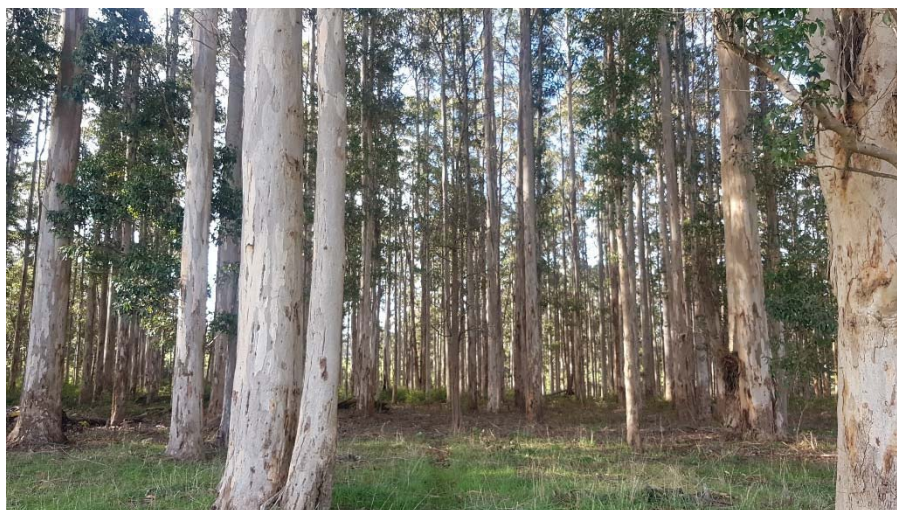


Targeted Fauna Assessment



Lots 9766-9768 and 9770

(CPS 9047/1)

Glenoran

December 2021

Version 2

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FIGURE 1: Aerial Photograph

FIGURE 2: Camera Traps & Possum Observations

SUMMARY

This report details the results of a targeted fauna assessment carried out over various sections of Lot 9766, 9767, 9768 and 9770, Glenoran (survey area).

Brumby Lane Land Holdings Pty Ltd are seeking permission to selectively clear up to 41 ha of native vegetation from within the survey area from the Department of Water and Environmental Regulation (DWER) (ref: CPS 9047/1).

Upon review of the application DWER have advised that in order to determine the impacts to conservation significant fauna potentially present a fauna assessment is required of the proposed clearing areas.

A variety of methods were used in an attempt to determine if the application area was occupied by the fauna species of conservation significance identified by DWER as having the potential of being present (i.e. western ringtail possum and south-western brush-tailed phascogale).

The assessment has included a habitat assessment and a series of day and night transects across the application area while searching for and recording any evidence of presence of the target species (i.e. tracks, scats, dreys, tree hollows, individuals). Camera traps were also utilised over a 91 day period in an effort to detect the species in question.

Daytime surveys of the application area were carried out by Greg Harewood on the 5 June 2020, 25 June 2021 and 24 September 2021. A nocturnal survey was also carried out on the 24 September 2021.

Overall habitat quality for the western ringtail possum and the south-western brush-tailed phascogales appears to be poor within the survey area.

There is a distinct lack of coherent midstory vegetation within woodland areas over most of the survey area, habitat typically favoured by WRPs. The tall, dense shrubland associated with a drainage line appears superficially to be more suitable however favoured foraging species appear to be absent/sparse.

South-western brush-tailed phascogales require hollow bearing trees to persist in an area and given the relatively young age of most of the trees present this resource appears to be limited which makes the habitats present marginal/unsuitable for this species.

A single western ringtail possum was recorded on one camera trap positioned at the base of a hollow bearing tree. No other evidence of fauna species of conservation significance utilising the survey area was found.

The observations made suggest that while western ringtail possums are present, their numbers and distribution appear to be limited by the general absence of favoured habitat. This conclusion can also be applied to the south-western brush-tailed phascogale given the limited number of hollow bearing trees, required by the species for daytime refuge.

This report should be forwarded to DWER for review.

1. INTRODUCTION

This report details the results of a targeted fauna assessment carried out over various sections of Lot 9766, 9767, 9768 and 9770, Glenoran (survey area).

Brumby Lane Land Holdings Pty Ltd are seeking permission to selectively clear up to 41 hectares of native vegetation from within the survey area from the Department of Water and Environmental Regulation (DWER) (ref: CPS 9047/1).

Upon review of the application DWER have advised that in order to determine the impacts to conservation significant fauna potentially present a fauna assessment is required of the proposed clearing areas.

It should be noted that a black cockatoo habitat tree assessment has already been completed with a report submitted to DWER with the initial application (Harewood 2020). This survey found that the vast majority of the trees present within the survey area were relatively young and as a consequence most do not contain hollows, or if present, what appeared to be only smaller hollows that would be unsuitable for black cockatoos to use for nesting.

