 'New or Increased Impact'

**Attachment 4: Notification to the Department of offset property: Carnaby's Black Cockatoo habitat**



mainroads  
WESTERN AUSTRALIA

Enquiries: Marni Baetge (08) 9158 4318  
Our Ref: 13/7463  
Your Ref: EPBC 2016/7761

8 November 2018

Gregory Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
Canberra ACT 2601

Dear Mr Manning

**Great Northern Highway Muchea to Wubin Upgrade Stage 2 – Walebing to Wubin, WA  
EPBC 2016/7761 Condition 6 – Offset Property Details**

Main Roads Western Australia (Main Roads) has commenced the Great Northern Highway Upgrade Stage 2 Walebing to Wubin (EPBC 2016/7761) action. EPBC 2016/7761 Condition 6 requires the following:

*“To compensate for the loss of up to 30 hectares of Carnaby’s Black Cockatoo habitat, the approval holder must, within one (1) year after the commencement of the action, provide the Department with the offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the offset area identified in Attachment 3, that the approval holder has transferred to the DBCA.”*

Main Roads has acquired Lot 1, 1395 Banovich Road, Hill River, Western Australia (refer Figure 1). This land parcel has been added to the conservation estate and is being managed by Department of Biodiversity, Conservation and Attractions (DBCA). Approximately 159 ha of the Banovich Road offset property has been allocated to offsetting impacts to Carnaby’s Black Cockatoo habitat associated with EPBC 2016/7761. Portions of the Banovich Road offset property have also been allocated to offsetting impacts from the Mitchell Freeway Extension and Muchea North Upgrade (EPBC 2013/7091 and EPBC 2016/7656 respectively).

Please find enclosed the following information to satisfy EPBC 2016/7761 Condition 6:

- Offset attributes table, Shapefile and map defining the location and boundary of the offset area
- A textual description of the offset property including relevant figure and biological surveys.





Main Roads trusts the information provided satisfies EPBC 2016/7761 Condition 6. If you require any further information please contact Marni Baetge on 9158 4318 or [marni.baetge@mainroads.wa.gov.au](mailto:marni.baetge@mainroads.wa.gov.au).

Yours sincerely

A handwritten signature in blue ink that reads 'Norm Fox'.

Norm Fox  
**Director – Infrastructure Delivery Directorate**

Enclosed as zip-file:

- *EPBC2016-7761\_CBC-Offset-Site shapfile*
- *EPBC2016-7761\_CBC-Offset-Site\_Figure 2*
- *EPBC2016-7761\_CBC-Offset-Site\_Offset Attributes Table*
- *EPBC2016-7761\_CBC-Offset-Site\_Textual Description*
- *Figure 1\_Banovich Road Land Offsets*
- *Attachment 1\_Hill River Offset Property Biological Survey Sept16*
- *Attachment 2\_Phoenix Survey 2016*

**Attachment 5: Correspondence with and Confirmation from the Department of offset property: Eucalypt Woodlands TEC**



mainroads  
WESTERN AUSTRALIA

Enquiries: John Braid (9323 6183)  
Our Ref: EPBC 2016/7761  
Your Ref: EPBC 2016/7761

24 May 2019

Gregory Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
Canberra ACT 2601

Attention: Vaughn Cox

**Great Northern Highway Muchea to Wubin Upgrade Stage 2 – Walebing to Wubin, WA  
EPBC Referral 2016/7761 Condition 7**

Main Roads Western Australia (Main Roads) commenced the Great Northern Highway Upgrade Stage 2 Walebing to Wubin (EPBC 2016/7761) action on 29 May 2018. EPBC 2016/7761 Condition 7(a) requires a minimum 155 ha Eucalypt Woodlands of the Western Australian Wheatbelt (Eucalypt Woodlands) threatened ecological community (TEC) to be acquired as a land offset within one (1) year of the commencement of the action.

