

City of Bunbury
PO Box 21
BUNBURY WA 6231

RE: Halifax Drive – Davenport - Turning Lane Project 2019 – CPS 8695/1 - Fauna Survey

1. BACKGROUND

The City of Bunbury (the City) are proposing to construct a left turning lane along South Western Highway turning into Halifax Drive (eastern entrance) to improve safety (the project).

The proposed works will require the removal of some areas of native vegetation (seven trees in total) (Figure 1). The City have applied for a clearing permit from the state Department of Water and Environmental Regulation (DWER) (CPS 8695/1) but are also in the process of determining if any Matters of National Environmental Significance (MNES) as defined under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) will be compromised by the action proceeding.

An initial assessment of the area general area by the City identified the presence of potential black cockatoo habitat (in this case, marri trees (*Corymbia calophylla*)) and possible western ringtail possum (WRP - *Pseudocheirus occidentalis*) habitat (i.e. peppermint trees (*Agonis flexuosa*)).

The City has requested some additional information be gathered on the significance of the fauna habitat present so that informed decisions on future development in the area can be made. This letter report summarises the findings of this assessment.

2. SCOPE

The scope of work was defined by the City of Bunbury as:

1. Carry out a “fauna survey” of the proposed clearing area with a focus upon but not limited to western ringtail possums and black cockatoo habitat. This has involved:

- A day time survey to record any evidence of western ringtail possums and black cockatoos onsite (e.g. observed individuals, evidence of their presence onsite such as dreys, scats, chewed fruits, nest hollow bite marks etc.) and their habitat (e.g. breeding, roosting/denning, foraging habitat), consistent with available literature in

addition to noting the presence of other species of conservations significance and/or their habitat; and

- One nocturnal survey to determine the distribution and abundance of western ringtail possums within the project area.
2. Preparation of a concise report documenting methods, results and legislative requirements including a review against published Commonwealth Department of the Environment and Energy (DotEE) referral guidelines.

3. METHODS

Vegetation within and adjacent to the project area was examined by the Author on 1 October 2019. A nocturnal survey aimed at detecting WRP activity was also undertaken on the 2 October 2019.

3.1 FAUNA HABITATS

Descriptions of broad scale fauna habitats present within the project area are provided. These are based on the vegetation communities, soils and landforms observed during the site survey.

3.2 BLACK COCKATOO HABITAT ASSESSMENT

The following methods were employed to comply with the defined scope of works and are based on guidelines published by the federal Department of the Environment and Energy's (DotEE) (Commonwealth of Australia 2012) which states that surveys for Carnaby's, Baudin's and forest red-tailed black cockatoo habitat should:

- be done by a suitably qualified person with experience in vegetation or cockatoo surveys, depending on the type of survey being undertaken;
- maximise the chance of detecting the species' habitat and/or signs of use;
- determine the context of the site within the broader landscape—for example, the amount and quality of habitat nearby and in the local region (for example, within 10 km);
- account for uncertainty and error (false presence and absences); and
- include collation of existing data on known locations of breeding and feeding birds and night roost locations.

Habitat used by black cockatoos has been placed into three categories by the DotEE (Commonwealth of Australia 2012) these being:

- Breeding Habitat;
- Foraging Habitat; and

- Night Roosting Habitat.

So as to comply with the request scope of works and in line with the published guidelines the following will be carried out.

3.2.1 Breeding Habitat Assessment

The black cockatoo breeding habitat assessment has involved the identification of all suitable breeding trees species within the proposed clearing areas that have a Diameter at Breast Height (DBH) of over 50cm. The DBH of each tree was estimated using a pre-made 50 cm “caliper”.

The location of each tree identified as being over the threshold DBH was recorded with a GPS and details on tree species, number and size of hollows (if any) noted. Trees observed to contain hollows (of any size/type) were marked with “H” using spray paint.

Target tree species included tuart, marri and jarrah or any other *Corymbia/Eucalyptus* species of a suitable size that may have been present. Peppermints, banksia, sheoak and melaleuca tree species (for example) were not assessed as they typically do not develop hollows that are used by black cockatoos.

