COTERRA ENVIRONMENT

Native Vegetation Clearing Permit Application

Rose Farms WA – Lot 10 (6274) Forrest Hwy Myalup

Rev 0 May 2026

CALIBRE | COMMITMENT | COLLABORATION

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Report Version:	Rev 0
Date:	May 2026

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1 Introduction

1.1 Background

Rose Farms WA is seeking to extend their intensive agriculture operations within Lot 10 (6274) Forrest Highway Myalup, located approximately 30 kilometres (km) north of Bunbury. The site lies approximately 16 km west of the Harvey townsite within the established Priority Agriculture district. It is bounded to the west by Lake Preston, to the east by Forrest Highway, and further intensive agricultural pursuits to the north, east and south (Figure 1).

The Rose family have been operating in Myalup since the early 1960's predominantly with horticultural pursuits focussing on large scale vegetable production with a secondary use of livestock grazing. Due to increase in demand, Rose Farms WA propose to extend their existing horticultural pursuits within Lot 10 on the eastern portion of the site by approximately 14.16 ha (Plate 1).

Plate 1: Proposed area for extension of intensive horticultural use

Source: MNG Access (2026) after Nearmaps (2026)

To facilitate this extension 11 mature trees, in an otherwise cleared paddock, are proposed to be removed. The location of the 11 Tuart (*Eucalyptus gomphocephala*) trees proposed to be cleared are shown on Figure 1.

1.2 Planning and Environmental Approvals

1.2.1 Regional Planning Framework

In recognition of the ongoing loss of agricultural land close to cities and towns, the Western Australian Planning Commission's (WAPC) State Planning Strategy 2050 highlighted the need for measures to secure land for future agricultural and food industry production (WAPC, 2017). These included the strategic identification of priority agricultural land that are considered to be of State or regional significance to improve the general status of food security (WAPC, 2017).

The site falls within a Priority Agricultural Land Policy Area and is zoned Rural under the Greater Bunbury Region Scheme (Plate 2). The areas of priority agricultural land identified by this policy are located on soils

with greater nutrient retention capacity and access to suitable water resources (WAPC, 2017). Intensive Agriculture is a Permitted use within the Policy area.

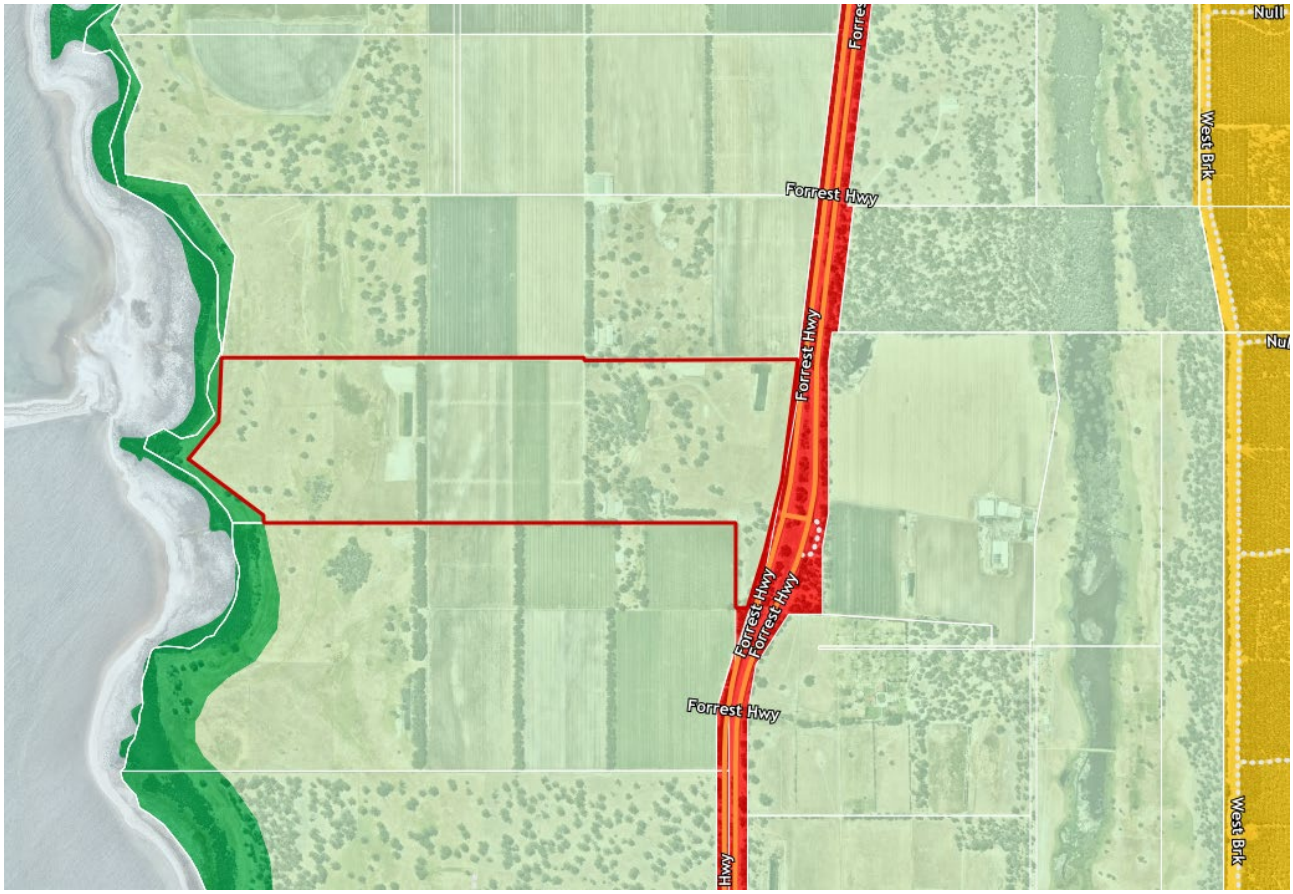

Plate 2: Greater Bunbury Region Scheme Zoning

Source: MNG Access (2026) after Nearmaps (2026) and Landgate (2026). Key: Dark Green – Regional Open Space, Light Green – Rural, Red – Primary Regional Roads, Yellow – State Forests

1.2.2 Local Planning Framework

Under the Shire of Harvey Local Planning Scheme No. 2 the site is zoned Priority Agriculture (Plate 3). Intensive agriculture is a Permitted use within this zoning. The objectives of this zone are to:

- To identify land of State, regional or local significance for food production purposes.
- To retain priority agriculture land for agricultural purpose.
- To limit the introduction of sensitive land uses which may compromise existing, future and potential agricultural production.

Plate 3: Shire of Harvey Local Planning Scheme No. 2 Zoning

Source: MNG Access (2026) after Nearmaps (2026) and Landgate (2026). Key: Light Green – Priority Agriculture

1.3 Purpose of this Report

This report has been prepared in support of a Native Vegetation Clearing Permit (NVCP) (Area Permit) application to clear 11 tuart trees (*Eucalyptus gomphocephala)* within the site to progress the expansion of the existing intensive horticulture use under Part V of the *Environmental Protection Act 1986* (EP Act).

2 Proposed Clearing

2.1 Proposed Works

The proposed works to be undertaken within the site will involve clearing of 11 trees with a total canopy area of approximately 0.55 ha in a parkland cleared pasture, followed by the levelling, ploughing and mounding of the soil to establish rows of irrigated vegetable production. The proposed expansion of the intensive horticulture use has been undertaken to minimise the extent of clearing required and to maximise the setback distance to Lake Preston, such that it will be undertaken in an existing predominantly cleared pasture with a few isolated stands of tuart trees.

2.2 Clearing Methodology

2.2.1 Pre-clearing

Prior to clearing, the works area will be clearly demarcated to ensure over-clearing does not occur. Site contractors will be provided with an environment induction to:

- Ensure knowledge of the environmental values within and adjacent to the project area, and the importance of minimising construction related impacts to these areas
- Adequately implement measures to protect the environment, including the use of dust minimisation strategies
- Requirement of and actions to ensure compliance with local, state and federal legislation.

2.2.2 Clearing

Clearing will be undertaken by mechanical removal. Dust emissions from the proposed works will be mitigated through the use of a watercarts where necessary, thereby ensuring that indirect impacts to proximal retained vegetation will be minimised to the fullest extent possible. Protocols for environmental incidents which occur during the course of clearing (such as contingency actions in the event of fauna strike) will be implemented and communicated to site contractors.

2.3 Alternatives Considered

The proponent is committed to achieving sustainable environmental outcomes. By utilising the parkland cleared area to the east of the site, the project aims to minimise long-term environmental damage and reduce native vegetation clearing by lessening overall environmental impact compared to alternative locations to the west with denser, higher quality native vegetation and mapped wetland areas in close proximity to Lake Preston.

3 Existing Environment

3.1 Topography, Geology and Soils

The geology and topography of the area is shown in Figure 2. The topography within the site is generally flat to gently undulating with topographic elevation ranging between 2-4 m AHD (Landgate, 2026).

The geology in the vicinity of the proposed tree clearing is mapped as containing the Qts unit described as: Sand associated with Tamala Limestone, high dunes (Biggs, 1979).

The Department of Primary Industries and Regional Development (DPIRD) Natural Resource Information mapping shows the site as containing Spearwood S4b phase soils described as:

> *'Flat to gently undulating sandplain with shallow to moderately deep siliceous yellow-brown and grey-brown sands with minor limestone outcrop.'*

The land capability qualities of this land unit are summarised in the following table (DPIRD, 2026. Wind erosion is considered the highest land degradation risk, however given that most of the project area is already cleared, and that irrigation and intensive horticulture will be established immediately after clearing, it is not anticipated that this risk is likely to be encountered during the clearing required for the project.

Table 1: Land Degradation Risk Categories

Land Degradation Risk Category	Land Unit Hazard Level of Concern	Percentage of Spearwood S4b with High Land Unit Hazard
Water erosion hazard	Very High to Extreme Hazard	Less than 3% of the map unit
Wind erosion hazard	High to Extreme Hazard	More than 70% of map unit
Land instability hazard	Moderate to High	Less than 3% of map unit
Phosphorus export hazard	High to Extreme	Less than 3% of map unit
Salinity risk	Moderate to High	0% of map unit
Waterlogging risk	Moderate to Very High	0% of map unit
Flood risk	Moderate to High	0% of map unit

Source: DPIRD (2025)

3.2 Hydrology

3.2.1 Groundwater

The site is not within a Public Drinking Water Source Area (PDWSA). The project area falls within the South West Coastal groundwater area proclaimed under the *Rights in Water and Irrigation Act 1914* and is situated within the Harvey River hydrographic catchment (Harvey Diversion Drain sub-catchment). There is an active groundwater licence for properties held by Graham Rose (lots 10, 100, 3 and 4 Forrest Highway Myalup) for up to 2,395,000kL per annum. The project will/will not require any additional water abstraction above the existing allocation.

3.2.2 Surface water

The site is within the Harvey Surface Water Management Areas (Harvey Diversion drain subarea).

Figure 3 shows the mapped surface water features and drainage lines within and adjacent to Lot 10. Lake Preston to the west of the site is part of the Yalgorup Lakes System and is included on the List of Wetlands of

International Importance developed under the Ramsar Convention. It is mapped as a Conservation Category Wetland. Several other Multiple Use wetlands are situated within Lot 10 to the west of the site that have been previously cleared and are degraded. The trees proposed to be cleared are over a 1km from the Multiple Use wetlands and over 1.6 km from Lake Preston.

A drain is present to the north of Lot 10 adjoining the boundary in proximity to the proposed clearing area. A drainage line is still mapped as entering the clearing area towards a dam, however this drain was removed in the 1970's. Several large dams have been constructed for the provision of irrigation water. The proposed intensive horticulture project will not require any changes to the existing groundwater licence.

The separation distance between the clearing area and these surface water features ensures that there will be no hydrological changes to these systems as a result of limited clearing to the east of the site.

3.3 Flora and Vegetation

3.3.1 Pre-European Vegetation

Broadscale mapping of pre-European vegetation within the Perth region was undertaken by Beard (1976) which recorded 75 major categories of plants. Shepherd et al. (2002) reassessed Beard's mapping and divided some of the larger vegetation units into small units, which then resulted in a total of 89 vegetation units being mapped across Western Australia.

The project area contains one vegetation system association, being Spearwood_998 (Table 3-2). This vegetation system is described as a 'southwest woodland of Jarrah, marri and wandoo; *Eucalyptus marginata*, *Corymbia calophylla*, *E. wandoo'* (Landgate, 2025).

Table 3-2: Spearwood_998 Vegetation Statistics

Area	Pre-European Extent	Current Extent	Current Extent managed in DBCA lands (proportion of Pre-European Extent)
Western Australia (1b)	48,441.77 ha	17,667.16 ha (36.47%)	18.25%
Swan Coastal Plain (2b)	48,293.94 ha	17,666.85 ha (36.58%)	18.30%

Source: GoWA (2019a)

3.3.2 Vegetation Complex

Additional regional scale mapping has also been prepared by Heddle *et al.* (1980) identifying vegetation complexes. Areas of native vegetation present on site are likely to represent the Yoongarillup vegetation complex, although a large proportion of the site has been historically cleared. The complex is described as:

- Woodland to tall woodland of *Eucalyptus gomphocephala* (Tuart) with *Agonis flexuosa* in the second storey. Less consistently an open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri).

The Environmental Protection Authority (EPA) use vegetation complexes as the basis for regional representation of biodiversity and has an overall objective to seek retention of at least 30% of the pre-clearing extent of each ecological community or at least 10% of the pre-clearing extent of each ecological community within defined constrained areas including the Peel Region Scheme area (EPA, 2008).

The current extent of the Yoongarillup Complex occurs above the 30% threshold both on the Swan Coastal Plain and within the Shire of Harvey (Table 3-3).

Table 3-3: Yoongarillup Complex Vegetation Statistics

Vegetation Complex	Pre-European Extent (ha)	Current Extent Remaining (ha)	% Remaining (overall)	Pre-European Extent in Shire of Harvey (ha)	Current Extent in Shire of Harvey (ha)	% Remaining (Shire of Harvey)
Yoongarillup	27,977.93	10,109.79	36.13	10,952.58	3,435.61	31.37

Source: Government of Western Australia (2025)

3.3.3 Site Assessment

WA Department of Biodiversity Conservation and Attractions (DBCA) mapping indicates that seven of the trees to be cleared appears likely to form part of the Tuart Woodlands and Forests of the Swan Coastal Plain Ecological Community (Plate 4). This community is listed as being Critically Endangered under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and listed as Priority 3 by the DBCA.

Plate 4: DBCA Tuart Woodland ecological community mapping

Source: Landgate (2026)

The trees proposed to be cleared are situated to the east of the lot within a cleared pasture paddock, with no remaining native understorey species. All 11 trees were identified to be mature tuarts (*Eucalyptus gomphocephala*). Based on the lack of understorey species the vegetation condition proposed to be cleared is considered to be 'Completely Degraded' on the Keighery Vegetation Condition scale (Table 3-4).

Table 3-4: Keighery Vegetation Condition Scale

Condition	Description
Pristine (1)	Pristine or nearly so, no obvious signs of disturbance.
Excellent (2)	Vegetation structure intact; disturbance affecting individual species; weeds are non-aggressive species.
Very Good (3)	Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires; the presence of some more aggressive weeds; dieback; logging & grazing.
Good (4)	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires; the presence of some very aggressive weeds at high density; partial clearing; dieback & grazing.
Degraded (Poor) (5)	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires; the presence of very aggressive weeds; partial clearing; dieback; & grazing.
Completely Degraded (6)	The structure of vegetation is no longer intact, and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Source: EPA (2016)

The combined canopy extent of the 11 tuart trees to be cleared has been estimated to be approximately 0.55 ha.

The approved conservation advice for the Tuart Woodlands and Forest of the Swan Coastal Plain ecological community as related to the EPBC Act notes the size and condition thresholds for this ecological community include:

- If the patch is smaller than 0.5 ha it is not part of the nationally protected ecological community
- If the patch is at least 0.5 ha and up to 5 ha in size the inclusion within the ecological community is dependent upon condition.
    - Poor condition areas do not form part of the nationally protected ecological community in this patch size range
- All patches of 5 ha or greater that meet the key diagnostic characteristics are part of the nationally protected ecological community
- The patch boundary is 30 m beyond the outer canopy of the established Tuart trees (≥15 cm diameter at breast height (DBH)), including dead Tuart trees.

As can be seen from Figure 4, 2 of the tuart trees proposed to be cleared (northeastern most trees) are below the patch size thresholds. The remaining Tuart Trees are part of a larger patch which together with the trees present to the north are likely to exceed the 5ha threshold to be considered part of the ecological community.

There are 36 mature tuart trees within parkland cleared areas of the site (See Figure 4) that will be retained along with an area of remnant vegetation to the west totalling approximately 7 ha. This remnant vegetation consists of *E. gomphocephala, Agonis flexuosa* (peppermint), and *E. marginata* (jarrah) woodland with some understorey species present.