At the time of the assessment the exact area of clearing had yet to be finalised but will be within the areas shown on the attached figure (Figure 1). The area consists of six native vegetation remnants (labelled A-F) with a total area of about 55 hectares (the survey area).

2. SCOPE OF WORKS

The scope of works are based on specifications within the request for additional information on made by DWER (2021) as detailed below:

Information Requirements

- A faunal survey is required for the area proposed to be cleared.

Specifications

- The survey is to be carried out by a fauna specialist (see below for relevant definitions) and survey methodology must be consistent with the Environmental Protection Authority's (EPA) Technical Guidance: Terrestrial Fauna Surveys (December 2016), copies of which are available at the EPA's website.
- All surveys must be submitted in accordance with the EPA's Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA) and submitted via DWER's IBSA Submissions Portal. Please provide the corresponding IBSA Submissions Reference Number to the assessing officer, using

the contact details located on the top right of the attached letter, once the survey has been submitted.

Rationale

- A number of threatened and priority fauna are known to occur within the local area and there is a reasonable probability that these may occur in the application area.
- Specifically, a species listed as critically endangered under the *Biodiversity Conservation Act 2016*, *Pseudocheirus occidentalis* (western ringtail possum (WRP)) are known to be present within 600 meters of the application area. This presumption is based on available datasets and preferred known habitats for this species.

(Note: DWER (2021) also specifically mention the likely presence of the south-west brush-tailed phascogale (*Phascogale tapoatafa wambenger*) within the survey area).

3. METHODS

Daytime surveys of the application area were carried out by Greg Harewood (Zoologist) on the 5 June 2020, 25 June 2021 and 24 September 2021. A nocturnal survey was also carried out on the 24 September 2021.

A variety of methods were used in an attempt to determine if the application area was occupied by the fauna species of conservation significance identified by DWER as having the potential of being present (i.e. western ringtail possum and the south-western brush-tailed phascogale).

The methods directed at detecting the species in question are detailed below:

3.1 Habitat Assessment

Vegetation units, landforms and soils observed during the field survey have been used to define broad fauna habitat types across the application area.

The objective of the habitat assessment was to assess if it were likely that the listed species of conservation significance would utilise the habitats identified within the application area.

During the field survey, fauna habitats present were assessed, and specific elements identified, which informed the likelihood of the listed conservation significant species utilising the area.

3.2 Camera Traps

Six motion sensing, infrared “camera traps” (Acorn model LTI 5210A) were placed within the application area on the 25 June 2021 and retrieved on the 24 September 2021 (91 days of deployment). The camera traps were set to take three consecutive pictures when triggered, with a five second time lapse before any subsequent trigger event. Camera traps were placed along obvious runways/runnels through the vegetation, along vehicle tracks and at the base of hollow bearing trees (Figure 2).

The camera trap survey had the potential to detect both listed fauna species of conservation significance identified by DWER as potentially occurring (and other fauna species).

3.3 Day and Night Surveys

Three day surveys and a night survey have been undertaken. The day surveys included a series of transects across the application area while searching for and recording any evidence of presence of the target species (i.e. calls, tracks, scats, runnels, dreys, tree hollows, individuals) concurrent with the habitat assessment.

The night survey involved a series of transects across the application area using a LED head torch while on foot or a spotlight from a slow moving vehicle with the aim of detecting the nocturnal target species by way of eye shine.

The day and night surveys had the potential to detect individuals and/or secondary signs of all both of the listed fauna species of conservation significance identified by DWER as potentially occurring (and a range of other fauna species).

4. SURVEY CONSTRAINTS

No seasonal sampling has been carried out as part of this fauna assessment. The conclusions presented are based upon field data and the environmental monitoring and/or testing carried out over a limited period and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. It should also be recognised that site conditions can change with time.

During the habitat assessment trees with hollows were searched for. It should be noted that identifying hollows suitable for fauna species from ground level has limitations. Generally, the full characteristics of any hollow seen are not fully evident (e.g. internal dimensions). It is also difficult to locate all hollows within all trees as some are not observable from ground level, though to a certain extent some of these limitations can be overcome by using a drone or pole camera to examine possible hollows in more detail (where considered warranted and feasible).

5. RESULTS

5.1 Habitat Assessment

Areas A and F within the survey area were found to contain patches of open forest/woodland mostly comprised of karri (*Eucalyptus diversicolor*) with very occasional marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) trees. Understorey varies from being almost absent to consisting of dense shrubs. The vast majority of the trees present are relatively young and appear to represent regrowth from historical clearing events. Because of their relatively young age most trees do not contain hollows, or if present, what appear to be only small hollows that would be unsuitable for black cockatoos to use for nesting.

Vegetation within areas B, C, D and E consists mainly of a tall, dense shrubland associated with a drainage line and apart from two trees in area E, contains no woodland habitat.

Overall habitat quality for the western ringtail possum and the south-western brush-tailed phascogales appears to be poor within the survey area.