For the purposes of this study a tree containing a potential cockatoo nest hollow has been defined as:

Generally any tree which is alive or dead that contains one or more visible/possible hollows (cavities within the trunk or branches) potentially suitable for occupation by black cockatoo for the purpose of nesting/breeding. Hollows that had an entrance greater than about 10cm in diameter and would allow the entry of a black cockatoo into a suitably orientated and sized branch/trunk, will be recorded as a “potential nest hollow”.

Identified hollows (if any) were examined using binoculars for evidence of actual use by black cockatoos (e.g. chewing around hollow entrance, scarring and scratch marks on trunks and branches). Trees with possible nest hollows (if any) were also scratched and raked with a large stick/pole in attempt to flush any sitting birds from hollows and calls of chicks were listened for (though it should be noted that the survey may be conducted outside of the main breeding season of all three species of black cockatoo).

3.2.2 Foraging Habitat Assessment

The location and nature of black cockatoo foraging evidence (e.g. chewed fruits around base of trees) observed during the field survey was recorded. The nature and extent of potential foraging habitat present was also documented irrespective of the presence of any actual foraging evidence.

3.2.3 Night Roosting Habitat Assessment

Direct and indirect evidence of black cockatoos roosting within trees on site was noted if observed (e.g. branch clippings, droppings or moulted feathers).

3.3 WESTERN RINGTAIL POSSUM HABITAT ASSESSMENT

3.3.1 Daytime Survey

A single day time surveys to locate and record dreys, obvious tree hollows, scats and individual WRPs was carried out and involved the examination of potential habitat within and near the project area.

3.3.2 Night Time Survey

A single nocturnal survey was carried out to provide an estimate of the distribution and abundance of WRPs in areas of potential habitat identified during the day time survey. Survey work was carried out on foot using an LED head torch.

3.3.3 Habitat Assessment

Description and comments on the amount and quality of WRP habitat within the project area is provided based on observations made during the site surveys.

3.4 OTHER FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

Any evidence of use of each site by other fauna species of conservation significance will be recorded during the course of all day and night time survey work.

4. RESULTS


4.1 Fauna Habitats

This project area is situated along an existing road verge that has been subject to considerable historical disturbance and the vegetation present appears to be largely regrowth from previous clearing events.

The vegetation within the proposed turning lane off South Western Highway is comprised of six peppermint trees and one marri tree of various ages over a grassland of weeds.

An example image of vegetation present within the project area are shown in Table 1.

Table 1: Example Image of Vegetation within the Project Area

Vegetation Description	Example Images
<p>Peppermints and marri within the proposed turning lane.</p>	

4.2 BLACK COCKATOO HABITAT ASSESSMENT

4.2.1 Breeding Habitat Assessment

The single marri tree within the project area has a DBH ≥ 50 cm and therefore qualifies as a “habitat tree” (Figure 1). This single tree contains no hollows of any size.

4.2.2 Foraging Habitat Assessment

The project area contains little or no quality black cockatoo foraging habitat. Peppermint trees are sometimes foraged upon by black cockatoos for grubs (beetle larvae under bark) but this is a rare occurrence. The single marri tree present may be foraged upon on occasions but by itself does not represent a significant foraging resource for black cockatoos.

No evidence of foraging by black cockatoos with the project area was observed.

4.2.3 Night Roosting Habitat Assessment

No evidence of cockatoos roosting within the project area was observed and it is considered unlikely that trees in or near the site would ever be used for this purpose.

4.3 WESTERN RINGTAIL POSSUM HABITAT ASSESSMENT

4.3.1 Daytime Survey

A single WRP drey was observed with one of the peppermint trees with the proposed turning lane area (Figure 1). This drey was made of fresh vegetation but was unoccupied at the time of the survey. No other evidence of WRPs being present within the project area was found.

