

## **BLACK COCKATOO SURVEY, SHWENKES DAM AREA, GREENBUSHES.**

Three species of black cockatoo *Calyptorhynchus spp.* occur in the south west of Western Australia – Forest Red-tailed Black Cockatoo *C. banksii naso*, Carnaby's Cockatoo *C. latirostris* and Baudin's Cockatoo *C. baudinii*. Carnaby's and Baudin's Cockatoos are both white-tailed species and are also commonly known as Short-billed and Long-billed Black Cockatoos respectively. All three species are known from the general area of Greenbushes and Shwenkes Dam.

The purpose of the survey was to record evidence of black cockatoos, and in particular locate the following:

- feeding sites
- drinking sites
- roosting sites
- breeding sites
- suitable sites for installing nest boxes
- habitat areas for further survey efforts

Apart from sightings of black cockatoos, their actual usage of an area can be determined by the distinctive residues left behind after feeding. Each of the three species leave characteristic markings on these residues which enable an experienced observer to determine which species have visited an area, though the birds may not actually be present at the time.

Roost sites can be located by the presence of feathers, clipped branches and droppings beneath the roost trees.

Drinking sites used by large (>20) numbers of birds can be located by searching for droppings and moulted feathers at the waters edge and chewing on nearby dead branches which are used for perches before drinking. For smaller groups the only reliable way to find drinking sites is by watching water bodies in the evening which is the main period in which black cockatoos drink.

Marri is the tree most likely to produce a suitable breeding hollow and in Jarrah-Marri forest it provides 91% of breeding hollows. Suitable trees have to have reached a 'Diameter at Breast Height (DBH) of 500mm to be large enough to provide a hollow for a black cockatoo. Breeding hollows can be determined by the presence of chewing and wear at the hollow entrance.

## **Methods**

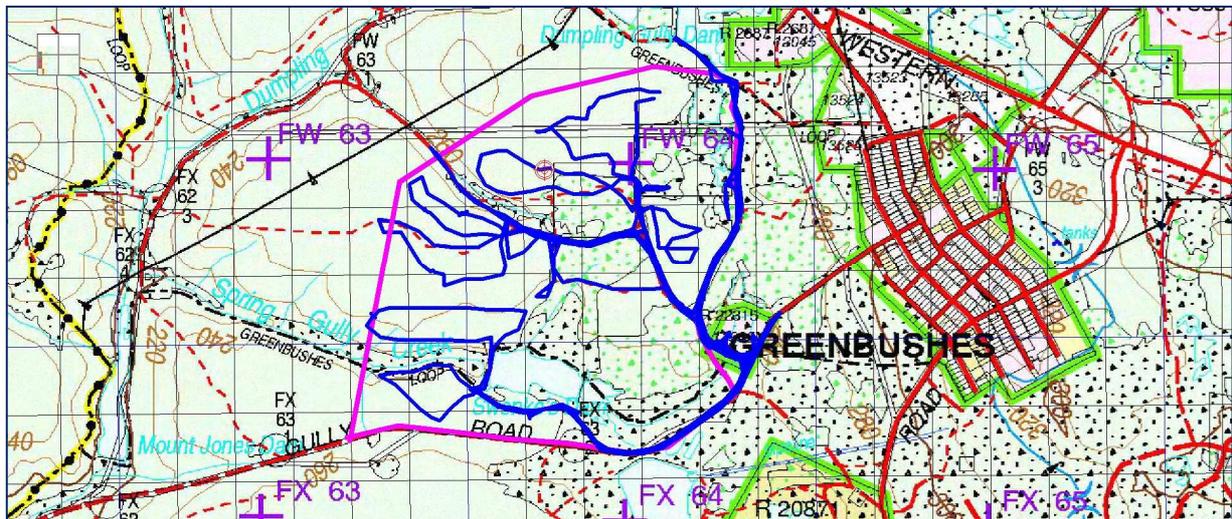
A corridor approximately 13km long and 70m wide was traversed during the survey (see Fig. 1). The corridor sampled most of the survey area apart from the area at the south-west which is mainly rehabilitated vegetation and unlikely to contain any breeding hollows.

All Marri over 500mm (DBH) were checked with binoculars from ground level for suitable hollows and if a hollow was located it was picked up with GPS and the tree raked and scratched. This method will flush to the hollow entrance a black cockatoo which may be incubating an egg or brooding a chick.

The 70m corridor was also searched for signs of feeding and roosting sites.

All sightings of black cockatoos were also logged.

Fig.1



- General survey area
- Area covered during survey

## **Feeding sites**

Forest Red-tailed Black Cockatoo – feeding residues (62 records) were located throughout the survey area exclusively on the seeds of Marri although Jarrah feeding was noted in the previous survey on the 17<sup>th</sup> March 2014.

Baudin's Cockatoo – chewed flower cones from Bull Banksia *Banksia grandis* were probably used by this species for nectar. Evidence of Baudin's Cockatoo feeding on the seeds of Marri was noted in a previous survey on the 17<sup>th</sup> March 2014

Carnaby's Cockatoo – no evidence of feeding was noted by this species though in a previous survey on the 17<sup>th</sup> March 2014 a small amount of feeding on pinus sp. was located.

