



WILDFLOWER SOCIETY OF WESTERN AUSTRALIA (Inc)

10th January 2023

Department of Water and Environmental Regulation
Prime House 8 Davidson Terrace
Joondalup WA 6027

CPS 9936/1: Lot 1 on Deposited Plan 415372 Wannamal Road West, Boonanarring Shire of Gingin

The Wildflower Society of WA (WSWA) objects to the granting of a Clearing Permit (application CPS 9936/1) in the Shire of Gingin for the clearing of 13.76 ha for a proposed Gravel Quarry. This proposed section of land is remnant, fragmented native vegetation remaining north of Wannamal Road West. It contains essential vegetation for breeding and foraging for two Black Cockatoo species, this land has the potential to either aid their recovery or condemn these species to extinction. WSWA implores this submission be considered with the heavy weight of what this clearing permit means to flora and avifauna species' survival. Lot 1 on Wannamal Road West has the vegetation type described as an Open forest *Eucalyptus marginata* and *Corymbia calophylla* woodland, with a second storey of *Banksia grandis*, situated upon the Karamal Complex-South on the Dandaragan plateau.

This valued woodland on the Swan Coastal Plain in the South-West of Australia is already under threat of decreased rainfall, climate change, disease, weed invasion, as well as what this application is requesting, further habitat fragmentation and land clearing. This clearing application invites the severe challenges of disease (Dieback) and invasive weeds with no ability to control or limit these forces. These woodlands are extremely susceptible to dieback and will perish undoubtedly if and when infected through transport via mechanical vehicles.

Flora

Over 40% of the vegetation type 'Gingin 1027' has been cleared and destroyed with in the whole of Western Australia. Only just over 20% is managed in DBCA lands, allowing another nearly 40% of this vegetation type to be permanently destroyed, with rippling effects through its ecosystem.

The flora survey identified the vegetation condition to be;

Very Good: 1.65 ha, 8%

Good: 18.40 ha, 91%

Completely Degraded: 0.23 ha, 1%

99% of 13.76 ha of this vegetation was found to be in a minimum condition of Good. Land degradation is becoming increasingly common, and native vegetation in such conditions as this, must be preserved and protected from forces of land clearing, disease (such as dieback), and invasive weeds.

The surrounding land to the north of this proposed project has already been cleared and stripped further fragmenting the remnant woodlands and many other valuable vegetation types that remain.



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The flora survey was conducted over 2 years ago, leaving a large gap of missing knowledge. Many flora species may be identified since the last survey, due to the extensive time in between. Over two years is a surplus of time for threatened and/or priority taxa to have germinated in the proposed area. We propose a new flora survey is conducted in appropriate flowering times, to provide a current and more accurate representation of the flora at threat to be destroyed. There are 15 priority listed taxa with a high or medium likelihood of occurring within the proposed area. These priority taxa, two of which are listed as Endangered, were not in their flowering times when the flora survey was conducted. The assumptions that they would have been identified if present, despite their key identifying characteristics of their flowers being present, is a harmful and unacceptable assumption. Some of these species can have very minimal height, *B. mimica* 0.15m, and their presence within the proposal site cannot be denied based on assumptions, especially due to their conservation status.

Outside flowering times, still expected to occur:

Thysanotus glaucus (P4)
(Medium likelihood)

Platysace ramosissima (P3) (Medium likelihood)

Calectasia elegans (P2)
(Medium likelihood)

Goodenia arthrotricha (T, EN) (High likelihood)

Goodenia xanthotricha (P2)
(High likelihood)

Styphelia filifolia (P3)
(High likelihood)

Outside flowering times, assumed not present:

Leucopogon allittii (P3)
(Medium likelihood)

Isopogon drummondii (P3) (Medium likelihood)

Banksia mimica (T, EN) (0.15m) (High likelihood)

Loxocarya gigas (P2)
(High likelihood)

Acacia cummingiana (P3)
(High likelihood)

Acacia drummondii subsp. *Affinis* (P3)
(High likelihood)

Acacia pulchella var. *reflexa acuminata bracteole variant* (R.J. Cumming 882) (P3)
(High likelihood)

Banksia kippistiana var. *paenepeccata* (P3)
(High likelihood)

Banksia chamaephyton (P4)
(High likelihood)

Two Priority flora species recorded within the proposal area;

Lasiopetalum venustum (P3)

Synaphea grandis (P4)

Priority listed taxa should not be considered a non-priority, and the goal of conservation is not to continue clearing species until their conservation status shifts to a Threatened status. Precautionary actions must be taken now to exempt priority listed taxa to having an altered, worsened, conservation status, they are not to be ignored until their situation becomes increasingly dire.