Main Roads has been unable to acquire the full 155 ha of Eucalypt Woodland TEC within one year of commencement of the action and is requesting a twelve (12) month extension to the EPBC 2016/7761 Condition 7 timeframe. Main Roads is currently funding the acquisition of Lot 500, Yenyening, Western Australia through the Department of Biodiversity, Conservation and Attractions (DBCA). The property contains 134.1 ha Eucalypt Woodlands TEC which is proposed as a partial offset for the action. The 12 month extension to EPBC 2016/7761 Condition 7 will allow Main Roads to locate the remaining land required to compensate for the shortfall of at least 20.9 ha Eucalypt Woodlands TEC.

**Background**

On 28 July 2016, a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was submitted to the Department of Environment and Energy (the Department) for Great Northern Highway Muchea to Wubin Upgrade Stage 2 Walebing to Wubin (EPBC 2016/7761).

On 19 October 2016, the Department notified Main Roads that the referral was determined to be a controlled action, with the controlling provision being “listed threatened species and communities”, namely Carnaby’s Black Cockatoo and the Eucalypt Woodlands TEC. On 21 December 2016 the Minister of the Environment’s delegate decided that the proposed action would be assessed by preliminary documentation. On the 19 February 2018 EPBC 2016/7761 conditional approval was granted.



EPBC 2016/7761 Condition 7 requires the following:

*“To compensate for the loss of up to 15 hectares of Eucalypt Woodlands TEC, the approval holder must, within one (1) year of the commencement of the action, or as otherwise agreed to by the Minister:*

- a. submit to the Minister for approval the details of an offset site(s) that:
  - i. is to be acquired and managed for conservation;*
  - ii. includes a minimum of 155 hectares of Eucalypt Woodlands TEC; and*
  - iii. meets the requirements of the EPBC Environmental Offsets Policy.**
- b. make a financial contribution to an approved conservation fund to fully fund the purchase and management for conservation of the approved offset site(s);*
- c. provide written evidence to the Department that the financial contribution:
  - (i) has been made to the approved conservation fund; and*
  - (ii) has fully funded the purchase and management of the offset site(s).**
- d. provide the Department with the offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the offset site(s).”*

### **Condition 7a – acquisition of Eucalypt Woodlands TEC**

Condition 7(a)(i) & (ii) requires a minimum 155 ha of Eucalypt Woodlands TEC to be acquired and managed for conservation. Main Roads is funding the acquisition of Lot 500, Yenyening, Western Australia through DBCA. The property contains 134.1 ha Eucalypt Woodlands TEC as a partial offset for the action (Figure 1).

A phone conference was held between the Department’s representative (Vaughn Cox) and Main Roads’ representatives (John Braid and Marni Baetge) on 23 March 2018 to discuss the suitability of Lot 500 Yenyening as an offset for Eucalypt Woodlands TEC. Since that meeting, and follow up emails between Main Roads and the Department, Main Roads commissioned a detailed survey (Phoenix 2019; Attachment A) which confirmed Lot 500 Yenyening contains 134.1 ha land that meets the Eucalypt Woodland TEC diagnostic criteria (Figure 2).

Main Roads is currently negotiating a Memorandum of Understanding (MoU) with DBCA for management of Lot 500 Yenyening offset site. The MoU will be finalised after the land acquisition is finalised. The MoU will comprise the following:

- The funding required for the establishment, management and conservation of the offset site
- Land management activities to be undertaken by DBCA
- Payment schedule
- Reporting requirements under the MoU.

Main Roads has made every endeavour to expedite the acquisition of Lot 500 Yenyening. However, since there was a requirement to sub-divide the land to allow the landowner to retain the cleared agricultural land within the original land parcel, there has been some delay in the acquisition process. Main Roads is confident that acquisition of Lot 500 Yenyening will be finalised in the coming weeks.

Main Roads is continuing to liaise with DBCA to identify additional land that contains Eucalypt Woodlands TEC that can be acquired by Main Roads to meet the offset shortfall. Satisfying the offset shortfall and meeting 2016/7761 Condition 7 compliance requirements is a key priority of Main Roads. The MoU with DBCA will be revised, or alternatively a new MoU will be prepared, to accommodate any additional requirements associated with the management of the 20.9 ha of Eucalypt Woodland TEC that is still to be acquired.