There is a distinct lack of coherent midstorey vegetation within woodland areas over most of the survey area, habitat which is typically favoured by WRPs. The tall, dense shrubland associated with a drainage line appears superficially to be more suitable however favoured foraging species appear to be absent/sparse.

South-western brush-tailed phascogales require hollow bearing trees to persist in an area and given the relatively young age of most of the trees present this resource appears to be limited which makes the habitats present marginal/unsuitable for this species.

5.1.1 Camera Traps

Ten fauna species were captured on camera traps during the survey period, these being:

- Grey Shrike-thrush (*Colluricincla harmonica*)
- Common Bronzewing (*Phaps chalcoptera*)
- Laughing Kookaburra (*Dacelo novaeguineae*)
- Red-winged Fairy-wren (*Malurus elegans*)
- Australian Raven (*Corvus coronoides*)
- Red Fox (*Vulpes vulpes*)
- Rabbit (*Oryctolagus cuniculus*)
- Yellow-footed Antechinus (*Antechinus flavipes*)

- Western Ringtail Possum (*Pseudocheirus occidentalis*).
- Western Grey Kangaroo (*Macropus fuliginosus*).

A single western ringtail possum was recorded on one camera trap (Cam 31) on the 16 July 2021 (Figure 2). This camera trap was positioned at the base of a hollow bearing tree and it is assumed that the possum was using a hollow in this tree (and possibly others nearby) for daytime refuge. Example camera trap images of the WRP recorded are shown below.



No other fauna species of conservation significance was recorded during the camera trap survey.

5.1.2 Day and Night Surveys

Twelve fauna species were recorded during the day surveys, these being:

- Australian Magpie (*Cracticus tibicen*)
- Silvereye (*Zosterops lateralis*)
- New Holland Honeyeater (*Phylidonyris novaehollandiae*)
- Australian Ringneck Parrot (*Platycercus zonarius*)
- Purple-crowned Lorikeet (*Parvipsitta porphyrocephala*)
- Common Bronzewing (*Phaps chalcoptera*)
- Laughing Kookaburra (*Dacelo novaeguineae*)
- Grey Fantail (*Rhipidura fuliginosa*)

- Red Wattlebird (*Anthochaera carunculata*)
- Red-winged Fairy-wren (*Malurus elegans*)
- Tree Martin (*Petrochelidon nigricans*) and
- Western Grey Kangaroo (*Macropus fuliginosus*)

No evidence of any fauna species of conservation significance was observed during the day or night surveys (i.e. no dreys, scats, individuals or other evidence).

6. CONCLUSION

The assessment reported on here was primarily undertaken to determine if fauna species of conservation significance were present, specifically the western ringtail possum and the south-western brush-tailed phascogale.

Overall habitat quality for the western ringtail possum and the south-western brush-tailed phascogales appears to be poor within the survey area.

There is a distinct lack of coherent midstory vegetation within woodland areas over most of the survey area, habitat which is typically favoured by WRPs. The tall, dense shrubland associated with a drainage line appears superficially to be more suitable however favoured foraging species appear to be absent/sparse.

South-western brush-tailed phascogales require hollow bearing trees to persist in an area and given the relatively young age of most of the trees present this resource appears to be limited which makes the habitats present marginal/unsuitable for this species.

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This report should be forwarded to DWER for review.

7. REFERENCES

Department of Water and Environmental Regulation (DWER) (2021). Application to Clear Native Vegetation under the Environmental Protection Act 1986 – Request for further information (CPS 9047/1). 16 April 2021.

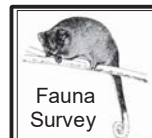
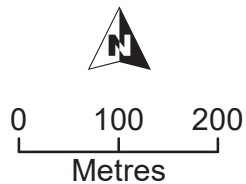
Environmental Protection Authority (EPA) and Department of Environment and Conservation (DEC) (2016). Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessments (eds B.M. Hyder, J. Dell and M.A. Cowan), Perth Western Australia.

FIGURES



Legend

 Survey Area



Drawn: G Harewood
Date: 05-Dec-21
Scale: 1: 50,000

**Lots 9766-68 and 9770
Glenoran**




**Aerial
Photograph**

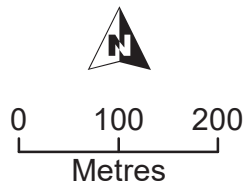

Projection/Coordinate System: UTM/MGA Zone 50

Figure: 1



Legend

-  Survey Area
-  Camera Trap
-  WRP Recorded

Fauna Survey

Drawn: G Harewood
Date: 05-Dec-21
Scale: 1: 50,000

Lots 9766-68 and 9770
Glenoran
**Camera Traps
&
Possum
Observations**

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The conclusions are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of preparing the report. Also it should be recognised that site conditions, can change with time.

Within the limitations imposed by the scope of services, the field assessment and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

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