The following Plates 5 -12 show photographs of the site and tuarts proposed to be cleared.

Plate 5: Tuart proposed to be cleared, Forrest Highway roadside vegetation in background

Plate 6: Tuarts proposed to be cleared, facing north in centre of lot

Plate 7: Tuarts proposed to be cleared, Forrest Highway roadside vegetation in background

Plate 8: Tuarts in foreground proposed to be cleared

Plate 9: Tuart proposed to be cleared, tuarts to be retained in background

Plate 10: Tuart proposed to be cleared at north of lot, roadside vegetation of Forrest Highway in background

Plate 11: Tuart proposed to be cleared at north of lot

Plate 12: Tuarts proposed to be cleared in centre of lot, with tuarts to be retained in background

3.4 Fauna and Habitat

A desktop review of the investigation area identified that the following key fauna values may be present within the proposed clearing area:

- Potential foraging, breeding and/or roosting habitat for three species of south-western Black Cockatoo, being:
  - *Zanda latirostris* (Carnaby's Black Cockatoo) - Endangered under the EPBC Act and *Biodiversity Conservation Act 2016* (BC Act)
  - *Zanda baudinii* (Baudin's Black cockatoo) - Endangered under the EPBC Act and BC Act; and/or
  - *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo – FRTBC) – Vulnerable under the EPBC Act and BC Act
- Potential habitat for the Western Ringtail Possum (*Pseudocheirus occidentalis*) and other significant fauna species.

In March 2026 a fauna, habitat and targeted black cockatoo and western ringtail possum survey in line with the *EPA's Technical Guidance – Terrestrial Vertebrate Surveys for Environmental Impact Assessment (EPA, 2020)* was undertaken by Greg Harewood (Appendix 1).

The ~6.8 ha survey area has been subject to significant historical disturbance with almost all of the natural vegetation having been removed for livestock grazing. As a consequence of the survey area's history of disturbance and lack of natural vegetation the original fauna diversity has been significantly compromised. The area would now only support a small subset of the original fauna assemblage with most (though not all) of those using the area generally being widespread, common species (mostly birds) able to persist in highly disturbed areas.

Nine fauna species (mainly common bird species) were observed or secondary evidence of their presence was recorded during the field survey. No vertebrate fauna species of conservation significance were positively identified as utilising the survey area (Harewood, 2026).

Several species of conservation significance may utilise the survey area, though, as no evidence of their presence was identified during the field survey, their status in the survey area remains uncertain, though in all cases the survey area is not considered to represent significant habitat for any species (Harewood, 2026). These species are:

- Peregrine Falcon - OS (WA)
- Carnaby's Cockatoo - Endangered (WA/Federal)
- Baudin's Cockatoo - Endangered (WA/Federal)
- Forest Red-tailed Black Cockatoo - Vulnerable (WA/Federal)
- Western False Pipistrelle - Priority 4 (WA)

In cases where some habitat is present and available information indicates at least some probability of a species occurrence, likely impacts to fauna are anticipated to be negligible given the anticipated low level of utilisation, the degraded nature of the habitat, its limited extent and the absence of significant hollows.

3.4.1 Black Cockatoos

The black cockatoo habitat assessment undertaken for the survey area concluded that the survey area contains the following key features (Harewood, 2026):

- The black cockatoo breeding habitat assessment identified 11 trees within the survey area with a Diameter at Breast Height (DBH) of >30cm.
- No hollows were identified within seven of the trees.

- Four trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to currently use for nesting purposes given each hollows small entrance size and/or apparent small overall size.
- No trees appeared to contain hollows of a size or orientation considered suitable for black cockatoos to use for nesting purposes.
- The Bamford Consulting Ecologists (BCE) scoring method for assessment of foraging habitat quality returned an overall value of "negligible value" (0 out of 10) for vegetation present for all three species of black cockatoos. This is a consequence of the lack of native vegetation and the low foraging value of introduced grasslands and the small number of tuarts.
- Application of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) Foraging Quality Scoring Tool to the entire survey area as one results in a high quality foraging score for all three species of black cockatoo (8 out of 10). This is a consequence of the score having to start at a maximum of 10 (given the foraging habitat present is mainly "eucalypt woodland") and there being only one attribute (lack of foraging evidence for any black cockatoo species) that could be used, without doubt, to reduce each total score.
- No evidence of black cockatoos foraging or roosting within the survey area was found.

The project area is not within any mapped confirmed or unconfirmed Carnaby's Black Cockatoo roost sites, or Black Cockatoo roosting site buffer (Landgate, 2025a). The closest confirmed Carnaby's Black Cockatoo roost site buffer is approximately 890 m north-east of the project areas boundary.

3.4.2 Western Ringtail Possum

No evidence of western ringtail possums utilising the site was found during the daytime or nocturnal survey. The survey area represents unsuitable habitat for Western Ringtail Possums given the paucity vegetation, lack of canopy connection/midstory structure and absence of favoured foraging species such as peppermint (*Agonis flexuosa*) (Harewood, 2026).

3.5 Conservation Areas

DPIRD native vegetation mapping indicates that there is about 10,800 ha of remnant native vegetation within 12 kilometres (km) of the project area (DWER, 2026).

Lot 10 is located adjacent to the Yalgorup National Park, a 12,888 ha park that includes several conservation significant attributes and habitat for threatened species. The Peel-Yalgorup System is a Ramsar Wetland afforded protection under the EPBC Act. The Ramsar site contains Lake Preston, a Conservation Category Wetland, which is mapped as being approximately 1.6km from the project area.

The project area is outside of the boundary of the State Planning Policy 2.8 area (Bush Forever Areas) and is not mapped as part of an EPA Redbook Recommended Conservation Reserve (Landgate, 2025).

Lot 4650 Forrest Highway to the north-east of the site, is set aside as a 47.8 ha environmental conservation reserve by the State Government. Approximately 75% of this reserve is mapped as the Tuart Woodlands ecological community.

3.6 Heritage

3.6.1 Aboriginal Heritage

There is one lodged Aboriginal cultural heritage site situated to the west of Lot 10 within the Lake Preston State Government reserve R11710. The site details are provided in the following Table 3-5 and the mapping of the site shown within Plate 17.

Table 3-5: Details of Aboriginal Cultural Heritage Lodged Place 5614 (DPLH, 2026)

Lodged Place	Details
Name	Lake Preston
ID	5614
Place Status	Lodged
Place Type	Artefacts/Scatter
Boundary Reliable	Yes

3.6.2 European Heritage

No Commonwealth heritage places occur on or in the vicinity of the site (DCCEEW, 2026).

No heritage places are listed under the Shire of Harvey Municipal Inventory or the State Heritage Register in proximity to the site (Shire of Harvey 2014; Heritage Council, 2017).

4 Actions to Reduce Environmental Impacts

4.1 Avoidance

The project requires the removal of eleven tuart trees which are of suitable DBH to support potential black cockatoo breeding. Although these trees are large enough to potentially form suitable breeding hollows for black cockatoos, no currently suitable hollows are present.

The proponent has strategically prepared the proposed intensive horticulture expansion area to avoid key environmental values within the project area. This has resulted in:

- Maximum distance between the clearing area and Lake Preston and the Yalgorup National Park of 1.6kms.
- Avoids the areas of Multiple Use wetlands present to the west of Lot 10 and has a buffer of 1km from these wetland areas.
- The proposed expansion area avoids 36 (76%) of mature tuart trees considered of suitable size to be suitable for black cockatoo breeding within the project area.
- The proposed expansion area avoids impacting on the better vegetation condition present within the *E. gomphocephala, Agonis flexuosa* (peppermint), and *E. marginata* (jarrah) woodland which covers approximately 7ha of the site.

4.2 Minimisation

In terms of impact minimisation, the proponent is committed to ensuring best environmental outcomes during development and will implement the following:

- The buffer of 1.6 km to Lake Preston and the Peel-Yalgorup System ensures no potential direct impacts to the surface water of these systems.
- Earthworks personnel will be provided with an Environmental Induction, which will be presented to the contractor at the pre-clearing start-up meeting. This information will include discussion of the roles and requirements of site personnel and environmental management measures.
- The trees to be cleared and construction extent boundary will be clearly demarcated to ensure they are accurately located and visible.
- Clearing to be undertaken in a direction to encourage wildlife movement away from the clearing area.
- Clearing to be undertaken in favourable weather conditions to prevent dust generation and wind-blown soil loss from the site.
- Vehicles accessing the site to undertake the clearing works will be restricted to the clearing and construction area footprint to prevent disturbance to vegetation beyond this boundary.
- Vehicle movements will be restricted to speeds of 25 km/hour within construction areas.
- Dust suppression will be undertaken during earthworks as required.
- Site works will be undertaken in accordance with standard construction work operation hours from 7 am to 7 pm, Monday to Saturday.
- A vegetated windbreak to be planted and established to reduce risk of wind erosion post establishment of the horticulture area. Tuarts trees to be planted within the windbreak to offset loss due to clearing.

The proposed expansion area has been strategically designed to avoid impacts to environmental values as much as practicable. There are no other locations where a similar size expansion area would result in a lesser extent of native vegetation being cleared or wetlands being potentially impacted, thus the proposed location is considered of lowest environmental impact to facilitate the required expansion.

As such, it is considered that all practical avoidance and mitigation measures have been implemented by the proponent.

5 Assessment Against Native Vegetation Clearing Permit Clearing Principles

An assessment of the proposed vegetation clearing against the ten native vegetation clearing principles contained in Schedule 5 of the EP Act is provided in Sections 5.1 to 5.10. Based on the outcomes of the assessment, it is considered that the development is not at variance with nine out of ten clearing principles. The proposed action is considered to potentially be at variance with principle (d).

5.1 Comprises high level of biological diversity

Principle (a): Native vegetation should not be cleared if it comprises a high level of biological diversity.

The 11 tuarts proposed for clearing are located within a parkland-cleared pasture paddock that has been grazed for several decades. No native understorey remains and the vegetation is therefore considered to be in 'Completely Degraded' condition.

The canopy of the tuarts to be cleared are disconnected but combined would total 0.55 ha. The stand of trees (aside from 2 isolated trees in the southern and northern ends of the area) appear likely to align with the Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain, listed as a TEC under the EPBC Act and a PEC by the DBCA. As such the removal of these Tuarts will only minimally reduce the extent of the Tuart TEC/PEC in this location, given the abundance of tuarts in proximity.

Given the above, the proposed clearing is not considered to be at variance with this principle.

5.2 Potential impact to any significant habitat

Principle (b): Native vegetation should not be cleared if it comprises the whole or apart of, or necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

The project area provides potential habitat for the following conservation significant species:

- Peregrine Falcon - OS (WA)
- Carnaby's Cockatoo - Endangered (WA/Federal)
- Baudin's Cockatoo - Endangered (WA/Federal)
- Forest Red-tailed Black Cockatoo - Vulnerable (WA/Federal)
- Western False Pipistrelle - Priority 4 (WA)

The vegetation on site provided no suitable habitat for western ringtail possums. In cases where some habitat is present and available information indicates at least some probability of a species occurrence, likely impacts to fauna are anticipated to be negligible given the anticipated low level of utilisation, the degraded nature of the habitat, its limited extent and the absence of significant hollows (Harewood, 2026).

Furthermore, no trees appeared to contain hollows of a size or orientation considered suitable for black cockatoos to use for nesting purposes. The Bamford Consulting Ecologists (BCE) scoring method for assessment of foraging habitat quality returned an overall value of "negligible value" (0 out of 10) for vegetation present for all three species of black cockatoos.

No evidence of black cockatoos foraging or roosting within the survey area was found.

The proposed clearing is not considered to be at variance with this principle.

5.3 Potential impacts to any rare flora

Principle (c): Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, Rare flora.

There is no other remnant vegetation remaining within the proposed clearing area besides the eleven tuarts. Due to long term historic disturbance through clearing and livestock grazing, there is a negligible likelihood of conservation significant flora occurring within the site.

The proposed clearing is not considered to be at variance with this principle.

5.4 Presence of any threatened ecological communities

Principle (d): Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a threatened ecological community.

The project area contains some vegetation which may meet the diagnostic characteristics and biotic thresholds of the Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain TEC/PEC. The removal of nine Tuarts trees within the project area which are within a patch likely to exceed the patch size threshold to be considered part of this ecological community will marginally reduce the mapped extent of the Tuart TEC/PEC.

The proposed clearing is potentially at variance with this principle.

5.5 Significance of remnant native vegetation

Principle (e): Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

The DBCA 2018 statewide vegetation statistics indicate that approximately 36.13% of the pre-European extent of the Spearwood_998 vegetation association remains within the Swan Coastal Plain.

The DBCA 2018 vegetation complex statistics identifies the Yoongarillup complex remains at approximately 36.13% within the Swan Coastal Plain, and 31.37% within the Shire of Harvey (GoWA, 2025).

Both the vegetation association and vegetation complex remain above the 30% target threshold set by the EPA regionally and locally.

The clearing is therefore not considered to be at variance with this principle.

5.6 Potential impact on watercourse and/or wetlands

Principle (f): Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or a wetland.

A constructed drain is located to the north of the clearing area adjacent to the Lot 10 boundary.

The project area is not located within a mapped wetland and does not contain any riparian vegetation. The project area is located approximately 1.6 km from Lake Clifton and approximately 1km from the nearest Multiple Use wetland.

The clearing is therefore not considered to be at variance with this principle.

5.7 Potential to cause appreciable land degradation

Principle (g): Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

The proposed clearing of 11 isolated trees will disturb a small footprint only. Whilst the soil type is susceptible to wind erosion, clearing will be undertaken during favourable weather conditions and wind erosion controls will be on standby (water suppression).

A wind break will be installed for the proposed intensive horticulture operation utilising tuart species within the species mix.

The clearing is therefore not considered to be at variance with this principle.

5.8 Potential impact on adjacent or nearby conservation areas

Principle (h): Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation areas.

The project area is located approximately 1.6 km from the Yalgorup National Park (YNP) and approximately 370 m from the nearest conservation reserve. Mitigation measures to be employed throughout the clearing and construction phases of the proposal will ensure that indirect impacts on the YNP will be minimised to the fullest extent practicable. These measures include the availability and use of a water cart for dust suppression purposes, and the effective demarcation of adjacent, retained vegetation.

The clearing is therefore not considered to be at variance with this Principle.

5.9 Potential deterioration in the quality of surface or underground water

Principle (i): Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of the surface or underground water.

The mapped soils within the proposed clearing area are not at risk of salinity, flood, waterlogging or inundation risk (Table 3-1).

There is a constructed drainage line approximately 40 m north from the nearest tuart proposed to be cleared.

Post-clearing ground preparation for the proposed future site use will involve further ripping and ploughing of the existing pasture. The risk of runoff and/or groundwater/surface water impacts will be managed in accordance with established best practices within the existing operation.

The soil of the subject area has the least limiting land quality of a 'nil to moderate' risk of phosphorus export. No changes to surface water flows, or significant emissions to the environment (including groundwater) are anticipated.

The clearing is therefore not considered to be at variance with this principle.

5.10 Potential for clearing to cause or exacerbate the incidence of flooding

Principle (j): Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

The soils within the proposed area are not mapped as being at risk of flood hazard or waterlogging (Table 3-1). No changes to surface water flows or groundwater levels will occur as a result of the proposed works.

The clearing is therefore not considered to be at variance with this principle.