The application of the EPBC Environmental Offset Policy to the 134.1 ha of Eucalypt Woodland TEC located at Lot 500 Yenyening, which is required under Condition 7a(iii) of EPBC 2016/7761, is detailed in Attachment B.

**Condition 7b and 7c – financial contribution to approved offset fund**

On 12 February 2018 Main Roads made a financial contribution of \$175,260 to the Western Australian Environmental Offset Fund in accordance with the requirements of Condition 7b of EPBC 2016/7661. Attachment C provides evidence of payment.

Main Roads will request reimbursement of the \$175,260 from the Western Australian Environmental Offset Fund once all requirements of EPBC 2016/7761 Condition 7 have been met.

**Condition 7d – offset attributes, shapefiles and textual descriptions and maps**

Please find enclosed the following additional information to partially address EPBC 2016/7761 Condition 7d:

- Figure 1 Lot 500 Yenyening Lakes Road Offset Property
- Attachment D Offset Attributes Table
- Attachment E Offset Textual Descriptions
- Shapefiles of Lot 500, Yenyening, Western Australia

**Conclusion**

Main Roads has liaised closely with DBCA to ensure the proposed offset of 134.1 ha of Eucalypt Woodland TEC at Lot 500 Yenyening to the conservation estate has strategic environmental and conservation values. Main Roads is keen to ensure the balance of the offset required as a condition of approval of EPBC 2016/7661 Condition 7 will also result in strategic environmental values and is liaising closely with DBCA and others to ensure this objective is met.

Main Roads requests a 12 month extension to the original EPBC 2016/7761 Condition 7 timeframe of 12 months from the commencement of the action (29 May 2018) to allow the subdivision process of Lot 500 Yenyening to be completed and the acquisition of the remaining offset requirement to provide similar strategic benefits.

Satisfying the offset shortfall and meeting 2016/7761 Condition 7 compliance requirements is a primary focus of Main Roads and every effort will be made to acquire the land as soon as possible.



Please contact John Braid on (08) 9323 6183 or [john.braid@mainroads.wa.gov.au](mailto:john.braid@mainroads.wa.gov.au) or Martine Scheltema (08) 9323 4614; [martine.scheltema@wa.gov.au](mailto:martine.scheltema@wa.gov.au) should you wish to discuss this in more detail.

Yours sincerely

A handwritten signature in blue ink that reads 'Norm Fox'.

Norm Fox  
**Director – Infrastructure Delivery Directorate**

Enc:

- *Figure 1 Lot 500 Yenyening Lakes Road Offset Property*
- *Figure 2 Vegetation and Eucalypt Woodland TEC Mapping – Lot 500 Yenyening Lakes Road*
- *Attachment A Brookton Offset Property Biological Survey Report Phoenix 2019*
- *Attachment B EPBC Act Environmental Offset Policy*
- *Attachment C DWER Receipt of Payment CPS 7231-1 Offset \$175,260.00.*
- *Attachment D Offset Attribute Table*
- *Attachment E Offset Textual Descriptions*
- *Shapefiles of Lot 500, Yenyening, Western Australia*



**Australian Government**  
**Department of Agriculture, Water and the Environment**

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Marni Baetge  
Senior Environment Officer  
Infrastructure Delivery Directorate  
Main Roads  
PO Box 6202  
EAST PERTH WA 6892

**Great Northern Highway Muchea to Wubin Upgrade Stage 2 - Walebing to Wubin, WA (EPBC 2016/7761) - Variation of condition 7**

Dear Ms Baetge

Thank you for your correspondence dated 18 November 2019 and subsequent correspondence to the Department, requesting variation of condition 7 attached to the EPBC Act approval 2016/7761.