4.3.2 Night Time Survey

No western ringtail possums were observed within or near the project area during the single night survey. Two common brushtail possums (*Trichosurus vulpecula*) were observed on the single marri tree present with the project area (Figure 1).

4.3.3 Habitat Assessment

The vegetation present with the turning lane area represents WRP habitat and the results of the surveys undertaken indicate it is at times utilised by the species (i.e. presence of a single unoccupied drey). This habitat type extends along the road verge to the south and is continuous with more variable vegetation that makes up or adjoins Manea Park.

5. ENVIRONMENTAL APPROVALS AND REFERRALS

5.1 ENVIRONMENT PROTECTION ACT 1986

The purpose of the Environmental Protection Act (1986) (*EP Act*) is “...to provide for an Environmental Protection Authority, for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection enhancement and management of the environment and for matters incidental to or connected with the foregoing”.

The powers of the *Environmental Protection Act 1986* are administered by the Department of Biodiversity, Conservation and Attractions (DBCA), which in relevant cases advises to the DWER and other government departments.

Legislation proclaimed on 8 July 2004 protects all native vegetation in Western Australia. Under the law, clearing native vegetation for mining is prohibited, unless a clearing permit is granted by DWER, or the clearing is for an exempt purpose. These exemptions ensure that low impact day to day activities involving clearing can be undertaken. People that wish to clear are required to submit an application if an exemption does not apply.

Any future clearing at the subject site, not covered by an exemption, will require a clearing permit, approval of which includes an assessment against the ten clearing principles related to native vegetation in the *EP Act*. These principles provide a guide for when native vegetation should not be cleared. DWER must consider these principles in making a decision on whether or not to issue a clearing permit. The DBCA has set out the minimum requirements and standards for addressing each of the ten principles in detail in its assessment methodology:

Native vegetation should not be cleared if

- (a) it comprises a high level of biological diversity;
- (b) it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia;

- (c) it includes, or is necessary for the continued existence of, rare flora;
- (d) it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community;
- (e) it is significant as a remnant of native vegetation in an area that has been extensively cleared;
- (f) it is growing in, or in association with, an environment associated with a watercourse or wetland;
- (g) the clearing of the vegetation is likely to cause appreciable land degradation;
- (h) the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area;
- (i) the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water; or
- (j) clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

One purpose of the assessment reported on here is to provide information relevant to principle (a) & (b).

Native vegetation should not be cleared if it comprises a high level of biological diversity

While the assessment has not included a detailed fauna survey it is quite apparent that the project area has very low fauna values. The project area is highly degraded and would only be utilised by a very small range of fauna species given their very low habitat values. As a consequence of their degraded state the project area cannot be regarded as representing an area of high biological diversity.

Any clearing of native vegetation from either area is therefore extremely unlikely to be classified as being in variance to this principle by the DWER.

Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia

As previously mentioned, the project area is highly degraded and the clearing required will only involve the removal of a very small number of trees. Despite the recorded use of the area by western ringtail possums it would seem unlikely that this small number of trees would “comprise the whole or a part of, or is necessary for the maintenance of, a significant habitat” for WRPs (or any other fauna) and therefore, it is again anticipated that DWER would be unlikely to classify any proposed clearing as being in variance to this principle.

DWER will need to consider all available information relating to all 10 clearing principles including those relating to fauna. The results of any vegetation and flora surveys provided by the proponent will therefore also be taken into consideration.

5.2 ENVIRONMENT PROTECTION & BIODIVERSITY CONSERVATION ACT 1999

If an action (i.e. the proposed clearing within the project area) is deemed to have a potential “significant impact” on listed species a referral to the Department of the Environment and Energy (DotEE) is required to ensure compliance with the *EPBC Act*. Currently, “significant impact” is defined within one document, this being:

- Commonwealth of Australia (2013). Matters of National Environmental Significance. Significant Impact Guidelines 1.1, *EPBC Act 1999*.