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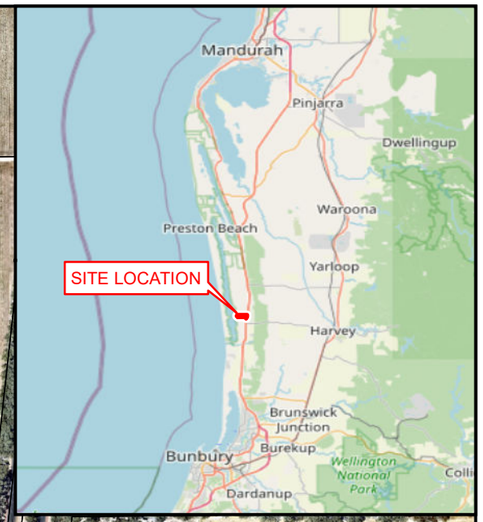
Figures

Figure 1 Site Location



LAKE PRESTON

Forrest Hwy

Forrest Hwy

LEGEND

- Site Boundary
- Cadastre
- Tuart *(Eucalyptus gomphocephala)* - Proposed to be Cleared

N

0 50 100 200 300 400 m

Scale: 1:7,500 @ A3
GDA2020

Source: Cadastre - Landgate | Orthophoto - NearMaps, 18.01.26

ENVIRONMAPS | t: 0406 590 006 | Environmental Mapping Solutions | www.environmaps.com.au

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NATIVE VEGETATION CLEARING PERMIT
LOT 10 (6274) FORREST HIGHWAY, MYALUP

SITE LOCATION

Figure 1

Figure 2 Soils and Topography

Qg
Qg
LAKE PRESTON
Water
Qts
Qtl
Forrest Hwy
Forrest Hwy

LEGEND

- Site Boundary
- Cadastre
- Tuart *(Eucalyptus gomphocephala)* - Proposed to be Cleared
- Contour (mAHD)

Geology

- Qg: Lagoonal deposits; muds, silts, shell beds.
- Qtl: TAMALA LIMESTONE; eolian and marine calcarenite, beneath thin sand cover.
- Qts: Sand associated with Tamala Limestone, high dunes.
- Water

Acid Sulfate Soil Risk Mapping

- High to Moderate Risk
- Moderate to Low Risk

N

0 50 100 200 300 400 m

Scale: 1:7,500 @ A3
GDA2020 MGA Zone 50

Source: Cadastre - Landgate | Orthophoto - NearMaps, 18.01.26 | ASS - DWER | Geology & Contours- DMPE

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SOILS AND TOPOGRAPHY

Figure 2

Figure 3 Hydrology

LAKE PRESTON

UFI: 1352

UFI: 1344

UFI: 15480

UFI: 1346

UFI: 1345

UFI: 1348

UFI: 1349

Forrest Hwy

Forrest Hwy

LEGEND

- Site Boundary
- Cadastre
- Tuart *(Eucalyptus gomphocephala)* - Proposed to be Cleared
- Drain - major
- Earth Dam
- Lake - perennial

Wetlands

- Conservation
- Multiple Use

N

0 50 100 200 300 400 m

Scale: 1:7,500 @ A3
GDA2020 MGA Zone 50

Source: Cadastre - Landgate | Orthophoto - NearMaps, 18.01.26 | Wetlands - DBCA | Hydrography - DWER

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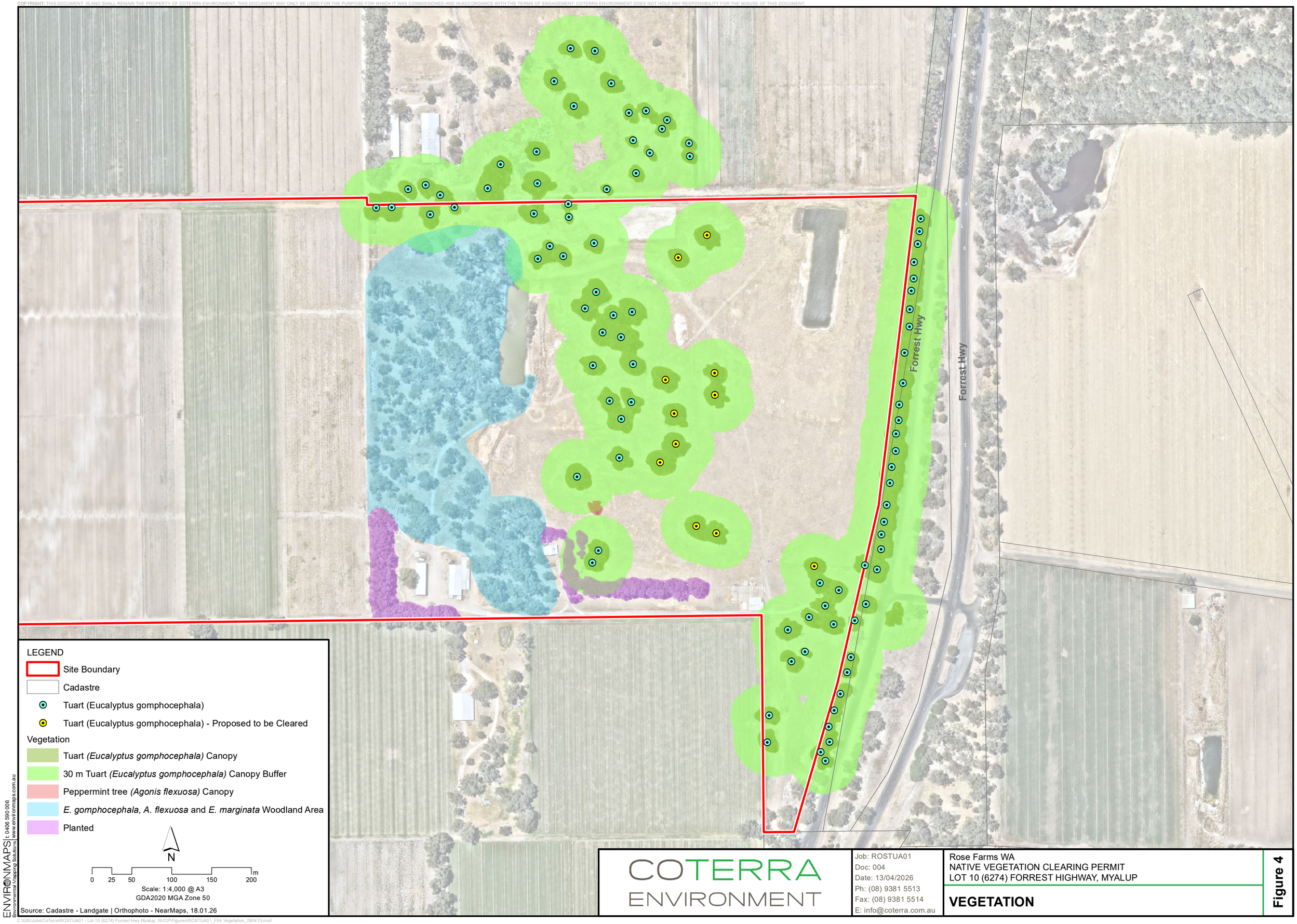
HYDROLOGY

Figure 3

Figure 4 Vegetation



LEGEND

- Site Boundary
- Cadastre
- Tuart (Eucalyptus gomphocephala)
- Tuart (Eucalyptus gomphocephala) - Proposed to be Cleared

Vegetation

- Tuart *(Eucalyptus gomphocephala)* Canopy
- 30 m Tuart *(Eucalyptus gomphocephala)* Canopy Buffer
- Peppermint tree *(Agonis flexuosa)* Canopy
- *E. gomphocephala, A. flexuosa* and *E. marginata* Woodland Area
- Planted

N

0 25 50 100 150 200 m

Scale: 1:4,000 @ A3
GDA2020 MGA Zone 50

Source: Cadastre - Landgate | Orthophoto - NearMaps, 18.01.26

ENVIRONMAPS | t: 0406 590 006
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NATIVE VEGETATION CLEARING PERMIT
LOT 10 (6274) FORREST HIGHWAY, MYALUP

VEGETATION

Figure 4

Appendix 1 Ecological Survey (Greg Harewood, 2026)

Fauna Assessment

Lot 10 (#6274) (Pt) Forrest Hwy

Myalup

April 2026

V1

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SUMMARY

This report details the results of a fauna assessment over an area of land near in Myalup in southwestern Western Australia. The land, a section of Lot 10 (#6274) Forrest Highway has a total area of about 6.8 hectares (ha) and contains 11 mature tuart trees over grassland (parkland cleared) (the survey area) (Figure 1).

It is understood that the landowner is proposing to clear the trees for farming purposes. Information gathered as part of the fauna assessment detailed here will be used to guide planning and support a native vegetation clearing permit (NVCP) application and a possible *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) referral if required.

To comply with anticipated information requirements, a "basic" fauna assessment in addition to targeted surveys for black cockatoo habitat and western ringtail possums were carried out.

The daytime and nocturnal field aspects of the fauna assessment were carried out on 25 March 2026. All survey work and reporting have been carried out by Greg Harewood (Zoologist)

Key Findings

- The ~6.8 ha survey area has been subject to significant historical disturbance with almost all of the natural vegetation having been removed for livestock grazing. The survey area now consists of an open grassland with 11 scattered tuarts (*Eucalyptus gomphocephala*). The canopy extent of the 11 remaining tuart trees has been estimated to be around 0.55 ha.

- As a consequence of the survey area's history of disturbance and lack of natural vegetation the original fauna diversity has been significantly compromised. The area would now only support a small subset of the original fauna assemblage with most (though not all) of those using the area generally being widespread, common species (mostly birds) able to persist in highly disturbed areas.

- The black cockatoo breeding habitat assessment identified 11 trees within the survey area with a DBH of >30cm. No hollows were identified within seven of the trees. Four trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to currently use for nesting purposes given each hollows small entrance size and/or apparent small overall size. No trees appeared to contain hollows of a size or orientation considered suitable for black cockatoos to use for nesting purposes.

- BCE's foraging score method returned an overall value of "negligible value" (0 out of 10) for vegetation present for all three species of black cockatoos. This is obviously a consequence of the lack of native vegetation and the low foraging value of introduced grasslands and the small number of tuarts.

- Application of the DCCEEW's Foraging Quality Scoring Tool to the entire survey area as one results in a high quality foraging score for all three species of black cockatoo (8 out of 10). This is a consequence of the score having to start at a maximum of 10 (given the foraging habitat present is mainly "eucalypt woodland") and there being only one attribute

(lack of foraging evidence for any black cockatoo species) that could be used, without doubt, to reduce each total score.

- No evidence of black cockatoos foraging or roosting within the survey area was found.
- Nine fauna species (mainly common bird species) were observed or secondary evidence of their presence recorded during the field survey. No vertebrate fauna species of conservation significance were positively identified as utilising the survey area.
- Several species of conservation significance may also utilise the survey area, though, as no evidence of their presence was identified during the field survey, their status in the survey area remains uncertain, though in all cases the survey area is not considered to represent significant habitat for any species.

  These species are:

  - Peregrine Falcon – OS (WA)
  - Carnaby`s Cockatoo – Endangered (WA/Federal)
  - Baudin's Cockatoo – Endangered (WA/Federal)
  - Forest Red-tailed Black Cockatoo – Vulnerable (WA/Federal)
  - Western False Pipistrelle – Priority 4 (WA)
- In cases where some habitat is present and available information indicates at least some probability of a species occurrence, likely impacts are anticipated to be negligible given the anticipated low level of utilisation, the degraded nature of the habitat, its limited extent and the absence of significant hollows.

1. INTRODUCTION

This report details the results of a fauna assessment over an area of land near in Myalup in southwestern Western Australia. The land, a section of Lot 10 (#6274) Forrest Highway has a total area of about 6.8 hectares and contains 11 mature tuart trees over grassland (parkland cleared) (the survey area) (Figure 1).

It is understood that the landowner is proposing to clear the trees for farming purposes. Information gathered as part of the fauna assessment detailed here will be used to guide planning and support a native vegetation clearing permit (NVCP) application and a possible *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) referral if required.

2. SCOPE OF WORKS

To comply with anticipated requirements, a "basic" fauna assessment in addition to targeted surveys for black cockatoo habitat and western ringtail possums was carried out and involved:

- A basic (Level 1) fauna assessment (EPA 2020).
- Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat).
- Targeted day and night searches for western ringtail possum habitat/site use (foraging, refuge (dreys/hollows) and dispersal habitat, scats and individuals).
- Opportunistic recording of other fauna encountered, with comments on the likelihood of other fauna of conversation significance occurring provided, and
- Preparation of a report summarising methods and results.

Note: For the purposes of this report the term black cockatoo is in reference to Baudin's black cockatoo *Zanda baudinii*, Carnaby's black cockatoo *Zanda latirostris* and the forest red-tailed black cockatoo *Calyptorhynchus banksii naso.*

3. METHODS

3.1 LITERATURE REVIEW – FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

A list of conservation significant fauna recorded or likely to occur within the survey area has been compiled by a review of available databases and literature including, but not limited to the following data sources:

- Department of Biodiversity, Conservation and Attractions (DBCA) Threatened Fauna Database (Dandjoo) search (DBCA 2026a). A 10 km buffer around the survey area was applied to capture previous fauna records within the immediate vicinity. A threatened fauna database search from DBCA's Species & Communities Branch (Threatened and Priority fauna) was also undertaken (DBCA 2026b).

- *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* Protected Matters database search for fauna of national environmental significance (DCCEEW 2026). The minimum buffer (0 km) was applied to this search as the databases contains distribution data (areas) and not actual fauna records.

The conservation status of the listed fauna species has been assessed using data from the following sources:

- *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*). Administered by the DCCEEW.

- *Biodiversity Conservation Act 2016 (BC Act)*. Administered by the Western Australian DBCA (Govt. of WA 2025).

- Red List produced by the Species Survival Commission (SSC) of the World Conservation Union (also known as the IUCN Red List - the acronym derived from its former name of the International Union for Conservation of Nature and Natural Resources). The Red List has no legislative power in Australia but is used as a framework for State and Commonwealth categories and criteria; and the

- DBCA Priority Fauna List. A non-statutory list maintained by the DBCA for management purposes (DBCA 2025).

The *EPBC Act* and *BC Act* also requires the compilation of a list of migratory species that are recognised under international treaties including the:

- Japan Australia Migratory Bird Agreement 1981 (JAMBA).

- China Australia Migratory Bird Agreement 1998 (CAMBA).

- Republic of Korea-Australia Migratory Bird Agreement 2007 (ROKAMBA), and

- Bonn Convention 1979 (The Convention on the Conservation of Migratory Species of Wild Animals).

Most, but not all migratory bird species listed in the annexes to these bilateral agreements are also protected in Australia as matters of national environmental significance (MNES) under the *EPBC Act*. However, species only classified as 'marine" under the *EPBC Act* are not discussed as they are not considered as specially protected under the MNES classification.

The conservation status of the fauna species listed as occurring or possibly occurring in the vicinity of the survey area has been assessed using the most recent lists published in accordance with the above-mentioned instruments and is indicated as such in the fauna listings of this report. A full listing of conservation codes is provided in Appendix A.

3.2 FIELD SURVEYS

The daytime and nocturnal field aspects of the fauna assessment were carried out on the 25 March 2026. All survey work and reporting have been carried out by Greg Harewood (Zoologist).

3.2.1 FAUNA HABITAT ASSESSMENT

Vegetation units identified during the daytime reconnaissance survey has been used to define broad scale fauna habitats across the survey area. The main aim of the habitat assessment was to determine which fauna species of conservation significance would be most likely to be utilising the survey area.

As part of the desktop literature review, available information on the habitat requirements of the species of conservation significance listed as possibly occurring in the area was researched. During the field survey the habitats within the survey area were assessed and specific elements identified, if present, to determine the likelihood of listed threatened species utilising the area and its significance to them.

3.2.2 BLACK COCKATOO HABITAT ASSESSMENT

The following methods were employed to comply with the defined scope of works and are based on Commonwealth of Australia (2012 and 2022) guidelines which state 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 12 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.

The Commonwealth of Australia (2012) places habitats used by black cockatoos into the following three categories:

- Breeding Habitat.
- Foraging Habitat, and
- Night Roosting Habitat.

3.2.2.1 Breeding Habitat Assessment

The black cockatoo breeding habitat assessment identified all suitable breeding tree species within the survey area that have a diameter at breast height (DBH) equal to or greater than 30 centimetres (cm). The DBH of each tree was estimated using pre-made "calipers".

Target tree species included marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), flooded gum (*E. rudis*), tuart (*E. gomphocephala*) and any other *Corymbia/Eucalyptus* species of a suitable size that were present. Peppermints, *Banksia*, sheoak and *Melaleuca* tree species (for example) were not assessed as they typically do not develop hollows used by black cockatoos.

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.

Hollow/potential hollows were placed into one of four categories, based on the size of the apparent hollow entrance, these being:

- Small = ~<5cm diameter (i.e. entrance too small for a black cockatoo);
- Medium = ~5cm-12cm diameter (i.e. entrance too small for a black cockatoo);
- Large = ~>12cm diameter (entrance large enough for a black cockatoo but hollow appears unsuitable for nesting i.e. wrong orientation, appears too small, too low or too shallow); or
- Large (cockatoo) = ~>12cm diameter (entrance and apparent hollow appears big enough and suitably sized/orientated for a black cockatoo to use for nesting).

Based on this assessment, trees present within the survey area were placed into one of five categories as defined by Commonwealth of Australia (2022):

- **Not a potential or suitable nesting tree** - Tree <30cm DBH or an unsuitable species (these were not recorded).
- **Potential nesting tree (no hollows)** - Tree ≥30cm DBH, no hollows seen.

- **Potential nesting tree (hollows or possible hollows)** - Tree ≥30cm DBH, one or more hollows seen, none of which were considered suitable for black cockatoos to use for nesting.

- **Suitable nesting tree** - Tree ≥30cm DBH, one or more hollows seen, with at least one considered suitable for black cockatoos to use for nesting, but with no evidence of use, or

- **Known nesting tree** - Tree ≥30cm DBH, one or more hollows seen, where black cockatoo breeding has been recorded or which demonstrates evidence of breeding (i.e. showing evidence of use through scratches, chew marks or feathers).