Fauna

The Carnaby's Black Cockatoo (*Zanda latirostris*) is under significant threat from this proposal, their habitat has been wiped out, and as a result the species is struggling and facing extinction in the near future.

- Listed as Endangered by the IUCN and Birdlife International.



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- Endangered Schedule 1 – Western Australian Wildlife Conservation Act.
- Endangered under Federal Environmental Protection and Biodiversity Conservation Act.

The Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) is also considered under threat by this proposal due to their habitat and breeding grounds altered from drastic habitat loss.

- Listed as Vulnerable by the IUCN and Birdlife International.
- Listed as Vulnerable, Schedule 1 under the WA Wildlife Conservation Act
- Listed as Vulnerable under Federal Environmental Protection and Biodiversity Conservation Act.

91% of the surveyed area was identified as having Very High-quality foraging habitat.

72 trees support 167 potential hollows for Carnaby's Black Cockatoo breeding trees in the impact area. 98.2% of which were determined to be 'unsuitable' for Black Cockatoos breeding.

- No indication as to why these hollows have been determined 'unsuitable' for use as a Black Cockatoo roosting site has been provided. Hollows not of appropriate size is not an acceptable excuse to categorise these trees as not fundamental to the survival of both Black Cockatoo species.

There are 162 hollows within the *E. marginata*, *C. calophylla*, stages trees with a diameter greater than 120mm. 306 hollows have been identified within the surveyed area.

- 190 trees in total; *E. marginata*, *C. calophylla*, stages (dead) trees are potential breeding trees within the survey area, with diameter at breast height exceeding 500mm.

Suitable hollows are scarce, only forming in trees 130 to 220 years of age, many of which have been preferentially felled (Abbott & Whitford 2002; Chapman 2008). The timeline for *E. marginata* and *C. calophylla* to reach a suitable DBH to become a suitable breeding tree for Black Cockatoo drastically exceeds the expected time until these species are predicted to be extinct, of 20 years.

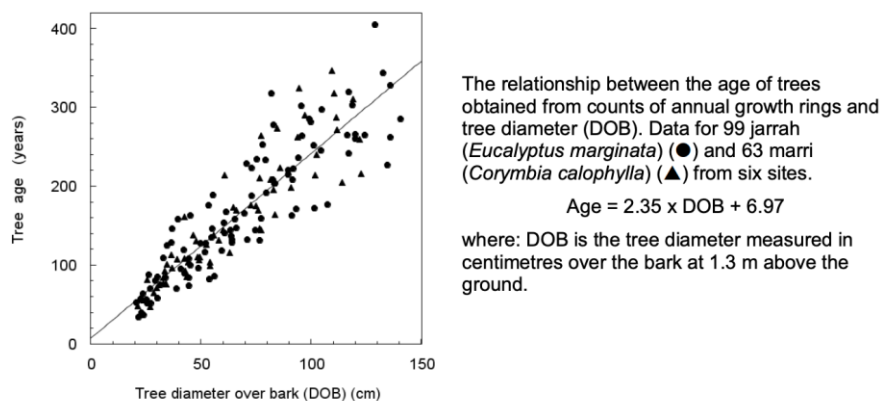


Figure 1. The age of jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) trees (Whitford, 2014)



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Removing trees even with the potential to become a Black Cockatoo breeding ground is not an acceptable environmental outcome. These species are listed as Vulnerable and Endangered, and the Carnaby's Black Cockatoo is facing extinction within the very near future.

The biggest threats against these protected species are:

- Habitat loss (breeding, foraging, roosting)
- Habitat fragmentation and degradation
- Loss of breeding hollows and nest availability
- Mortality of individuals

Measures for improving habitat values for Carnaby's cockatoo include increased management and protection of existing habitat from threatening processes (EPA, 2019).

This proposal of this land clearing permit contains the exact threats that have caused the significant population decline in both the Carnaby's Black Cockatoo and the Forest Red-Tailed Cockatoo. The EPA stated in an advice report (stated above), how to protect these species, and approving this proposal would be a major contradiction considering the value of this open Marri and Jarrah woodland.

Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests. The size of the tree (measured as the diameter at breast height) can be a useful indication of the hollow-bearing potential of the tree. In a woodland stand with trees of suitable diameter at breast height, all trees of all ages and size are potentially important for maintaining breeding in the long term through maintaining the integrity of the habitat and allowing for recruitment of trees to provide future nest hollows. Maintaining the long-term supply of trees of a size to provide suitable nest hollows is particularly important in woodland stands that are known to support cockatoo breeding. 'Breeding habitat' is defined in these referral guidelines as trees of species known to support breeding within the range of the species which either have a suitable nest hollow OR are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 mm. For salmon gum and wandoo, suitable DBH is 300 mm. (EPA, 2019)

While breeding, black cockatoos will generally forage within a 6–12 km radius of their nesting site. Following breeding, birds assemble into flocks and move through the landscape searching for food, usually foraging within 6 km of a night roost. Because of this mobility, potential for reduced seed set and flowering due to drought, and the irregular or infrequent flowering and fruiting patterns of many of their food sources, large areas of foraging habitat are required to support black cockatoo populations. (EPA, 2019)

When moving between roosting, water, and food resources, Carnaby's cockatoo flocks follow vegetation corridors and actively avoid cleared and open areas, including dense urban areas. Habitat fragmentation increases the distances cockatoos need to travel between resources. Proximity of foraging habitat and water has been demonstrated to be critical to support roosting and breeding sites (Groom, 2015; Le Roux, 2017; Saunders, 1990).



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Increased foraging distances have been linked to poor chick health and lower breeding success rates, leading to abandonment of breeding areas because of a lack of food availability (Saunders, 1982; Saunders, 1990; Saunders et al., 1985; Saunders and Ingram, 1987). For example, Saunders observed that the chicks of adult birds that had to travel greater distances, up to 12 km, to find food, had lower growth rates and fledging success, compared to the chicks of adult birds that had foraging habitat available within 7 km of a nest site (Saunders, 1980; Saunders, 1982). These impacts have had long-term effects that are likely to be contributing to a contemporary downwards population trend. In the Perth-Peel region, the key threatening process to Carnaby's cockatoo is the clearing of foraging habitat, both native and pine. Actions that contribute to the loss of habitat in the region include urban and infrastructure development, plantation forestry and basic raw material extraction. Carnaby's cockatoo's most important natural food resource on the Swan Coastal Plain is Banksia species (predominantly *B. attenuata*, *B. menziesii* and *B. sessilis*), and it also feeds frequently on *Corymbia calophylla* (Marri) (Groom et al., 2014). Banksia woodland in the Perth metropolitan area has been reduced to one third of its original extent since European settlement and the remaining portions are fragmented into smaller patches, with the majority (82%) of remnant patches under 10 ha size (DEE, 2016b). The significant clearing and fragmentation of Banksia woodland was recognised by the Commonwealth in 2016 when it listed the Banksia Woodland on the Swan Coastal Plain as an Endangered Threatened Ecological Community under the EPBC Act (DEE, 2016b). The importance of Banksia woodland habitat for Carnaby's cockatoo has been demonstrated through foraging studies, which determined that Carnaby's cockatoo exploit all areas of available Banksia food resources on the Swan Coastal Plain (Johnson et al., 2016). (EPA, 2019)

This proposal site contains a perfect environment for Black Cockatoo species; with 190 current and potential breeding trees, with high-quality foraging vegetation, nearby water sources, this is the exact environment which these endangered and vulnerable species are reliant on. If their extinction is going to be avoided, it is the conservation and protection of land and native vegetation like this one that are the key.

Summary

This land situated on Lot 1 has much greater value than what the clearing permit proposal has acknowledged. This vegetation is supporting and will support fauna are facing extinction with in the next 20 years. Approval of this project would be environmentally unacceptable, and a catastrophe, possibly beyond repair for some species directly involved.

The flora survey is outdated and has not attempted at observing highly likely Threatened and Priority listed taxa. The assumptions that they are not situated through this vegetation are unsound. The flora survey must be conducted at a recent date, and assumptions such as the current ones rejected when the survey is designed. Conservation should always take a cautious approach especially if speculation or the unknown is present, and this has not been done in this instance.

The value of this vegetation as foraging and breeding habitat should alone, exceed the quantity of evidence needed to reject such a proposal. Following the EPA's advice, this permit will not proceed further, and shall be rejected.



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<http://www.wildflowersocietywa.org.au/>

Reference

EPA (2019). Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region. (10-11)

Whitford, K. (2014). The age of jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) trees. *Science and Conservation Division*. 81