The DotEE have also released referral guidelines for black cockatoos and western ringtail possums which detail what scale of actions potentially constitute “significant impact” and therefore require referral, these being:

- Commonwealth of Australia (2012). *EPBC Act* Referral guidelines for three threatened black cockatoo species: Carnaby’s cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin’s cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*.
- Commonwealth of Australia (2008). Background Paper to the *EPBC Act* Policy Statement 3.10 – Nationally Threatened Species and Ecological Communities. “Significant Impact Guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia”; and
- Commonwealth of Australia (2009). *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* Policy Statement 3.10 “Significant Impact Guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia.

An assessment of the need to refer the project to DotEE using criteria within the relevant referral guidelines are provided below.

5.2.1 Black Cockatoos

The following points provide general guidance on what, in DotEE’s view, may constitute a high or low risk of “significant impact” on black cockatoos as well as providing some guidance on uncertainty.

Actions that have a high risk of significant impacts

- Clearing of any known nesting tree.

- Clearing or degradation of any part of a vegetation community known to contain breeding habitat.
- Clearing of more than 1 ha of quality foraging habitat.
- Clearing or degradation (including pruning the top canopy) of a known night roosting site.
- Creating a gap of greater than 4 km between patches of black cockatoo habitat (breeding, foraging or roosting).

Actions that have and uncertain risk of significant impacts

- Degradation (such as through altered hydrology or fire regimes) of more than 1 ha of foraging habitat. Significance will depend on the level and extent of degradation and the quality of the habitat.
- Clearing or disturbance in areas surrounding black cockatoo habitat that has the potential to degrade habitat through introduction of invasive species, edge effects, hydrological changes, increased human visitation or fire.
- Actions that do not directly affect the listed species but that have the potential for indirect impacts such as increasing competitors for nest hollows.
- Actions with the potential to introduce known plant diseases such as *Phytophthora* spp. to an area where the pathogen was not previously known.

Actions that have a low risk of significant impacts

- Actions that do not affect black cockatoo habitat or individuals.
- Actions whose impacts occur outside the modelled distribution of the three black cockatoos

Given the presence of only one habitat tree, the absence of any actual breeding hollows, limited, low quality foraging habitat and no identified roost trees, no criteria listed in the referral guidelines will be compromised by clearing of vegetation within the project area. As such the DotEE would not consider the proposed removal of these trees to be a “controlled action”.

This conclusion is based on the small number of trees involved, the fact that none would have ever been used as actual breeding habitat by black cockatoos, the location of the trees adjacent to a road in an existing light industrial area and the total absence of quality foraging habitat in the immediate vicinity. It is therefore considered highly unlikely that the clearing of the vegetation in question would have a “significant impact” on the status of any species of black cockatoo frequenting the area.

5.2.2 Western Ringtail Possums

The DotEE document titled “Significant Impact Guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia” (Commonwealth of Australia 2009) summarises what scale of actions would be considered likely to have a significant impact on WRPs in the Bunbury area.

Within the policy statement an action is deemed likely to have a significant impact on the WRP in the southern Swan Coastal Plain Region if it:

- reduces the ability of the region to support the persistence of the western ringtail possum; or
- modifies, destroys, removes or isolates important remnant habitat patches, or decreases the availability or quality of remnant habitat patches; or
- adversely affects connections between important areas; or
- interferes substantially with the ability of the area to effectively contribute to the recovery of the species.

The guidelines have also categorised certain areas between Bunbury and Dunsborough as “Core Habitat”, “Primary Corridors” or “Supporting Habitat”. The project area is situated in the zone defined as “Supporting Habitat” (also referred to as Area 3). As defined in the guidelines a significant impact on WRPs is deemed as “likely” if there is a real chance or possibility that an action within in the defined Area 3 will result in:

- any clearing of a remnant habitat patch that is greater than 0.5 hectares in size;
- the clearing of more than 50% of a remnant habitat patch that is between 0.2 and 0.5 hectares in size;
- the fragmentation of any existing habitat linkages.

The vegetation within the project area forms part of a much larger “habitat patch” which extends southwards that is likely to be utilised by western ringtail possums and so the proposed action potentially compromises the first criteria (i.e. any clearing of a remnant habitat patch that is greater than 0.5 hectares in size).