For the purposes of this assessment, a tree containing a potential black cockatoo nest hollow was defined as:

Generally, any tree which is alive or dead that contains one or more visible hollows (cavities within the trunk or branches) or possible hollows potentially suitable for occupation by black cockatoo for the purpose of nesting/breeding. Hollows or possible hollows that had an entrance greater than about 12cm in diameter and would allow the entry of a black cockatoo into a suitably orientated and sized branch/trunk, were recorded as a "potential nest hollow".

Identified hollows 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). Details recorded included hollow size, height, type, orientation, comments on suitability and any evidence of use. Where considered warranted, suspect hollows were also examined and photographed using a drone and/or pole mounted camera.

A review of available literature was carried out to determine the location/extent of any known/likely black cockatoo breeding habitat areas in the vicinity of the survey area.

3.2.2.2 Foraging Habitat Assessment

Foraging habitat is represented by plant species that are known to provide a food source for black cockatoos. This can be in the form of seeds, flowers and also boring grubs that are extracted from some plant species.

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 documented irrespective of the presence of any actual foraging evidence.

Based on these observations (and other relevant information) the black cockatoo foraging value of each of the identified vegetation units present has been assessed for each of the three black cockatoo species using two methods, these being:

1. Bamford's scoring methodology - Bamford Consulting Ecologists (BCE 2020). Scoring system for the Assessment of Foraging Value of Vegetation for Black-Cockatoos.

2. DCCEEW's scoring methodology - Commonwealth of Australia (2022). Referral guideline for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black Cockatoo. Commonwealth of Australia, Canberra, Australian Capital Territory.

The system developed by Bamford Consulting Ecologists (BCE) aims to provide an objective scoring system that is practical and can be used by trained field zoologists with experience in the environments frequented by the species.

The foraging value score used provides a numerical value out of 10 that reflects the significance of vegetation as foraging habitat for black cockatoos. This numerical value is designed to provide information to assist in the assessment of impact significance and offset requirements by the relevant regulatory authorities. The foraging value of the vegetation depends upon the type, density and condition of trees and shrubs in an area and can be influenced by the context such as the availability of foraging habitat nearby. The BCE scoring system for value of foraging habitat has three components as detailed below. These three components are drawn from the DCCEEW offsets guide (Commonwealth of Australia 2012) but the scoring approach was developed by BCE (2020) and includes a fourth (moderation) component.

Calculating the total score (out of 10) requires the following steps:

- Site Condition: Determining a score out of six for the vegetation composition, condition and structure.
- Site Context: Determining a score out of three for the context of the site.
- Species Stocking Rate: Determining a score out of one for species density, and.
- Moderation: Determining the total score out of 10, which may require moderation for context and species density with respect to the site condition (vegetation) score.

Foraging value can thus be assigned a score out of six, based upon site vegetation characteristics, or a score out of 10 if context and species density are also considered. The score out of 10 is calculated only for vegetation of at least Low to Moderate foraging value (vegetation characteristics score of ≥3). Vegetation with No, Negligible or Low foraging value is effectively assigned context and species density scores of '0' because the context and species density are of little relevance if the vegetation does not support regular foraging by the birds. Foraging value scores are calculated differently for the three black-cockatoo species depending upon the vegetation present (BCE 2020).

A full description of the process involved in calculating of scores and the moderation process are described in more detail in Appendix B.

The Commonwealth of Australia's (2022) referral guidelines for black cockatoos provide a method for determining foraging quality within the defined "impact area" of a development (Table A1 – Foraging quality scoring tool template – Appendix C). The foraging quality scoring tool has been developed to guide developers on what the DCCEEW views as important determinants of high-quality foraging habitat.

Habitat assessments and associated field observations of the impact area and in proximity to the impact area must be sufficient to complete the scoring tool, provide a solid justification for the score given to each attribute in the scoring tool and for supporting an overall appraisal of the foraging habitat quality on site.

The attributes the DCCEEW views as being important determinants of foraging habitat quality are:

- Foraging potential.
- Connectivity.
- Proximity to breeding.
- Proximity to night roosting, and
- Impact from significant plant disease.

If an impact site contains native vegetation used for foraging at any time by one or more of the black cockatoo species as described in the table (Appendix B), and is larger than 1 hectare in size, it is considered at face value to be of very high quality, important for recovery and therefore as having a score of 10. This is because black cockatoos rely on foraging resources to provide sufficient energy for breeding and to rebuild condition in the post-breeding period. The availability of foraging habitat, in close proximity to breeding and night roosting habitat, as well as watering sites, is also critical in ensuring that birds can successfully raise chicks.

The scoring tool includes consideration of the three components used in the *EPBC Act* Offsets Assessment Guide in the calculation of habitat quality (site condition, site context and species stocking rate) by taking into account contextual factors that may lessen the quality of that habitat, to give you a final habitat quality score, i.e., you use the context adjustors to subtract from the starting score.

The DCCEEW scoring tool is to be applied once to the entire impact area of your proposed action, even if there is more than one type of foraging habitat, for example, *Banksia* woodland and heath, introduced eucalyptus trees and planted pines (*Pinus pinaster*). You will always start with a score of 10.

The scoring tool should be completed once for each black cockatoo species occurring within an impact area.

It is the developer's responsibility to define the impact area and consider indirect, offsite or facilitated impacts on black cockatoos, and include these areas in the definition of the impact area used in the calculations.

If there is insufficient evidence to determine what score a particular habitat attribute meets, one of two options can be considered:

- carry out additional targeted surveys, or
- apply the precautionary principle (i.e. assume the habitat is of sufficient quality to warrant referral).

A full description of the process involved in calculating scores using this method are described in more detail in Appendix C.

A review of available literature was also carried out to determine the location/extent of any known/likely black cockatoo foraging habitat areas in the vicinity of the survey area.

3.2.2.3 Night Roosting Habitat Assessment

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

A review of available literature was carried out to determine the location/extent of any known/likely black cockatoo roosting habitat areas in the vicinity.

3.2.3 WESTERN RINGTAIL POSSUM ASSESSMENT

3.2.3.1 Daytime Survey

Evidence of the presence of WRPs (i.e. dreys, obvious tree hollows, scats and individuals) was searched for and recorded during the daytime field reconnaissance survey. All areas of suitable vegetation were examined at least once.

3.2.3.2 Night Time Survey

One night-time survey to locate and record individual WRPs was carried out. The survey involved a series of transects, on foot using a LED head torch to locate individuals by way of eyeshine.

3.2.3.3 Habitat Assessment

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

3.2.4 FAUNA OBSERVATIONS

Evidence of the presence or likely presence of fauna species of conservation significance (or suitable habitat) was searched for and recorded concurrent with other site surveys. Opportunistic observations of all fauna species were made during all field survey work and recorded where positive species identifications were made.

This aspect of the assessment included but was not limited to:

- Undertaking a series of transects across the survey area.
- Searching for evidence (i.e. individuals, tracks, scats, calls) of potential conservation significant species under logs, rocks and leaf litter.
- Observing bird species with binoculars.

3.3 LIKELIHOOD OF OCCURRENCE – FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

Based on the information gathered during the site reconnaissance survey and the documented distribution and habitat preferences of the species of conservation significance identified as potentially being present in the general area, their likelihood of occurrence within the survey area itself has been assessed. The rankings and criteria used were:

- Would Not Occur: There is no suitable habitat for the species in the survey area and/or there is no documented record of the species in the general area since records have been kept and/or the species is generally accepted as being locally/regionally extinct (supported by a lack of recent records).
    - Locally Extinct: Populations no longer occur within a small part of the species natural range, in this case within 10 or 20 km of the survey area. Populations do however persist outside of this area.
    - Regionally Extinct: Populations no longer occur in a large part of the species natural range, in this case within the central Swan Coastal Plain region. Populations do however persist outside of this area.
- Unlikely to Occur: The survey area is outside of the currently documented distribution for the species in question, or no suitable habitat (type, quality and extent) was identified as being present during the field assessment. Individuals of some species may occur occasionally as vagrants/transients especially if suitable habitat is located nearby, but the survey area itself would not support a population or part population of the species.
- Possibly Occurs: The survey area is within the known distribution of the species in question and habitat of at least marginal quality was identified as being present during the field assessment, supported in some cases by recent records being documented in literature from within or near the survey area. In some cases, while a species may be classified as possibly being present at times, habitat may be marginal (e.g. poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.
- Known to Occur: The species in question was positively identified as being present (for sedentary species) or as using the survey area as habitat for some other purpose (for non-sedentary/mobile species) during the field survey. This information may have been obtained by direct observation of individuals or by way of secondary

evidence (e.g. foraging debris, tracks and scats). In some cases, while a species may be classified as known to occur, habitat may be marginal (e.g. poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.

4. SURVEY LIMITATIONS

No seasonal sampling was 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 of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. It should be recognised that site conditions can change with time.

Lack of observational data on some species should also not necessarily be taken as an indication that a species is absent from the site or does not utilise it for some purpose at times.

During the survey, habitat 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. Where considered warranted and if feasible a drone and/or pole camera was deployed to assist in assessing the characteristics of tree hollows.

The location of observations was recorded using a handheld GPS. The accuracy of the GPS cannot be guaranteed above a level of about 5 to 10 metres, though it should be noted that in some circumstance the accuracy can increase or decrease beyond this range.

5. RESULTS

5.1 LITERATURE REVIEW – FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

The literature review identified multiple fauna species of conservation significance as potentially occurring in the general area as listed in Table 1. The Dandjoo database (DBCA 2026a) and Protected Matter Search Tool (DCCEEW 2026) results, used as a primary source for compiling this listing, are held within Appendix D. The results of the DBCA threatened fauna database search (DBCA 2026b) are shown in Figure 2.

Given the survey area's proximity to the ocean and Lake Preston numerous migratory shorebirds along with various marine and wetland fauna species appeared in the database searches. These species are in most cases not specifically listed or discussed in this report given there is no suitable habitat for any within the survey area. None of these species would, under normal circumstances, occur within the survey area or be impacted on by the proposed development.

The likelihood of the below listed species occurring within the survey area is provided in Section 5.3 of the report.

Table 1: Conservation significant fauna previously recorded or potentially occurring within the general vicinity of the survey area.

Species	Conservation Status[1]	
	BC Act	*EPBC Act*
Carter's Freshwater Mussel *Westralunio carteri*	VU	VU
Swan Coastal Plain Shield-backed Trapdoor Spider *Idiosoma sigillatum*	P3	-
Graceful Sunmoth *Synemon gratiosa*	P4	-
Black-stripe Minnow *Galaxiella nigrostriata*	EN	EN
Perth Slider *Lerista lineata*	P3	-
Coastal Plains Skink *Ctenotus ora*	P3	-
Australasian Bittern *Botaurus poiciloptilus*	EN	EN
Australian Little Bittern *Ixobrychus dubius*	P4	-
Malleefowl *Leipoa ocellata*	VU	VU
Migratory Shorebirds/Wetland Species	Various	Various
Blue Billed Duck *Oxyura australis*	P4	-
Peregrine Falcon *Falco peregrinus*	OS	-
Osprey *Pandion haliaetus*	MI	Mig
Carnaby`s Cockatoo *Zanda latirostris*	EN	EN
Baudin`s Cockatoo *Zanda baudinii*	EN	EN
Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*	VU	VU
Masked Owl *Tyto novaehollandiae novaehollandiae*	P3	-
Fork-tailed Swift *Apus pacificus*	MI	Mig
Grey Wagtail *Motacilla cinerea*	MI	Mig
Chuditch *Dasyurus geoffroii*	VU	VU
Quenda *Isoodon fusciventer*	P4	-
South-western Brush-tailed Phascogale *Phascogale tapoatafa wambenger*	CD	-
Numbat *Myrmecobius fasciatus*	EN	EN
Western Ringtail Possum *Pseudocheirus occidentalis*	CR	CR
Western Brush Wallaby *Notamacropus irma*	P4	-
Western False Pipistrelle *Falsistrellus mackenziei*	P4	-
Water Rat *Hydromys chrysogaster*	P4	-

[1] See Appendix A for conservation status codes

5.2 FIELD SURVEYS

5.2.1 FAUNA HABITAT ASSESSMENT

The ~6.8 ha survey area has been subject to significant historical disturbance with almost all of the natural vegetation having been removed for livestock grazing. The survey area now consists of an open grassland with 11 scattered tuarts (*Eucalyptus gomphocephala*). The canopy extent of the 11 remaining tuart trees has been estimated to be around 0.55 ha.

To put the area of vegetation remaining within the survey area into perspective there is about 10,800 ha of remnant native vegetation within 12 kilometres (km) of the survey area (DWER 2026).

Example images of the various fauna habitats present are provided in Table 2.

Table 2: Example images of the fauna habitats within the survey area

Fauna Habitat Description	Example Image
Open Grassland of introduced pasture species with 11 scattered Tuarts (*Eucalyptus gomphocephala*) Area ~6.8 ha (100%)	
	

As a consequence of the survey area's history of disturbance and lack of natural vegetation the original fauna diversity has been significantly compromised. The area would now only support a small subset of the original fauna assemblage with most (though not all) of those using the area generally being widespread, common species (mostly birds) able to persist in highly disturbed areas.

5.2.2 BLACK COCKATOO HABITAT ASSESSMENT

5.2.2.1 Breeding Habitat Assessment

Trees considered potentially suitable for black cockatoos to use as nesting habitat (subject to a suitable hollow being present and other factors) found within the survey area comprised the following species:

- Tuart – *Eucalyptus gomphocephala.*

A summary of the habitat trees observed is provided in Table 3. The locations of habitat trees are shown in Figure 3.

Table 3: Summary of potential habitat trees (DBH ≥30cm) within the survey area

Total Number of Habitat Trees (DBH > 30cm)	Number of Habitat Trees with No Hollows Observed	Number of Habitat Trees with Possible Hollows considered Unsuitable for Black Cockatoos	Number of Habitat Trees with Possible Hollows considered Potentially suitable for Black Cockatoos
11	7	4	0

The black cockatoo breeding habitat assessment identified 11 trees within the survey area with a DBH of ≥30cm. No hollows were identified within seven of the trees. Four trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to currently use for nesting purposes given each hollows small entrance size and/or apparent small overall size.

No trees were assessed as containing hollows suitable for black cockatoos to use for nesting purposes.

Additional details on each habitat tree observed can be found in Appendix E.

Based on available mapping, there is approximately 10,800 ha of remnant native vegetation within 12 km of the survey area (DWER 2026). Much of this is likely to contain "potential" breeding habitat as defined by DCCEEW (i.e. suitable tree species with a DBH ≥30).

5.2.2.2 Foraging Habitat Assessment

The following flora species are known to be or are potentially used as a direct food source (e.g. seeds, flowers, nectar, bark or grubs) by one or more species of black cockatoo were recorded within the survey area:

- Tuart - *Eucalyptus gomphocephala.*

It should be noted that tuart, while foraged upon on occasions, would make up only a small proportion of any one bird's diet relative to more favoured plant species such as marri, jarrah, banksia and sheoak which are all absent from the survey area.

No evidence of black cockatoos foraging within the survey area was found during the survey period.

Foraging value scores have been calculated for the survey area using both BCE's method (BCE 2020) and DCCEEW's Foraging Quality Scoring Tool (Commonwealth of Australia 2022).

BCE's foraging score method returned an overall value of "negligible value" (0 out of 10) for the vegetation present for all three species of black cockatoos. This is obviously a consequence of the lack of native vegetation and the low foraging value of introduced grasslands and the small number of tuarts.

Application of the DCCEEW's Foraging Quality Scoring Tool to the entire survey area as one results in a high quality foraging score for all three species of black cockatoo (8 out of 10). This is a consequence of the score having to start at a maximum of 10 (given the foraging habitat present is mainly "eucalypt woodland") and there being only one attribute (lack of foraging evidence for any black cockatoo species) that could be used, without doubt, to reduce each total score to a lower level.

Details of the methods used, and the justification of the conclusions drawn can be found in Appendix B (BCE's method) and Appendix C (DCCEEW's method).

Based on available mapping there is about 10,800 ha of remnant native vegetation within 12 km of the survey area (DWER 2026). Much of this is likely to represent black cockatoo foraging habitat of some type.

5.2.2.3 Night Roosting Habitat Assessment

No evidence of black cockatoos roosting within trees located within the survey area was observed during the survey period. It is difficult to determine if trees or groves of trees within the survey area represent potential roosting habitat as a range of factors, not all of which can be observed, determine suitability. Some of the trees may be suitable for roosting but as indicated, no actual evidence of use was seen.

A review of the 2022 Great Cocky Count database (the most recent available) shows no documented roost sites within the survey area. The 2022 Great Cocky Count report documents the closest active roost as being approximately six kilometres southeast of the

survey area (Site ID: HARMYAR004). This roost was being used by 268 "white-tailed black cockatoos" during the April 2022 survey (Pryor *et al.* 2023). There are two other black cockatoo roost sites within 12 km of the survey area documented by Pryor *et al.* (2023) (excluding one that has been cleared), though not all are necessarily in use at any one time.

