

BLACK COCKATOO HABITAT SURVEY, PROPOSED BYFORD QUARRY EXTENSION

M70/1240

The purpose of the survey was to locate and document suitable breeding, feeding and roosting habitat used by black cockatoos *Calyptorhynchus spp.* at the proposed Byford Quarry Extension M70/1240.

Three species of black cockatoo occur in the south west of Western Australia – Forest Red-tailed Black Cockatoo *C. banksii naso*, Carnabys Cockatoo *C. latirostris* and Baudin’s Cockatoo *C. baudinii*.

Carnaby’s and Baudin’s Cockatoos are also known collectively as white-tailed black cockatoos.

The status of the three species is currently:

- Carnaby’s Cockatoo (*Calyptorhynchus latirostris*): Endangered.
- Baudin’s Cockatoo (*Calyptorhynchus baudinii*): Vulnerable.
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*): Vulnerable.

All three species are known from the general area of the survey. All three species are known to breed, roost and drink in Wungong and Churchmans Brook catchment areas within 12km of the survey area.

Breeding habitat.

Tree species at the survey area which could provide breeding hollows are Jarrah *Eucalyptus marginata*, and Marri *Corymbia calophylla*. These species need to have reached a diameter at breast height (DBH) of at least 500mm to be large enough to have formed a breeding hollow.

Feeding habitat.

The main and most important food species at the survey area are Jarrah, Marri, Sheoak *Allocasuarina fraseriana* and *Banksia sessilis*.

Roosting habitat.

Roosting habitat (Jarrah /Marri) is present throughout the survey area.

Methods.

All evidence of black cockatoo usage was logged using hand held GPS. WGS 84. Zone 50. UTM.

All Jarrah and Marri trees at the survey area were inspected from ground level using binoculars and those with suitable hollows for black cockatoos were raked with a pole. This method will flush incubating or brooding females to the hollow entrance.

Feeding residues were logged opportunistically while searching for breeding trees.

Evidence of roosting sites (leaf and branch clipping and concentrations of droppings) under suitable trees were searched for and a dawn visit conducted on the 4th September 2017. A dawn visit will confirm the presence of a roost site as black cockatoos can be heard leaving the roost to forage.

The survey was undertaken between 29th August and 4th September 2017.

Results. See spreadsheet for individual records and coordinates.

Breeding.

The survey area has both Jarrah and Marri which provide hollows for black cockatoos, though in the Jarrah/ Marri forest the majority (90%) are in Marri (Johnstone, Kirkby and Sarti 2013).

A total of 14 hollows with suitable entrances for use as breeding hollows were located (see spreadsheet for details). Of these 13 were in Marri and one in Jarrah. Of the 14 hollows, ten showed signs of old or recent use, and of these seven were heavily chewed at the entrance. Of the remaining four hollows two had signs of wear at the entrance and two had no signs of use.



Marri hollows with chewing at entrance.

Feeding.

Feeding residues were plentiful and easily located (see spreadsheet for details) throughout the site beneath both Jarrah and Marri. These ranged from fresh and recent through to old and grey and possibly up to two years old. Residues were almost entirely from Forest Red-tailed Black Cockatoo with only two records from Baudin's Cockatoo.

Feeding residues from Carnaby's Cockatoos were not located.



Marri feeding residues from Baudin's Cockatoo.



Marri feeding residues of varying ages from Forest Red-tailed Black Cockatoo.



Jarrah feeding residues from Forest Red-tailed Black Cockatoo.

Roosting.

No roosting sites were located.

Sightings.

Forest Red-tailed Black Cockatoos were present in small groups throughout the survey period and were feeding on seeds from Marri. Breeding displays and mating calls were also noted and a pair of birds were seen prospecting hollows.

A pair of Baudin's Cockatoos with the male making the breeding call were noted but didn't remain at the survey area very long before the pair flew west.

Carnaby's Cockatoos were not seen or heard during the survey.

Individual species foraging habitat scores.

Note – information on distances to breeding sites etc. is from either WA Museum database or the authors personal records.

Forest Red-tailed Black Cockatoo.

Score - 10

- 1 - survey area is Jarrah/ Marri foraging habitat.
- 2 - is within 12 km of known breeding sites.
- 3 - is within 12 km of known roosting and drinking sites.
- 4 - has clear evidence of use as a foraging site with cockatoo species present during surveys.

Carnaby's Cockatoo.

Score – 10

- 1 - contains Jarrah / Marri foraging habitat
- 2 - is within 12 km of a known breeding site.
- 3 - is within 12 km of known roosting and drinking site.

Baudin's Cockatoo.

Final score – 10

- 1 - contains Jarrah/Marri foraging habitat.
- 2 - is within 12 km of a known breeding site.
- 3 - is within 12km of known roosting and drinking site.
- 4 - has clear evidence of use as a foraging site with cockatoo species present during surveys.

Conclusions.

Breeding habitat.

The survey area contains Jarrah/Marri breeding habitat suitable for all three species of black cockatoos and at the time of the survey ten trees had hollows showing signs of old or recent

use. Removal of this habitat could have a significant impact on local black cockatoo populations and would need a referral under the EPBC act.

Foraging habitat

The survey area is made up of Jarrah/Marri foraging habitat and has extensive evidence of use by Forest Red-tailed Black Cockatoo and limited use by Baudin's Cockatoo. Clearing of more than 1ha of foraging habitat requires a referral under the EPBC act.

Tony Kirkby

17th September 2017