Nonetheless, given that only six trees are likely to be removed and the large extent of adjoining habitat, the likelihood of “significant impact” as defined within the DotEE guidelines occurring can be regarded as being very low. It is highly probable that no WRPs will be encountered during clearing and the extent of available habitat that will be removed will be negligible (6 trees).

Based on available information, it is therefore the Authors opinion, that the DotEE would not consider the proposal to be a “controlled action” with respect to impact on the western ringtail possum or its habitat.

6. CONCLUSION AND RECOMMENDATIONS

Based on the results of this assessment it is the Authors opinion none of the 10 principles (as they relate to fauna) used by DWER when assessing a permit application will be compromised.

In addition, no significant impact on threatened fauna species listed under the *EPBC Act* is considered likely to occur as a consequence of clearing of vegetation from within either area. This would suggest that, if the proponent were to refer the proposed development to the DotEE for review, clearing of the vegetation in question would be assessed as “not a controlled action” and therefore would not require further assessment or approval under the *EPBC Act* before it could proceed.

In both instances this conclusion is primarily based on the limited amount of vegetation that will be affected and/or its relatively poor habitat value.

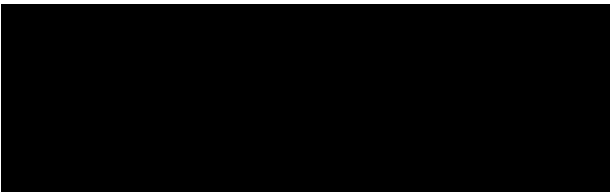
Based on these conclusions it is recommended that an application to clear be applied for from DWER to ensure compliance with the state *EP Act*.

Given that the proposal is very unlikely to have any significant impact on any *EPBC Act* listed threatened species a referral to the DotEE is considered unnecessary as considered highly likely to be deemed “not a controlled action” by the DotEE.

The vegetation does however have the potential to be occupied by western ringtail possums and therefore it is recommended that subsequent to the necessary approvals being obtained that a fauna spotter be employed to inspect the trees immediately prior to clearing so that appropriate action can be undertaken. Relocating any individuals encountered to nearby, adjoining vegetation should be considered an acceptable management measure by regulatory authorities based on previous experience (given that only one or two are likely to be encountered at most, and the large extent of suitable adjoining habitat).

It should be note that these conclusions relate to fauna only. Impacts on flora and vegetation also need to be considered.

If you have any questions or queries relating the information provided here please contact the undersigned on 0402 141 197 / gharewood@inet.net.au



Greg Harewood
Zoologist

References Cited:

Commonwealth of Australia (2008). Background Paper to the *EPBC Act* Policy Statement 3.10 – Nationally Threatened Species and Ecological Communities. “Significant Impact Guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia”.





Commonwealth of Australia (2009). *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* Policy Statement 3.10 “Significant Impact Guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia.

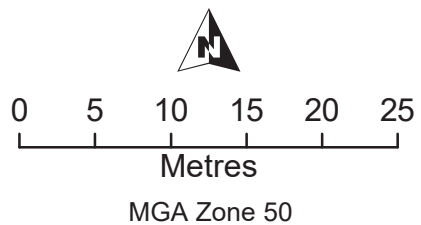
Commonwealth of Australia (2012). *EPBC Act* Referral guidelines for three threatened black cockatoo species: Carnaby’s cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin’s cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*.

Commonwealth of Australia (2013). Matters of National Environmental Significance. Significant Impact Guidelines 1.1, *EPBC Act 1999*.



Legend

-  Permit_Area
-  Habitat Tree (DBH >50cm)
-  Brushtail Possum
-  Western Ringtail Possum Drey



Drawn: G Harewood
Date: Dec 2019
Scale: 1:500
Projection/Coordinate System: UTM/MGA Zone 50

CPS 8695/1 - Halifax Drive
City of Bunbury

Field Observations