5.2.3 WESTERN RINGTAIL POSSUM ASSESSMENT

5.2.3.1 Daytime Survey

No evidence of western ringtail possums was observed during the daytime survey (i.e. no dreys, no scats and no individuals).

5.2.3.2 Night Time Survey

No western ringtail possums (or other fauna) were detected during the nocturnal survey.

5.2.3.3 Habitat Assessment

The survey area represents unsuitable habitat for western ringtail possums given the paucity vegetation, lack of canopy connection/midstory structure and absence of favoured foraging species such as peppermint (*Agonis flexuosa*). Because of this, western ringtail possums would, under normal circumstance, not occur within the survey area.

5.2.4 FAUNA OBSERVATIONS

Nine fauna species were recorded during the site reconnaissance survey (Appendix F). Most of the fauna recorded were relatively common, widespread bird species.

No evidence of any fauna species of conservation significance was observed during the survey period. The lack of evidence of species of conservation significance does not eliminate the potential for them still occur, if only infrequently. The likelihood of conservation significant species occurring within the survey area is provided in Section 5.3 of the report.

5.3 LIKELIHOOD OF OCCURRENCE – FAUNA SPECIES OF CONSERVATION SIGNIFICANCE

Based on the information gathered during the site reconnaissance survey and the documented distribution and habitat preferences of the species of conservation significance identified as potentially being present in the general area, their likelihood of occurrence within the survey area itself has been assessed. A summary of this assessment is presented in Table 4.

Some comments on the possible impacts of any proposed development are also provided in the table though as no specific development plan has been put forward these are preliminary comments that should be reviewed as planning progresses.

No vertebrate fauna species of conservation significance (listed as State or Federal threatened/migratory species or as DBCA priority species) were positively identified as utilising the survey area for any purpose during the survey period:

Several species of conservation significance may utilise the survey area for some purpose at times, but their status on-site and/or in the general area is in some cases difficult to determine because they were not sighted during the field survey, or evidence of use was not observed:

- Peregrine Falcon *Falco peregrinus* – OS (*BC Act*)
  This species potentially utilises some sections of the survey area as part of a much larger home range, though it is only likely to occur infrequently. All areas represent potential foraging habitat for this species. No potential nest sites observed. Listed as a potential species based on available information.

- Carnaby`s Cockatoo *Zanda latirostris* – Endangered (*BC Act & EPBC Act*).
  This species is frequently recorded in the general area and therefore may occasionally be found within the survey area. It is however only likely to occur infrequently and for brief periods given the low habitat value of the survey area for black cockatoos. The survey area contains areas of potential black cockatoo breeding habitat (trees with a DBH ≥30cm) but no suitable hollows are present. The vegetation present with the survey area represents very low-quality foraging habitat. No evidence of roosting observed. Listed as a potential species based on available information.

- Baudin's Cockatoo *Zanda baudinii* – Endangered (*BC Act* & *EPBC Act*).
  This species is infrequently recorded in the general area and therefore may occasionally be found within the survey area. It is however only likely to occur infrequently and for brief periods given the low habitat value of the survey area for black cockatoos. The survey area contains areas of potential black cockatoo breeding habitat (trees with a DBH ≥30cm) but no suitable hollows are present. The vegetation present with the survey area represents very low-quality foraging habitat. No evidence of roosting observed. Listed as a potential species based on available information.

- Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso* – Vulnerable (*BC Act & EPBC Act*).
  This species is often recorded in the general area and therefore may occasionally be found within the survey area. It is however only likely to occur infrequently and for brief periods given the low habitat value of the survey area for black cockatoos. The survey area contains areas of potential black cockatoo breeding habitat (trees with a DBH ≥30cm) but no suitable hollows are present. The vegetation present with the survey area represents very low-quality foraging habitat. No evidence of roosting observed. Listed as a potential species based on available information.

- Western False Pipistrelle *Falsistrellus mackenziei* – Priority 4 (DBCA)
  This species has been recorded north and south of the survey area in the past but appears to be uncommon. Western false pipistrelle utilises tree hollows for daytime refuge though it is uncertain if there are any suitable hollows present within the survey area. Listed as a potential species based on available information.

A number of other species of conservation significance (as listed in Table 4), while possibly present in the larger bush remnants in the wider area (e.g. Yalgorup National Park), are not listed as potentially occurring within the survey area primarily due to a complete lack of suitable habitat (quality and extent) and/or known local/regional extinction.

Table 4: Likelihood of Occurrence – Fauna Species of Conservation Significance

Species	Conservation Status		Habitat Preferences	Habitat Present	Likelihood of Occurrence	Comments/Possible Impacts
	BC Act	*EPBC Act*				
Carter's Freshwater Mussel *Westralunio carteri*	VU	VU	Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Swan Coastal Plain Shield-backed Trapdoor Spider *Idiosoma sigillatum*	P3	-	Burrows of this species usually found in *Banksia* woodland and heathland on sandy soils.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Graceful Sunmoth *Synemon gratiosa*	P4	-	Banksia woodland/woolly bush on deep sands, Breeds on *Lomandra hermaphrodita* and open areas of herbland, heathland and shrubland on Quindalup soils (sand and limestone) close to the coast where it breeds on *Lomandra maritima.*	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Black-stripe Minnow *Galaxiella nigrostriata*	EN	EN	Permanent or ephemeral pools, roadside ditches and small creeks in sandy, thickly vegetated wetland areas. Water is usually darkly tannin stained and acidic (pH 4.6 – 6.5).	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Perth Slider *Lerista lineata*	P3	-	Inhabits loose white sands and leaf litter under areas of shrubs and heath particularly in association with banksias.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Coastal Plains Skink *Ctenotus ora*	P3	-	Sandy substrates with low vegetation (including heath) in open eucalypt woodland over *Banksia*.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Australasian Bittern *Botaurus poiciloptilus*	EN	EN	Freshwater wetlands, occasionally estuarine; prefers heavy vegetation such as beds of tall dense *Typha, Baumea* and sedges in freshwater swamps.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Australian Little Bittern *Ixobrychus dubius*	P4	-	Dense vegetation surrounding/within freshwater pools, swamps and lagoons, well screened with trees. Shelters in dense beds of *Typha, Baumea* and tall rushes in freshwater swamps around lakes and along rivers.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Mallleefowl *Leipoa ocellata*	VU	VU	Mainly scrubs and thickets of mallee *Eucalyptus* spp., boree *Melaleuca lanceolata* and bowgada *Acacia linophylla*, also dense litter forming shrublands.	No	Would Not Occur.	Regionally extinct. Habitat unsuitable. No impact on this species will occur.
Migratory Shorebirds/Wetland Species/Marine Species (various reptiles, birds and mammals)	MI, Various	Ma, Mig Various	Varies between species but includes open ocean, beaches and permanent/temporary wetlands varying from billabongs, swamps, lakes, floodplains, sewerage farms, saltwork ponds, estuaries, lagoons, mudflats sandbars, pastures, airfields, sports fields and lawns.	No	Would Not Occur.	No suitable habitat. No impact on these species will occur.

Species	Conservation Status		Habitat Preferences	Habitat Present	Likelihood of Occurrence	Comments/Possible Impacts
	BC Act	*EPBC Act*				
Blue Billed Duck *Oxyura australis*	P4	-	Well vegetated freshwater swamps, large dams and lakes, winters on more open water. Occasionally salt lakes and estuaries freshened by floodwaters.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Peregrine Falcon *Falco peregrinus*	OS	-	Diverse from rainforest to arid shrublands, from coastal heath to alpine. Mainly about cliffs along coasts, rivers and ranges and about wooded watercourses and lakes.	Yes	Possibly Occurs.	May forage in general area. Modification of areas of foraging habitat. No potential nest sites observed. No significant impact on this species will occur.
Osprey *Pandion haliaetus*	Mi	Mig	Coasts, estuaries, bays, inlets, islands, and surrounding waters, coral atolls, reefs, lagoons, rock cliffs and stacks. Ascends larger rivers.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Carnaby`s Cockatoo *Zanda latirostris*	EN	EN	Forests, woodlands, heathlands, farms; feeds on *Banksia*, *Hakea* and Marri.	Yes/Marginal	Possibly Occurs.	Known to occur in general area. Modification/loss of very small areas of low-quality habitat. No significant impact on this species overall conservation status is anticipated given limited area of impact.
Baudin`s Cockatoo *Zanda baudinii*	EN	EN	Mainly eucalypt forests where it feeds primarily on the marri seeds.	Yes/Marginal	Possibly Occurs.	Known to occur in general area but only occasionally relative to the other two species. Modification/loss of very small areas of low-quality habitat. No significant impact on this species overall conservation status is anticipated given limited area of impact
Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*	VU	VU	Eucalypt forests, feeds on marri, jarrah, blackbutt, karri, sheoak and snottygobble.	Yes/Marginal	Possibly Occurs.	Known to occur in general area. Modification/loss of very small areas of low-quality habitat. No significant impact on this species overall conservation status is anticipated given limited area of impact.
Masked Owl *Tyto novaehollandiae novaehollandiae*	P3	-	Roosts and nests in heavy forest, hunts over open woodlands and farmlands.	Yes/Marginal	Unlikely to Occur.	Rarely recorded in his part of the southwest. Modification/loss of very small areas of low-quality habitat. No suitable nest/roost hollows. No significant impact on this species anticipated.
Fork-tailed Swift *Apus pacificus*	MI	Ma, Mig	Low to very high airspace over varied habitat from rainforest to semi desert.	Yes	Unlikely to Occur	May occur very occasionally for brief periods. Entirely aerial. No impact on this species will occur.
Grey Wagtail *Motacilla cinerea*	MI	Mig, Ma	In Australia, near running water in disused quarries, sandy, rocky streams in escarpments and rainforest, sewerage ponds, ploughed fields and airfields.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Chuditch *Dasyurus geoffroii*	VU	VU	Forest, mallee shrublands, woodland and desert. The densest populations have been found in riparian jarrah forest.	No	Would Not Occur.	Locally extinct. Habitat unsuitable. No impact on this species will occur.

Species	Conservation Status		Habitat Preferences	Habitat Present	Likelihood of Occurrence	Comments/Possible Impacts
	BC Act	*EPBC Act*				
Quenda *Isoodon fusciventer*	P4	-	Dense scrubby, often swampy, vegetation with dense cover.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
South-west Brush-tailed Phascogale *Phascogale tapoatafa wambenger*	CD	-	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Numbat *Myrmecobius fasciatus*	EN	EN	Open Woodlands generally dominated by eucalypts that provide hollow logs and branches for shelter and termites for food.	No	Would Not Occur.	Regionally extinct. This species has not been recorded on the coastal plain for over 50 years. No impact on this species will occur.
Western Ringtail Possum *Pseudocheirus occidentalis*	CR	CE	Coastal peppermint, coastal peppermint-tuart, jarrah-marri associations, sheoak woodland, and eucalypt woodland and mallee.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Western Brush Wallaby *Notamacropus irma*	P4	-	Prefers areas of forest and woodland supporting a dense shrub layer adjacent to small open areas.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.
Western False Pipistrelle *Falsistrellus mackenziei*	P4	-	Wet sclerophyll forest dominated by karri and in high rainfall zones of the jarrah and marri forest.	Yes	Possibly Occurs.	Known to occur in general area. Loss of some possible roosting habitat. No significant impact on this species overall conservation status is anticipated given limited area of impact.
Water Rat *Hydromys chrysogaster*	P4	-	Permanent water, fresh, brackish or marine.	No	Would Not Occur.	No suitable habitat. No impact on this species will occur.

See Appendix A for conservation status codes

6. CONCLUSION

The fauna assessment within the survey area was primarily undertaken to document black cockatoo habitat and to determine the possible presence of western ringtail possums and other conservation significant fauna species and/or their habitat.

With respect to fauna habitat values in general, and because of the survey area's history of disturbance and lack of natural vegetation the original fauna diversity has been significantly compromised. The survey area would now only support a very small subset of the original fauna assemblage with most (though not all) of those using the area generally being widespread, common species (mostly birds) able to persist in highly disturbed areas.

The black cockatoo breeding habitat assessment identified 11 trees within the survey area with a DBH of ≥30cm. No hollows were identified within seven of the trees. Four trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to currently use for nesting purposes given each hollows small entrance size and/or apparent small overall size.

No trees were assessed as containing hollows suitable for black cockatoos to use for nesting purposes. No evidence of black cockatoos foraging or roosting within the survey area was found.

BCE's foraging score method returned an overall value of "negligible value" (0 out of 10) for vegetation present for all three species of black cockatoos. This is obviously a consequence of the lack of native vegetation and the low foraging value of introduced grasslands and the small number of tuarts.

Application of the DCCEEW's Foraging Quality Scoring Tool to the entire survey area as one results in a high quality foraging score for all three species of black cockatoo (8 out of 10). This is a consequence of the score having to start at a maximum of 10 (given the foraging habitat present is mainly "eucalypt woodland") and there being only one attribute (lack of foraging evidence for any black cockatoo species) that could be used, without doubt, to reduce each total score.

No existing roosting trees (trees used at night by black cockatoos to rest) or roosting activity was positively identified during the survey. The closest documented and recently active cockatoo roost site is located about six kilometres southeast of the survey area.

Nine fauna species (mainly common bird species) were observed or secondary evidence of their presence recorded during the field survey. No vertebrate fauna species of conservation significance were positively identified as utilising the survey area.

Several species of conservation significance may also utilise the survey area, though, as no evidence of their presence was identified during the field survey, their status in the survey area remains uncertain, though in all cases the survey area is not considered to represent significant habitat for any species.

These species are:

- Peregrine Falcon – OS (WA)
- Carnaby`s Cockatoo – Endangered (WA/Federal)
- Baudin’s Cockatoo – Endangered (WA/Federal)
- Forest Red-tailed Black Cockatoo – Vulnerable (WA/Federal)
- Western False Pipistrelle – Priority 4 (WA)

In cases where some habitat is present and available information indicates at least some probability of a species occurrence, likely impacts are anticipated to be negligible given the anticipated low level of utilisation, the degraded nature of the habitat, its limited extent and the absence of significant hollows.

7. REFERENCES

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FIGURES

Legend

Survey Area

0 50 100

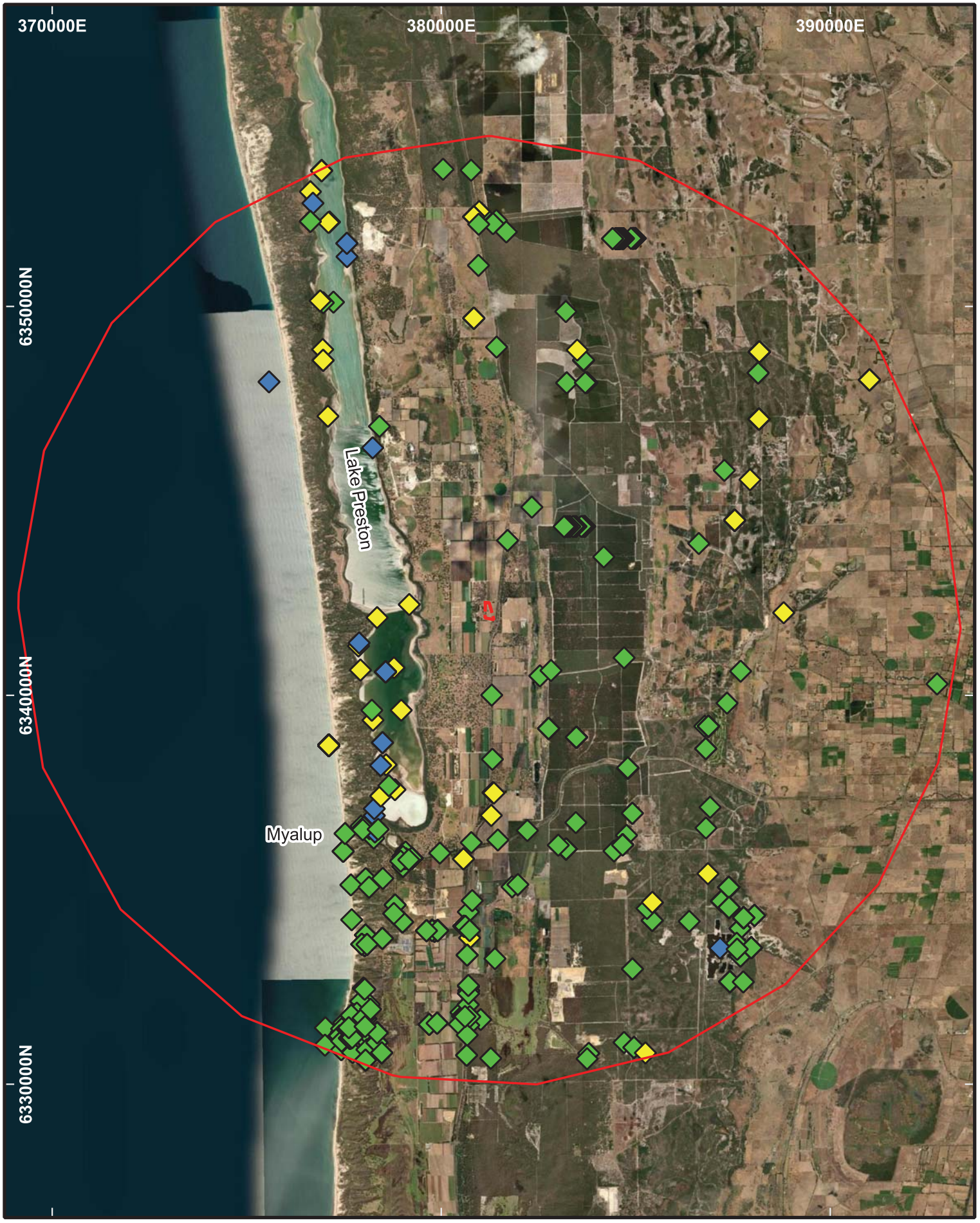
Metres

Fauna Survey

Lot 10 (#6274) (Pt)
Forrest Hwy, Myalup

Survey Area Aerial Photograph

Drawn: G Harewood	
Date: March 2026	
Scale: 1:2,000	
Coordinate System: UTM Z50/GDA 2020	**Figure 1**