Officers of this Department have reviewed the variation request. As delegate of the Minister, I have varied condition 7 of EPBC Act approval 2016/7761 to ensure that the offset area at Lot 500, Yenyening, WA is managed and protected to compensate for the impacts of the action on Eucalypt Woodlands TEC. Condition 7, as specified in the attached variation notice, must now be implemented.

As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval so that they can be made available to the Department on request.

Should you require any further information please contact Peter Blackwell, Assistant Director, Post Approvals Section, on 03 62082927 or by email: [post.approvals@environment.gov.au](mailto:post.approvals@environment.gov.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'C. Videroni'.

Chris Videroni  
Acting Assistant Secretary  
Assessments (WA, SA, NT), Post Approvals and Policy Branch  
Environment Standards Division

18 July 2020

Att.



## VARIATION OF CONDITIONS ATTACHED TO APPROVAL

### Great Northern Highway Muchea to Wubin Upgrade Stage 2 - Walebing to Wubin, WA (EPBC 2016/7761).

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

#### Approved action

Person to whom the approval is granted

Main Roads

ABN 50 860 676 021

Approved action

To clear vegetation to upgrade, rebuild and/or partially relocate discrete sections of the Great Northern Highway between SLK 147 (Walebing) to SLK 258 (Wubin), Western Australia [See EPBC Act Referral 2016/7761, as varied under section 156B on 6 December 2017].

#### Variation

Variation of conditions of approval

The variation is:

Delete condition 7 and replace it with the condition specified below.

Date of effect

This variation has effect on the date the instrument is signed

Expiry Date of approval

This approval has effect until Friday, 31 December 2038

#### Person authorised to make decision

Name and position

Chris Videroni  
Acting Assistant Secretary  
Assessments (WA, SA, NT), Post Approvals and Policy Branch

Signature

Date of decision

18 July 2020



### Conditions attached to the approval

7. To compensate for the loss of up to 15 hectares of **Eucalypt Woodlands TEC**, the **approval holder** must, within one (1) year of the **commencement of the action**, or as otherwise agreed to by the **Minister**:

- a. submit to the **Minister** for approval the details of an offset site that:
  - i. is to be acquired and managed for conservation;
  - ii. includes a minimum of 134.1 hectares of **Eucalypt Woodlands TEC** at Lot 500, Yenyening, Western Australia; and
  - iii. meets the requirements of the **EPBC Environmental Offsets Policy**.
- b. make a financial contribution to an **approved conservation fund** to fully fund the purchase and management for conservation of the approved offset site;
- c. provide written evidence to the **Department** that the financial contribution:
  - i. has been made to the **approved conservation fund**; and
  - ii. has fully funded the purchase and management of the offset site.
- d. provide the **Department** with the offset attributes, **shapefiles** and textual descriptions and maps to clearly define the location and boundaries of the offset site.

## **Attachment 6: Notification of commencement of action**



Enquiries: John Braid (9323 6183)  
Our Ref: EPBC 2016/7761  
Your Ref: EPBC 2016/7761

31 May 2018

Gregory Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
Canberra ACT 2601

Dear Mr Manning

**Great Northern Highway Muchea to Wubin Upgrade Stage 2 – Walebing to Wubin, WA  
EPBC Referral 2016/7761 – Notification of commencement of action**

I refer to the decision made by Department of Environment and Energy (DoEE) regarding the referral of the Great Northern Highway Upgrade Project (Walebing to Wubin) WA, under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2016/7761).

Approval was granted on 19 February 2018 provided the proposal is undertaken in accordance with the conditions specified in the approval document.

In accordance with Condition 8 of the approval, Main Roads Western Australia (Main Roads) wishes to inform the Department that the proposed action in the above mentioned referral commenced on 29 May 2018.

If you require any further information, please contact John Braid who will be the contract person responsible for the administration of the approval decision on 9323 6183 or [john.braid@mainroads.wa.gov.au](mailto:john.braid@mainroads.wa.gov.au).

Yours sincerely

Norm Fox  
Project Director – Infrastructure Delivery Directorate