### **Drinking sites**

Drinking sites were located in two areas. One near the Forest Red-tailed Black Cockatoo roost site at Shwenkes Dam and the other just outside and to the north of the survey area at the Dumpling Gully Dam.

Of interest was the absence of birds at the three water bodies in rehabilitated areas adjacent to the west of the link rd between Greenbushes Loop and Spring Gully Road.

### **Roosting sites**

Forest Red-tailed Black Cockatoos continue to use the roost at the south of Shwenkes Dam with approximately 30 birds present. The roost site has also extended slightly with a small group heard roosting to the west of the dam wall.

Forest Red-tailed Black Cockatoos located feeding near the Greenbushes Pool on the 15<sup>th</sup> left the area later in the day and headed south-west and possibly to the roost at Shwenkes Dam which is approximately 1 km from the feeding site.

A small, possibly family group, of Baudin's Cockatoos also roosted at the Forest Red-tail roost at Shwenkes Dam.

### **Breeding sites/trees**

A total of six trees were located which may provide a black cockatoo breeding hollow. Three of these were heavily chewed and probably have been used in the past. The remaining are suitable looking hollows but show no signs of usage apart from a little wear.

### **Nest box locations**

A total of six areas with large Marri were identified as being suitable for nest boxes. Although there were other areas of large Marri suitable at the survey area these were chosen for their good access as

well as the habitat type. Please note that these are suggested sites only and may need to be reviewed with the arborist on the day the nesting boxes are erected

### **Future monitoring and surveys**

Continue monitoring of the general area for evidence of feeding.

Continue monitoring of drink sites including those at the survey area which haven't been used such as the Greenbushes Pool and those along the Greenbushes to Spring Gully road.

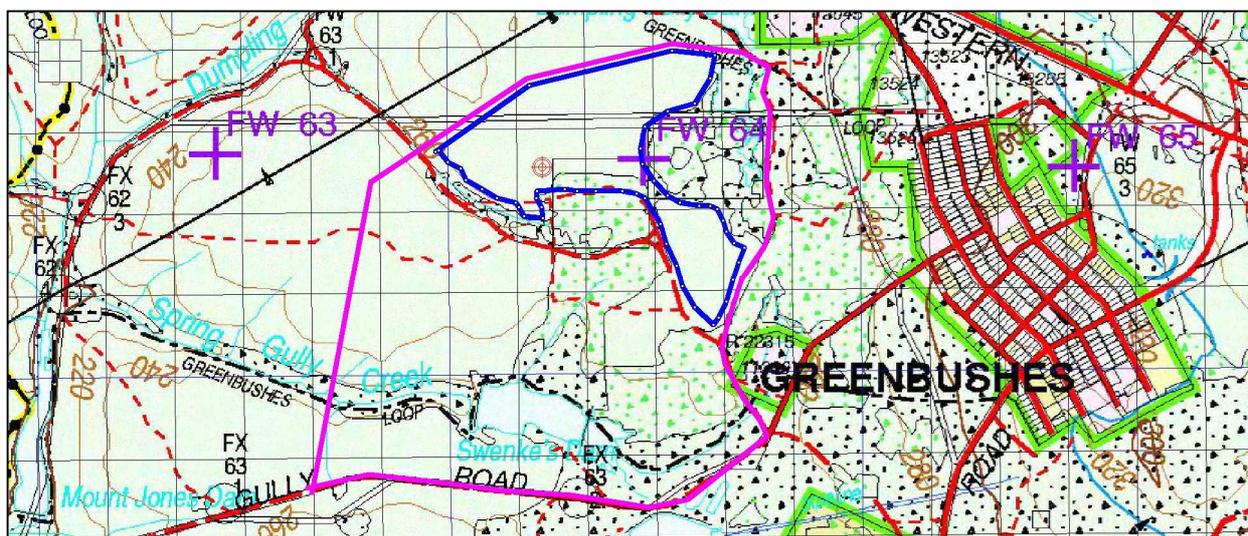
Continue monitoring the roost site with further searches for other roost sites.

Monitor of breeding trees. Of particular interest is the possible Baudin's Cockatoo hollow near the Forest Red-tail roost. The breeding distribution of Baudin's Cockatoo is poorly known and if confirmed this would be a valuable addition to the current knowledge base.

In regards to breeding habitat the survey area is very patchy and those areas which contain large suitable old growth Marri seem to lack breeding hollows. A corridor approximately 13km long and 70m wide was traversed during the survey and produced only three likely and three possible nesting hollows.

The area north from Shwenkes Dam to the main track running east to west contains virtually no suitable breeding habitat while the area north of this track has many large suitable Marri.

Fig. 2



- General survey area
- Optimum breeding hollow, survey area

The area highlighted in Figure 2 is the optimum area for future breeding hollow surveys as it contains many large Marri and further survey effort will probably reveal more black cockatoo breeding hollows.

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