Legend

- Survey Area
- 12km Buffer
- Threatened Fauna Species
- Threatened Migratory Fauna Species
- DBCA Priority Fauna Species

0 2.5 5

Kilometres

Fauna Survey

Drawn: G Harewood

Date: March 2026

Scale: 1:125,000

Coordinate System: UTM Z50/GDA 2020

Lot 10 (#6274) (Pt)
Forrest Hwy, Myalup

Threatened and Priority Fauna – DBCA records (12km buffer)

Figure 2

Legend

- Survey Area
- Habitat Tree (DBH >30cm) - No hollows observed
- Habitat Tree (DBH >30cm) - One or more hollows
  None suitable for black cockatoos

0 50 100

Metres

Fauna Survey

Drawn: G Harewood

Date: April 2026

Scale: 1:2,000

Coordinate System: UTM Z50/GDA 2020

Lot 10 (#6274) (Pt)
Forrest Hwy, Myalup

Survey Area Black Cockatoo Habitat Trees (DBH >30cm)

Figure 3

APPENDIX A
CONSERVATION CATEGORIES

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
Threatened Fauna Categories

Threatened fauna may be listed under Section 178 of the *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) in any one of the following categories:

Category	Code	Description
Extinct	E	There is no reasonable doubt that the last member of the species has died.
*Extinct in the wild	EW	A species (a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
*Critically Endangered	CR	A species is facing an extremely high risk of extinction in the wild in the immediate future.
*Endangered	EN	A species: (a) is not critically endangered; and (b) is facing a very high risk of extinction in the wild in the near future.
*Vulnerable	VU	A species (a) is not critically endangered or endangered; and (b) is facing a high risk of extinction in the wild in the medium-term future.
Conservation Dependent	CD	A species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered
*Migratory	Mig	(a) all migratory species that are: (i) native species; and (ii) from time to time included in the appendices to the Bonn Convention; and (b) all migratory species from time to time included in annexes established under JAMBA, CAMBA and ROKAMBA; and (c) all native species from time to time identified in a list established under, or an instrument made under, an international agreement approved by the Minister.
Marine	Ma	Species in the list established under s248 of the *EPBC Act*

Note: Only species in those categories marked with an asterix are matters of national environmental significance (NES) under the *EPBC Act*.

Biodiversity Conservation Act 2016 (BC Act)
Specially Protected Fauna Categories

Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022, made by the Minister under sections 13(1), 19(1) and 23(1) of the Act and regulation 174(1) of the Biodiversity Conservation Regulations 2018

Threatened Species		
Category	**Code**	**Description**
Critically Endangered species	CR	Species facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines
Endangered species	EN	Species facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines.
Vulnerable species	VU	Species facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines.
Presumed extinct species	EX	Species where there is no reasonable doubt that the last member of the species has died.
Extinct in the wild species	EW	Species that is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and from.
Specially Protected Species		
Category	**Code**	**Description**
Migratory Species	MI	Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the *BC Act*)
Species of special conservation interest (conservation dependent)	CD	Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the *BC Act*).
Species otherwise in need of special protection (other specially protected).	OS	Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the *BC Act*).

Priority Species*		
Category	**Code**	**Description**
Priority 1 (P1) Poorly Known Species.	P1	Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.
Priority 2 (P2) Poorly Known Species.	P2	Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.
Priority 3 (P3) Poorly Known Species.	P3	Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.
Priority 4 (P4) Rare, Near Threatened and other species in need of monitoring.	P4	(a) Rare: Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened: Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

*Priority is not a listing category under the BC Act.

All fauna and flora are protected in WA following the provisions in Part 10 of the *BC Act*. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land). Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened. Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

IUCN Red List Threatened Species Categories

The *IUCN Red List of Threatened Species*™ is a checklist of taxa that have undergone an extinction risk assessment using the *IUCN Red List Categories and Criteria*.

Categories are summarized below.

Category	Code	Description
Extinct	EX	Taxa for which there is no reasonable doubt that the last individual has died.
Extinct in the Wild	EW	Taxa which is known only to survive in cultivation, in captivity or and as a naturalised population well outside its past range and it has not been recorded in known or expected habitat despite exhaustive survey over a time frame appropriate to its life cycle and form.
Critically Endangered	CR	Taxa facing an extremely high risk of extinction in the wild.
Endangered	EN	Taxa facing a very high risk of extinction in the wild.
Vulnerable	VU	Taxa facing a high risk of extinction in the wild.
Near Threatened	NT	Taxa which has been evaluated but does not qualify for CR, EN or VU now but is close to qualifying or likely to qualify in the near future.
Least Concern	LC	Taxa which has been evaluated but does not qualify for CR, EN, VU, or NT but is likely to qualify for NT in the near future.
Data Deficient	DD	Taxa for which there is inadequate information to make a direct or indirect assessment of its risk of extinction based on its distribution and/or population status.
Not Evaluated	NE	Taxa which has not been evaluated.

A full list of categories and their meanings are available at:

https://www.iucnredlist.org/resources/categories-and-criteria

APPENDIX B

BAMFORD'S SCORING SYSTEM FOR THE ASSESSMENT OF FORAGING VALUE OF VEGETATION FOR BLACK COCKATOOS (BCE 2020) AND CALCULATIONS

Scoring system for the assessment of foraging value of vegetation for Black-Cockatoos. Revised 5th June 2020

Bamford Consulting Ecologists

Introduction

Application of the Offset Assessment Guide (offsets guide) developed by the federal environment department for assessing Black-Cockatoo foraging habitat requires the calculation of a score out of 10. The following system has been developed by Bamford Consulting Ecologists (BCE) with assistance from Quessentia Consulting to provide an objective scoring system that is practical and can be used by trained field zoologists with experience in the environments frequented by the species.

The foraging value score provides a numerical value that reflects the significance of vegetation as foraging habitat for Black-Cockatoos, and this numerical value is designed to provide the information needed by the Federal Department of Agriculture, Water and the Environment (DAWE) to assess impact significance and offset requirements. The foraging value of the vegetation depends upon the type, density and condition of trees and shrubs in an area and can be influenced by the context such as the availability of foraging habitat nearby. The BCE scoring system for value of foraging habitat has three components as detailed above. These three components are drawn from the DAWE offsets guide but the scoring approach was developed by BCE and includes a fourth (moderation) component.

Calculating the total score (out of 10) requires the following steps:

A Site condition. Determining a score out of six for the vegetation composition, condition and structure; plus

B Site context. Determining a score out of three for the context of the site; plus

C Species stocking rate. Determining a score out of one for species density.

D Determining the total score out of 10, which may require moderation for context and species density with respect to the site condition (vegetation) score. Moderation also includes consideration of pine plantations as a special case for foraging value.

Calculation of scores and the moderation process are described in detail below.

A. Site condition. Vegetation composition, condition and structure scoring

Site Score	Description of Vegetation Values		
	Carnaby's Black-Cockatoo	**Baudin's Black-Cockatoo**	**Forest Red-tailed Black-Cockatoo**
0	No foraging value. No Proteaceae, eucalypts or other potential sources of food. Examples: • Water bodies (e.g. salt lakes, dams, rivers); • Bare ground; • Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits) or with vegetation of no food value, such as some suburban landscapes. • Mown grass	No foraging value. No eucalypts or other potential sources of food. Examples: • Water bodies (e.g. dams, rivers); • Bare ground; • Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits).	No foraging value. No eucalypts or other potential sources of food. Examples: • Water bodies (e.g. dams, rivers); • Bare ground; • Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits).
1	Negligible to low foraging value. Examples: • Scattered specimens of known food plants but projected foliage cover of these is < 2%. This could include urban areas with scattered foraging trees; • Paddocks that are lightly vegetated with melons or other known food-source weeds (e.g. *Erodium* spp.) that represent a short-term and/or seasonal food source; • Blue Gum plantations (foraging by Carnaby's Black-Cockatoos has been reported but appears to be unusual).	Negligible to low foraging value. Scattered specimens of known food plants but projected foliage cover of these < 1%. This could include urban areas with scattered foraging trees.	Negligible to low foraging value. Scattered specimens of known food plants but projected foliage cover of these < 1%. Could include urban areas with scattered foraging trees.

Site Score	Description of Vegetation Values		
	Carnaby's Black-Cockatoo	**Baudin's Black-Cockatoo**	**Forest Red-tailed Black-Cockatoo**
2	Low foraging value. Examples: • Shrubland in which species of foraging value, such as shrubby banksias, have < 10% projected foliage cover; • Woodland with tree banksias 2-5% projected foliage cover; • Open eucalypt woodland/mallee of small-fruited species; • Paddocks that are densely vegetated with melons or other known food-source weeds (e.g. *Erodium* spp.) that represent a short-term and/or seasonal food source.	Low foraging value. Examples: • Woodland with scattered specimens of known food plants (e.g. Marri and Jarrah) 1-5% projected foliage cover; • Urban areas with scattered foraging trees.	Low foraging value. Examples: • Woodland with scattered specimens of known food plants (e.g. Marri, Jarrah or Sheoak) 1-5% projected foliage cover; • Urban areas with scattered food plants such as Cape Lilac, *Eucalyptus caesia* and *E. erythrocorys*.
3	Low to Moderate foraging value. Examples: • Shrubland in which species of foraging value, such as shrubby banksias, have 10-20% projected foliage cover; • Woodland with tree banksias 5-20% projected foliage cover; • Eucalypt Woodland/Mallee of small-fruited species; • Eucalypt Woodland with Marri < 10% projected foliage cover.	Low to Moderate foraging value. Examples: • Eucalypt Woodland with known food plants (especially Marri) 5-20% projected foliage cover; • Parkland-cleared Eucalypt Woodland/Forest with known food plants 10-40% projected foliage cover (poor long-term viability without management); • Younger areas of (managed) revegetation with known food plants 10-40% projected foliage cover (establishing food sources with good long-term viability).	Low to Moderate foraging value. Examples: • Eucalypt Woodland with known food plants (especially Marri and Jarrah) 5-20% projected foliage cover; • Parkland-cleared Eucalypt Woodland/Forest with known food plants 10-40% projected foliage cover (poor long-term viability without management); • Younger areas of (managed) revegetation with known food plants 10-40% projected foliage cover (establishing food sources with good long-term viability).

Site Score	Description of Vegetation Values		
	Carnaby's Black-Cockatoo	**Baudin's Black-Cockatoo**	**Forest Red-tailed Black-Cockatoo**
4	Moderate foraging value. Examples: • Woodland/low forest with tree banksias (of key species *B. attenuata* and *B. menziesii*) 20-40% projected foliage cover; • Kwongan/ Shrubland in which species of foraging value, such as shrubby banksias, have 20-40% projected foliage cover; • Eucalypt Woodland/Forest with Marri 20-40% projected foliage cover.	Moderate foraging value. Examples: • Marri-Jarrah Woodland/Forest with 20-40% projected foliage cover; • Marri-Jarrah Forest with 40-60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths. • Eucalypt Woodland/Forest with diverse, healthy understorey and known food trees (especially Marri) 10-20% projected foliage cover. • Orchards with highly desirable food sources (e.g. apples, pears, some stone fruits).	Moderate foraging value. Examples: • Marri-Jarrah Woodland/Forest with 20-40% projected foliage cover; • Marri-Jarrah Forest with 40-60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths; • Sheoak Forest with 40-60% projected foliage cover.
5	Moderate to High foraging value. Examples: • Banksia Low Forest (of key species *B. attenuata* and *B. menziesii*) with 40-60% projected foliage cover; • Banksia Low Forest (of key species *B. attenuata* and *B. menziesii*) with > 60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths; • Pine plantations with trees more than 10 years old (but see pine note below in moderation section).	Moderate to High foraging value. Examples: • Marri-Jarrah Forest with 40-60% projected foliage cover; • Marri-Jarrah Forest with > 60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths.	Moderate to High foraging value. Examples: • Marri-Jarrah Forest with 40-60% projected foliage cover; • Marri-Jarrah Forest with > 60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths. • Sheoak Forest with > 60% projected foliage cover.

Site Score	Description of Vegetation Values		
	Carnaby's Black-Cockatoo	**Baudin's Black-Cockatoo**	**Forest Red-tailed Black-Cockatoo**
6	High foraging value. Example: • Banksia Low Forest (of key species *B. attenuata* and *B. menziesii*) with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).	High foraging value. Example: • Marri-Jarrah Forest with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).	High foraging value. Example: • Marri-Jarrah Forest with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).

Vegetation structural class terminology follows Keighery (1994).

B. Site context.

Site Context is a function of site size, availability of nearby habitat and the availability of nearby breeding areas. Site context includes consideration of connectivity, although Black-Cockatoos are very mobile and will fly across paddocks to access foraging sites. Based on BCE observations, Carnaby's are unlikely to regularly go over open ground for a distance of more than a few kilometres and prefer to follow tree-lines.

The maximum score for site context is 3, and because it is effectively a function of presence/absence of nearby breeding and the distribution of foraging habitat across the landscape, the following table, developed by Bamford Consulting in conjunction with DEE, provides a *guide* to the assignation of site context scores. Note that 'local area' is defined as within a 15 km radius of the centre point of the study site. This is greater than the maximum distance of 12km known to be flown by Carnaby's Black-Cockatoo when feeding chicks in the nest.

Site Context Score	**Percentage of the existing native vegetation within the 'local' area that the study site represents.**	
	'Local' breeding known/likely	**'Local' breeding unlikely**
3	> 5%	> 10%
2	1 - 5%	5 - 10%
1	0.1 - 1%	1 - 5%
0	< 0.1%	< 1%

The table above provides weighting for where nearby breeding is known (or suspected) and for the proportion of foraging habitat within 15km represented by the site being assessed. Some adjustments may be needed based on the judgement of the assessor and in relation to the likely function of the site. For example, a small area of foraging habitat (eg 0.5% of such habitat within 15km) could be upgraded to a context of 2 if it formed part of a critical movement corridor. In contrast, the same sized area of habitat, of the same local proportion, could be downgraded if it were so isolated that birds could never access it.

C. Species density (stocking rate).

Species stocking rate is described as "the usage and/or density of a species at a particular site" in the offsets guide. The description also implies that a site supports a discrete population, which is unlikely in the case of very mobile black-cockatoos. Assignation of the species density score (0 or 1) is based upon the black-cockatoo species being either abundant or not abundant. A score of 1 is used where the species is seen or reported regularly and/or there is abundant foraging evidence. Regularly is when the species is seen at intervals of every few days or weeks for at least several months of the year. A score of 0 is used when the species is recorded or reported very infrequently and there is little or no foraging evidence. Where information on actual presence of birds is lacking, a species density score can be assigned by interpreting the landscape and the site context. For example, a site with a moderate condition score that is part of a network of such habitat where a black-cockatoo species is

known would get a species density score of 1 even without clear presence data, while a species density score of 0 can be assigned to a site where the level of usage can confidently be predicted to be low.

D. Moderation of scores for the calculation of a value out of 10.

The calculation out of 10 requires the vegetation characteristics (out of 6) to be combined with the scores given for context and species density. It is considered that the context and density scores are not independent of vegetation characteristics; otherwise habitat of absolutely no value for black-cockatoo foraging (such as concrete or a wetland) could get a foraging score out of 10 as high as 4 if it occurred in an area where the species breed (context score of 3) and are abundant (species density score of 1). Similarly, vegetation of negligible or low characteristics which could not support black-cockatoos could be assigned a score as high as 6 out of 10. In that case, the score of 6 would be more a reflection of nearby vegetation of high characteristics than of the foraging value of the negligible to low scoring vegetation. The Black-Cockatoos would only be present because of vegetation of high characteristics, so applying the context and species density scores to vegetation of low characteristics would not give a true reflection of their foraging value.

For this reason, the context and species density scores need to be moderated for the vegetation characteristic score to prevent vegetation of little or no foraging value receiving an excessive score out of 10. A simple approach is to assign a context and species density score of zero to sites with a Condition score of low (2), negligible (1) or none (0), on the basis that birds will not use such areas unless they are adjacent to at least low-moderate quality foraging habitat ($\geq$3). The approach to calculating a score out of 10 can be summarised as follows:

vegetation composition, condition and structure score (out of 6)	context score	Species density score
3-6 (low/moderate to high value)	Assessed as per B above	Assessed as per C above
0-2 (no to low value)	0	0

Note that this moderation approach may require interpretation depending on the context. For example, vegetation with a condition score of 2 could be given a context score of 1 under special circumstances. Such as when very close to a major breeding area or if strategically located along a movement corridor.

Pine plantations

Pine plantations are an important foraging resource for Carnaby's Black-Cockatoo (only) but are not directly comparable with native vegetation. In comparing native vegetation with pine plantations for the purpose of calculating offsets, the following should be noted:

- Pine plantations are a commercial crop established with the intention of being harvested and thus have short-term availability (30-50 years), whereas native vegetation is available indefinitely if protected. Due to the temporary nature of pines as a food source, site condition and context differs between pines and native vegetation.
- Although pines provide a high abundance of food in the form of seeds, they are a limited food resource compared with native vegetation which provides seeds, insect larvae, flowers and nectar. The value of insect larvae in the diet of Carnaby's Black-Cockatoo has not been quantified, but in the vicinity of Perth, the birds forage very heavily on insect larvae in young cones of *Banksia attenuata* in winter, ignoring the seeds in these cones and seeds in older cones on the same trees (Scott and Black 1981; M. Bamford pers. obs.). This suggests that insect larvae are of high nutritional importance immediately prior to the breeding season.
- Pine plantations have very little biodiversity value other than their importance as a food source for Carnaby's Black-Cockatoos. They inhibit growth of other flora. While this is not a factor for direct consideration with respect to Carnaby's Black-Cockatoo, it is a factor in regional conservation planning of which offsets for the cockatoos are a part.

Taking the above points into consideration, it is possible to assign pine plantations a foraging value as follows:

- Site condition. The actual foraging value of pines is high. Stock *et al.* (2013) report that it takes nearly twice as many seeds of *Pinus pinaster* to meet the daily energy requirements for Carnaby's Black-Cockatoo compared with Marri, and three times as many *P. pinaster* seeds compared with Slender Banksia. However, pines are planted at a high density so the food supply per hectare can be high. Taking account of the lack of variety of food from pines, this suggests a site condition score of 4 or 5 out of 6 (5 is used in Section A above). As a source of food, pines are thus comparable to the best banksia woodland. This site condition score then needs to be adjusted to take account of the short-term nature of the food supply (for pine plantations to be harvested. Where pines are 'ornamental, such as in some urban contexts, they can be treated as with other trees in urban landscapes). The foraging value of a site after pines are harvested will effectively be 0, or possibly 1 if there is some retention. It is proposed that this should approximately halve the site condition score; young pine plantations could be redacted slightly less than old plantations on the basis that a young plantation provides a slightly longer term food supply. If a maximum site condition score of 5 is given, then a young plantation (>10 but <30 years old) could be assigned a score of 3, and an old plantation (>30 years old) could be assigned a score of 2. Plantations <10 years old and thus not producing large quantities of cones could also get a score of 2, but recognising they may increase in value.
- Site context. Although a temporary food source, pines can be very important for Carnaby's Black-Cockatoo in some contexts; they could be said to carry populations in areas where there

is little native vegetation. The system for assigning a context score as outlined above (Section B) also applies to pines. Thus, a context score of 3 can be given where pines are a significant proportion of foraging habitat (>5% if breeding occurs; >10% if no breeding), but where pines are a small part of the foraging landscape they will receive a context score of less than this.

- Species density. As outlined above (Section C), pines will receive a species density score of 1 where Carnaby's Black-Cockatoo are regular visitors. This is irrespective of an old plantation having a moderated condition score of 2.

Based on the above, pine plantations that represent a substantial part of the foraging landscape, such as in the region immediately north of Perth, would receive a total score (out of 10) of 6; young plantations in this area would receive a score of 7. In contrast, isolated and small plantations in rural landscapes could receive a score of just 2 if they are only a small proportion of foraging habitat and Carnaby's Black-Cockatoos are not regularly present.

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Lot 10 (#6274) (Pt) Forrest Hwy – Myalup – April 2026

Foraging values of vegetation recorded for black cockatoos (BCE 2020)

Habitat Description	Vegetation Characteristics			Site Context			Species Density			Total Score		
	CC	BC	FRTBC	CC	BC	FRTBC	CC	BC	FRTBC	CC	BC	FRTBC
Open Grassland with 11 Scattered Tuarts Area = 6.8 ha (100%)	1	1	1	0	0	0	1	1	1	**0**	**0**	**0**

CC = Carnaby's Cockatoo, BB = Baudin's Cockatoo, FRTBC = Forest Red-tailed Black Cockatoo

Appraisal/Justification

The following flora species, known to be or potentially used as a direct food source (e.g. seeds, flowers, nectar, bark or grubs) by one or more species of black cockatoo were recorded within the survey area:

Black cockatoo foraging species recorded within the survey area

Plant Species
Eucalyptus gomphocephala (Tuart)

It should be noted that tuart, while foraged upon on occasions, would make up only a small proportion of any one bird's diet relative to more favoured plant species such as marri, jarrah, banksia and sheoak which are all absent from the survey area.

Based on available vegetation mapping (DWER 2026) it is estimated that there is approximately 15,000 ha of native vegetation within 15 km the survey area, much of which is very likely to represent potential black cockatoo foraging habitat of some type, though it is difficult to specifically calculate.

Site condition.

The **Open Grassland with 11 Scattered Tuarts** unit has been assigned a score of 1 for all black cockatoo species because tuarts are a small fruited species and the additional contribution of possible grassland foraging species is likely to be insignificant.

Site context.

It has been assumed that local breeding (within 15km) is "likely" for all black cockatoo species.

In the **Open Grassland with 11 Scattered Tuarts** unit each black cockatoo species has been assigned a score of 0 as it represents <0.1% of the 15,000 ha of native vegetation within 15km.

Species stocking rate.

All three species of black cockatoo are known to frequent the general area (to varying degrees) and while the survey area itself represents low habitat value a score of 1 has been applied to all species for the **Open Grassland with 11 Scattered Tuarts unit.**

Moderation/Total Score

The **Open Grassland with 11 Scattered Tuarts unit** have been given a total score of 0 for all species because of the low combine value of vegetation composition, condition and structure scores for this unit (i.e. moderated).

APPENDIX C

DCCEEW'S SCORING SYSTEM FOR THE ASSESSMENT OF FORAGING VALUE OF VEGETATION FOR BLACK COCKATOOS (COMMONWEALTH OF AUSTRALIA 2022) AND CALCULATIONS

Appendix C: Foraging quality scoring tool

A foraging habitat quality scoring tool has been developed to guide you on what the department views as important for assessing quality of foraging habitat and which should influence your decision to refer your proposal to the Minister for the Environment for likely significant impacts on foraging habitat.

The scoring tool is designed to be simple, with a structure that allows for more detailed information to be taken into account, if needed. For actions that will clearly require a referral, more detailed information relating to the key attributes in the scoring tool may be required, including on proposed avoidance and mitigation measures (see Appendix B).

How the scoring tool works

If your impact site contains native vegetation used for foraging at any time by one or more of the black cockatoo species as described in the table below, and is larger than 1 hectare in size, it is considered at face value to be of very high quality, important for recovery and therefore as having a score of 10. This is because black cockatoos rely on foraging resources to provide sufficient energy for breeding and to rebuild condition in the post-breeding period. The availability of foraging habitat, in close proximity to breeding and night roosting habitat, as well as watering sites, is also critical in ensuring that birds can successfully raise chicks.

The scoring tool includes consideration of the three components used in the EPBC Act Offsets Assessment Guide in the calculation of habitat quality (site condition, site context and species stocking rate) by taking into account contextual factors that may lessen the quality of that habitat, to give you a final habitat quality score, i.e., you use the context adjustors to subtract from your starting score.

To support your habitat score, you should provide an overall appraisal of the habitat to clearly explain and justify the score, and include it in your referral to the minister if you decide to refer.

Using the scoring tool

The scoring tool below is to be applied once to the entire impact area of your proposed action, even if there is more than one type of foraging habitat, for example, *Banksia* woodland and heath, introduced eucalyptus trees and planted pines (*Pinus pinaster*). You will always start with a score of 10.

You should complete the scoring tool for each black cockatoo species occurring within your impact area.

It is your responsibility to define the impact area and consider indirect, offsite or facilitated impacts on black cockatoos, and include these areas in the definition of your impact area (see Glossary).

If you have insufficient evidence to determine what score a particular habitat attribute meets, you should either:

- carry out additional targeted surveys (see Appendix B)
- apply the precautionary principle (i.e. assume the habitat is of sufficient quality to warrant referral).

The scoring tool should not be used to calculate the value of an offset site.

Table A1 Foraging quality scoring tool template

Starting score		Baudin's Cockatoo	Carnaby's Cockatoo	Forest Red-tailed Black-Cockatoo
10		**Start at a score of 10** if your site is native eucalypt woodlands and forest, and proteaceous woodland and heath, particularly Marri, within the range of the species, including along roadsides and parkland cleared areas. Can include planted vegetation. **This tool only applies to sites equal to or larger than 1 hectare in size.**	**Start at a score of 10** if your site is native shrubland, kwongan heathland or woodland, dominated by proteaceous plant species such as *Banksia* spp. (including *Dryandra* spp.), *Hakea* spp. and *Grevillea* spp., as well as native eucalypt woodland and forest that contains foraging species, within the range of the species, including along roadsides and parkland cleared areas. Also includes planted native vegetation. **This tool only applies to sites equal to or larger than 1 hectare in size.**	**Start at a score of 10** if your site is Jarrah or Marri woodland and/or forest, or if it is on the edge of Karri forest, or if Wandoo and Blackbutt occur on the site, within the range of the subspecies, including along roadsides and parkland cleared areas. **This tool only applies to sites equal to or larger than 1 hectare in size.**
Attribute	Sub-tractions	Context adjustor (attributes reducing functionality of foraging habitat)		
Foraging potential	**-2**	**Subtract 2** from your score if there is no evidence of feeding debris on your site.	**Subtract 2** from your score if there is no evidence of feeding debris on your site.	**Subtract 2** from your score if there is no evidence of feeding debris on your site.
Connectivity	**-2**	**Subtract 2** from your score if you have evidence to conclude that there is no other foraging habitat within 12 km of your site.	**Subtract 2** from your score if you have evidence to conclude that there is no other foraging habitat within 12 km of your site.	**Subtract 2** from your score if you have evidence to conclude that there is no other foraging habitat within 12 km of your site.
Proximity to breeding	**-2**	**Subtract 2** if you have evidence to conclude that your site is more than 12 km from breeding habitat	**Subtract 2** if you have evidence to conclude that your site is more than 12 km from breeding habitat.	**Subtract 2** if you have evidence to conclude that your site is more than 12 km from breeding habitat.
Proximity to roosting	**-1**	**Subtract 1** if you have evidence to conclude that your site is more than 20 km from a known night roosting habitat.	**Subtract 1** if you have evidence to conclude that your site is more than 20 km from a known night roosting habitat.	**Subtract 1** if you have evidence to conclude that your site is more than 20 km from a known night roosting habitat.
Impact from significant plant disease	**-1**	**Subtract 1** if your site has disease present (e.g. *Phytophthora* spp. or Marri canker) and the disease is affecting more than 50% of the preferred food plants present.	**Subtract 1** if your site has disease present (e.g. *Phytophthora* spp. or Marri canker) and the disease is affecting more than 50% of the preferred food plants present.	**Subtract 1** if your site has disease present (e.g. *Phytophthora* spp. or Marri canker) and the disease is affecting more than 50% of the preferred food plants present.
Total score		*Enter score*	*Enter score*	*Enter score*
Appraisal		To support your habitat score, you should provide an overall appraisal of the habitat on the impact site and within 20km of the impact area to clearly explain and justify the score. It should include discussion on the foraging habitat's proximity to other resources (e.g. exact distance to proximate resources), frequency of use of proximate sites, the degree of evidence and description of vegetation type and condition.		

Lot 10 (#6274) (Pt) Forrest Hwy – Myalup – April 2026

Foraging Quality Scoring Tool (Commonwealth of Australia 2022)

Starting Score		Baudin's Cockatoo	Carnaby's Cockatoo	Forest Red-tailed Black Cockatoo
10		10	10	10
Attribute	**Subtractions**	**Context Adjustor (attributes reducing functionality of foraging habitat)**		
Foraging potential	**-2**	8	8	8
Connectivity	**-2**	10	10	10
Proximity to breeding	**-2**	10	10	10
Proximity to roosting	**-1**	10	10	10
Impact from significant Plant disease	**-1**	10	10	10
Total Score		8	8	8

For the purpose of this assessment the **impact area** has been defined as being restricted to the survey area.

Appraisal/Justification

The following flora species, known to be or potentially used as a direct food source (e.g. seeds, flowers, nectar, bark or grubs) by one or more species of black cockatoo were recorded within the survey area:

Black cockatoo foraging species recorded within the survey area

Plant Species
Eucalyptus gomphocephala (Tuart)

Given the presence of "eucalypt woodland", in this case 11 scattered tuart trees (*Eucalyptus gomphocephala*) a starting score of 10 is required for the application of DCCEEW Foraging Quality Scoring Tool.

It should however be noted that tuart, while foraged upon on occasions, would make up only a small proportion of any one bird's diet relative to more favoured plant species such as marri, jarrah, banksia and sheoak which are all absent from the survey area.

For context and based on available vegetation mapping it is estimated that there is approximately 22,000 ha of native vegetation within 20 km the survey area, much of which is very likely to represent potential black cockatoo foraging habitat of some type, though it is difficult to specifically calculate.

Foraging Potential

No evidence of foraging by black cockatoo of any species was found and therefore subtracting 2 from each species score is justified.

Connectivity

Based on available vegetation mapping (DWER 2026) it is estimated that there is approximately 10,800 ha of native vegetation within 12 km the survey area and there is therefore significant potential for foraging habitat for all three species to be present in the wider area (assuming the presence of suitable plant species).

No subtractions justified for any species.

Proximity to breeding

There is a lack of breeding records in the general area but it is not possible to discount the probability that all three species breed within 12 km of the survey area despite the apparent paucity of records, though the likelihood varies for each species.

Based on available vegetation mapping (DWER 2026) it is estimated that there is approximately 10,800 ha of native vegetation within 12 km the survey area and there is therefore potential for breeding to take place in the wider area (assuming the presence of suitable trees).

No subtractions justified for any species.

Proximity to roosting

No existing roosting trees (trees used at night by black cockatoos to rest) or roosting activity was positively identified during the survey.

A review of the 2022 Great Cocky Count database (the most recent available) shows no documented roost sites within the survey area. The 2022 Great Cocky Count report documents the closest active roost as being approximately six kilometres southeast of the survey area (Site ID: HARMYAR004). This roost was being used by 268 “white-tailed black cockatoos” during the April 2022 survey (Pryor et al. 2023). There are two other black cockatoo roost sites within 12 km of the survey area documented by Pryor et al. (2023) (excluding one that has been cleared), though not all are necessarily in use at any one time.

Based on available vegetation mapping (DWER 2026) it is estimated that there is approximately 22,000 ha of native vegetation within 20 km the survey area and therefore there is significant potential for roosting habitat to be present in the wider area (assuming the presence of suitable trees).

No subtractions justified for any species.

Impact from significant Plant disease

No dead trees are present within the survey area. No subtractions are therefore justified for any black cockatoo species.

APPENDIX D

DANDJOO DATABASE SEARCH AND PROTECTED MATTERS SEARCH TOOL RESULTS

GOVERNMENT OF WESTERN AUSTRALIA

Dandjoo Species List Export

Created by Guest User on 29 Mar 2026

Source	Dandjoo – Department of Biodiversity, Conservation and Attractions
Method	User defined circle: [[115.72785, -33.05245]] 10.0 km.
Date time	2026-03-29T15:18:25.950356+08:00

Conservation status summary	Count
CD	1
CD, MI	1
CR	4
Cons code inherited from parent	1
EN	7
MI	14
MI, P4	1
None	233
OS	1
P3	4
P4	8
Parent of conservation listed taxa	6
VU	7
Total	**288**

Kingdoms	Count
Animalia	288
Total unique species	**288**

#	Class	amily	Name	Establishment	Conservation
Animalia					
1	None	None	Ellatrivia merces merces Iredale, 1924		
2	Actinopterygii Klein, 1885	Galaxiidae	Galaxiella nigrostriata (Shipway, 1953)	native	EN
3	Actinopterygii Klein, 1885	Gobiidae	Pseudogobius olorum (Sauvage, 1880)		
4	Actinopterygii Klein, 1885	Percichthyidae D.S. Jordan & C.H. Eigenmann, 1890	Nannoperca vittata (Castelnau, 1873)		
5	Actinopterygii Klein, 1885	Poeciliidae	Gambusia holbrooki Girard, 1859		
6	Amphibia	Limnodynastidae	Heleioporus eyrei (Gray, 1845)	native	
7	Amphibia	Limnodynastidae	Limnodynastes dorsalis (Gray, 1841)	native	
8	Amphibia	Myobatrachidae	Crinia georgiana Tschudi, 1838	native	
9	Amphibia	Myobatrachidae	Crinia glauerti (Loveridge, 1933)	native	
10	Amphibia	Myobatrachidae	Crinia insignifera (Moore, 1954)	native	
11	Amphibia	Myobatrachidae	Geocrinia leai (Fletcher, 1898) *(Ticking Frog)*	native	
12	Amphibia	Pelodryadidae Günther, 1858	Coggerdonia adelaidensis (Gray, 1841)	native	
13	Amphibia	Pelodryadidae Günther, 1858	Ranoidea moorei (Copland, 1957)	native	
14	Arachnida	None	Acariformes		

15	Arachnida	None	Araneomorphae		
16	Arachnida	Actinopodidae Simon, 1892	Missulena granulosa (O. P.-Cambridge, 1869)		
17	Arachnida	Anamidae Simon, 1889	Aname L. Koch, 1873		
18	Arachnida	Anamidae Simon, 1889	Proshermacha Simon, 1908		
19	Arachnida	Araneidae Clerck, 1757	Argiope protensa L. Koch, 1872	mixed	
20	Arachnida	Araneidae Clerck, 1757	Backobourkia heroine (L. Koch, 1871)		
21	Arachnida	Araneidae Clerck, 1757	Hortophora biapicata (L. Koch, 1871)		
22	Arachnida	Idiopidae Simon, 1889	Idiosoma Ausserer, 1871		Parent of conservation listed taxa
23	Arachnida	Idiopidae Simon, 1889	Idiosoma sigillatum O. P.-Cambridge, 1870	native	P3
24	Arachnida	Salticidae Blackwall, 1841	Maratus pavonis (Dunn, 1947)		
25	Arachnida	Triaenonychidae	Nunciella aspera (Pocock, 1903)		
26	Arachnida	Zodariidae Thorell, 1881	Pentasteron intermedium Baehr & Jocqué, 2001		
27	Arachnida	Zodariidae Thorell, 1881	Storena Walckenaer, 1805		
28	Aves	Acanthizidae	Acanthiza apicalis Gould, 1847	native	
29	Aves	Acanthizidae	Acanthiza chrysorrhoa (Quoy & Gaimard, 1830)	native	
30	Aves	Acanthizidae	Acanthiza inornata Gould, 1841	native	
31	Aves	Acanthizidae	Gerygone fusca (Gould, 1838)	native	
32	Aves	Acanthizidae	Sericornis frontalis (Vigors & Horsfield, 1827)	native	
33	Aves	Acanthizidae	Smicrornis brevirostris (Gould, 1838)	native	
34	Aves	Accipitridae	Aquila audax (Latham, 1802)	native	
35	Aves	Accipitridae	Circus approximans Peale, 1848	native	
36	Aves	Accipitridae	Elanus axillaris (Latham, 1802)		
37	Aves	Accipitridae	Haliastur sphenurus (Vieillot, 1818)	native	
38	Aves	Accipitridae	Hieraaetus morphnoides (Gould, 1841)	native	
39	Aves	Accipitridae	Lophoictinia isura (Gould, 1838)		
40	Aves	Accipitridae	Pandion haliaetus (Linnaeus, 1758)	native	MI
41	Aves	Aegothelidae	Aegotheles cristatus (Shaw, 1790)	native	
42	Aves	Alcedinidae	Dacelo novaeguineae (Hermann, 1783)	alien	
43	Aves	Alcedinidae	Todiramphus sanctus (Vigors & Horsfield, 1827)	native	
44	Aves	Anatidae	Anas gracilis Buller, 1869	native	
45	Aves	Anatidae	Anas platyrhynchos Linnaeus, 1758	native	
46	Aves	Anatidae	Anas superciliosa Gmelin, 1789	native	
47	Aves	Anatidae	Aythya australis (Eyton, 1838)	native	
48	Aves	Anatidae	Biziura lobata (Shaw, 1796)	native	
49	Aves	Anatidae	Chenonetta jubata (Latham, 1802)	native	
50	Aves	Anatidae	Cygnus atratus (Latham, 1790)	native	
51	Aves	Anatidae	Malacorhynchus membranaceus (Latham, 1802)	native	
52	Aves	Anatidae	Oxyura australis Gould, 1836	native	P4
53	Aves	Anatidae	Spatula rhynchotis (Latham, 1802)		
54	Aves	Anatidae	Tadorna tadornoides (Jardine & Selby, 1828) *(Australian Shelduck)*	native	
55	Aves	Anhingidae	Anhinga melanogaster Pennant, 1769	native	
56	Aves	Anhingidae	Anhinga novaehollandiae (Gould, 1847)	native	
57	Aves	Ardeidae	Ardea alba Linnaeus, 1758	native	
58	Aves	Ardeidae	Ardea alba modesta JE Gray, 1831	native	
59	Aves	Ardeidae	Ardea coromanda (Boddaert, 1783)	native	
60	Aves	Ardeidae	Ardea pacifica Latham, 1802	native	
61	Aves	Ardeidae	Botaurus dubius Mathews, 1912	native	P4
62	Aves	Ardeidae	Botaurus poiciloptilus (Wagler, 1827)	native	EN
63	Aves	Ardeidae	Egretta novaehollandiae (Latham, 1790)		
64	Aves	Ardeidae	Nycticorax caledonicus (Gmelin, 1789)	native	
65	Aves	Artamidae	Artamus cinereus Vieillot, 1817	native	
66	Aves	Artamidae	Artamus cyanopterus (Latham, 1802)	native	

67	Aves	Artamidae	Cracticus torquatus (Latham, 1802)	native	
68	Aves	Artamidae	Gymnorhina tibicen		
69	Aves	Cacatuidae	Cacatua sanguinea Gould, 1843	native	
70	Aves	Cacatuidae	Calyptorhynchus banksii (Latham, 1790)	native	
71	Aves	Cacatuidae	Calyptorhynchus banksii naso Gould, 1837	native	VU
72	Aves	Cacatuidae	Eolophus roseicapilla		
73	Aves	Cacatuidae	Zanda Mathews, 1913		Parent of conservation listed taxa
74	Aves	Cacatuidae	Zanda baudinii Lear, 1832	native	EN
75	Aves	Cacatuidae	Zanda latirostris Carnaby, 1948	native	EN
76	Aves	Campephagidae	Coracina novaehollandiae	native	
77	Aves	Casuariidae	Dromaius novaehollandiae (Latham, 1790)	native	
78	Aves	Charadriidae	Anarhynchus leschenaultii (Lesson, 1826)		VU
79	Aves	Charadriidae	Anarhynchus ruficapillus (Temminck, 1822) *(Red-capped Plover)*	native	
80	Aves	Charadriidae	Charadrius cucullatus Vieillot, 1818	native	P4
81	Aves	Charadriidae	Pluvialis fulva (Gmelin, 1789)	native	MI
82	Aves	Charadriidae	Pluvialis squatarola (Linnaeus, 1758)	native	MI
83	Aves	Columbidae	Ocyphaps lophotes (Temminck, 1822)	native	
84	Aves	Columbidae	Phaps chalcoptera (Latham, 1790)	native	
85	Aves	Columbidae	Spilopelia chinensis (Scopoli, 1786)		
86	Aves	Corvidae	Corvus coronoides	native	
87	Aves	Corvidae	Corvus coronoides coronoides Vigors & Horsfield, 1827	mixed	
88	Aves	Corvidae	Corvus coronoides perplexus Mathews, 1912	native	
89	Aves	Cuculidae	Cacomantis flabelliformis (Latham, 1802)	native	
90	Aves	Cuculidae	Chalcites lucidus (Gmelin & JF, 1788)		
91	Aves	Dicaeidae	Dicaeum hirundinaceum (Shaw, 1792)	native	
92	Aves	Diomedeidae	Thalassarche cauta (Gould, 1841)	native	Parent of conservation listed taxa
93	Aves	Falconidae	Falco cenchroides Vigors & Horsfield, 1827	native	
94	Aves	Falconidae	Falco longipennis Swainson, 1837	native	
95	Aves	Falconidae	Falco peregrinus Tunstall, 1771	native	OS
96	Aves	Glareolidae	Glareola maldivarum J.R. Forster, 1795	native	MI
97	Aves	Haematopodidae	Haematopus longirostris Vieillot, 1817	native	
98	Aves	Hirundinidae	Hirundo neoxena	native	
99	Aves	Hirundinidae	Petrochelidon nigricans (Vieillot, 1817)	native	
100	Aves	Laridae	Chroicocephalus novaehollandiae Stephens, 1826		
101	Aves	Laridae	Chroicocephalus novaehollandiae novaehollandiae Stephens, 1826		
102	Aves	Laridae	Hydroprogne caspia (Pallas, 1770)	native	MI
103	Aves	Laridae	Thalasseus bergii (Lichtenstein, 1823)	native	MI
104	Aves	Locustellidae Bonaparte, 1854	Poodytes gramineus (Gould, 1845)		
105	Aves	Maluridae	Malurus lamberti Vigors & Horsfield, 1827	mixed	Parent of conservation listed taxa
106	Aves	Maluridae	Malurus splendens (Quoy & Gaimard, 1830)	native	
107	Aves	Meliphagidae	Acanthorhynchus superciliosus Gould, 1837	native	
108	Aves	Meliphagidae	Anthochaera carunculata	native	
109	Aves	Meliphagidae	Anthochaera lunulata Gould, 1838	native	
110	Aves	Meliphagidae	Epthianura albifrons (Jardine & Selby, 1828)	native	
111	Aves	Meliphagidae	Gavicalis virescens	native	
112	Aves	Meliphagidae	Lichmera indistincta	native	
113	Aves	Meliphagidae	Phylidonyris novaehollandiae	native	
114	Aves	Meropidae	Merops ornatus Latham, 1802	native	
115	Aves	Monarchidae Bonaparte,	Grallina cyanoleuca	native	

		1854			
116	Aves	Motacillidae	Anthus novaeseelandiae (J.F.Gmelin, 1789)	alien	
117	Aves	Neosittidae	Daphoenositta chrysoptera (Latham, 1802)	native	
118	Aves	Pachycephalidae	Colluricincla harmonica (Latham, 1802)	native	
119	Aves	Pachycephalidae	Pachycephala occidentalis Ramsay, 1878	native	
120	Aves	Pachycephalidae	Pachycephala rufiventris (Latham, 1802)	native	
121	Aves	Pardalotidae	Pardalotus punctatus (Shaw, 1792)	native	
122	Aves	Pardalotidae	Pardalotus striatus (Gmelin, 1789)	native	
123	Aves	Pelecanidae	Pelecanus conspicillatus Temminck, 1824	native	
124	Aves	Petroicidae Mathews, 1920	Petroica boodang (Lesson, 1838)	native	
125	Aves	Phalacrocoracidae	Microcarbo melanoleucos (Vieillot, 1817)		
126	Aves	Phalacrocoracidae	Phalacrocorax carbo (Linnaeus, 1758)	native	
127	Aves	Phalacrocoracidae	Phalacrocorax sulcirostris (von Brandt, 1837)	native	
128	Aves	Phalacrocoracidae	Phalacrocorax varius (Gmelin, 1789)	native	
129	Aves	Phasianidae	Coturnix pectoralis Gould, 1837	native	
130	Aves	Podicipedidae	Poliocephalus poliocephalus (Jardine & Selby, 1827)	native	
131	Aves	Podicipedidae	Tachybaptus novaehollandiae (Stephens, 1826)	native	
132	Aves	Podicipedidae	Tachybaptus novaehollandiae novaehollandiae (Stephens, 1826)	native	
133	Aves	Psittacidae	Neophema elegans (Gould, 1837)	native	
134	Aves	Psittaculidae	Barnardius zonarius		
135	Aves	Psittaculidae	Parvipsitta porphyrocephala (Dietrichsen, 1837)	native	
136	Aves	Psittaculidae	Polytelis anthopeplus (Lear, 1831)	native	
137	Aves	Psittaculidae	Purpureicephalus spurius (Kuhl, 1820)	native	
138	Aves	Rallidae	Fulica atra Linnaeus, 1758	native	
139	Aves	Rallidae	Fulica atra australis Gould, 1845	native	
140	Aves	Rallidae	Gallinula tenebrosa Gould, 1846	native	
141	Aves	Rallidae	Gallinula tenebrosa tenebrosa Gould, 1846	native	
142	Aves	Rallidae	Hypotaenidia philippensis (Linnaeus, 1766)		
143	Aves	Rallidae	Porphyrio melanotus bellus Gould, 1841		
144	Aves	Rallidae	Porphyrio porphyrio (Linnaeus, 1758)	native	
145	Aves	Recurvirostridae	Cladorhynchus leucocephalus (Vieillot, 1816)	native	
146	Aves	Recurvirostridae	Himantopus leucocephalus Gould, 1837		
147	Aves	Recurvirostridae	Recurvirostra novaehollandiae Vieillot, 1816	native	
148	Aves	Rhipiduridae	Rhipidura albiscapa	native	
149	Aves	Rhipiduridae	Rhipidura leucophrys	native	
150	Aves	Scolopacidae	Actitis hypoleucos (Linnaeus, 1758)	native	MI
151	Aves	Scolopacidae	Arenaria interpres (Linnaeus, 1758)	native	MI
152	Aves	Scolopacidae	Calidris acuminata (Horsfield, 1821)	native	MI
153	Aves	Scolopacidae	Calidris ferruginea (Pontoppidan, 1763)	native	CR
154	Aves	Scolopacidae	Calidris ruficollis (Pallas, 1776)	native	MI
155	Aves	Scolopacidae	Calidris tenuirostris (Horsfield, 1821)	native	CR
156	Aves	Scolopacidae	Numenius madagascariensis (Linnaeus, 1766)	native	CR
157	Aves	Scolopacidae	Tringa brevipes (Vieillot, 1816)	native	MI, P4
158	Aves	Scolopacidae	Tringa glareola Linnaeus, 1758	native	MI
159	Aves	Scolopacidae	Tringa nebularia (Gunnerus, 1767)	native	MI
160	Aves	Spheniscidae	Eudyptula minor (Forster, 1781)	native	
161	Aves	Strigidae	Ninox boobook (Latham, 1801)	native	
162	Aves	Threskiornithidae	Platalea flavipes Gould, 1838	native	
163	Aves	Threskiornithidae	Plegadis falcinellus (Linnaeus, 1766)	native	MI
164	Aves	Threskiornithidae	Threskiornis moluccus (Cuvier, 1829)	native	
165	Aves	Threskiornithidae	Threskiornis spinicollis (Jameson, 1835) *(Straw-necked Ibis)*	native	
166	Aves	Turnicidae	Turnix varius (Latham, 1802)	native	
167	Aves	Tytonidae	Tyto alba (Scopoli, 1796)	native	
					Parent of

168	Aves	Tytonidae	Tyto novaehollandiae (Stephens, 1826)	native	conservation listed taxa
169	Aves	Tytonidae	Tyto novaehollandiae novaehollandiae (Stephens, 1826)	native	P3
170	Aves	Zosteropidae	Zosterops lateralis (Latham, 1802)	native	
171	Bivalvia	Glycymerididae Dall, 1908	Glycymeris striatularis (Lamarck, 1819)		
172	Bivalvia	Hyriidae	Hyriidae		
173	Bivalvia	Hyriidae	Westralunio carteri Iredale, 1934	native	VU
174	Chondrichthyes Huxley, 1880	Lamnidae	Carcharodon carcharias (Linnaeus, 1758)	native	VU
175	Copepoda H. Milne Edwards, 1840	Centropagidae	Calamoecia clitellata Bayly, 1962		
176	Gastropoda	None	Gastropoda		
177	Gastropoda	Eatoniellidae Ponder, 1965	Eatoniella melanochroma (Tate, 1899)		
178	Gastropoda	Geomitridae	Cochlicella acuta (Müller, 1774)		
179	Gastropoda	Geomitridae	Cochlicella barbara (Linnaeus, 1758)		
180	Gastropoda	Helicidae Rafinesque, 1815	Theba pisana (Müller, 1774)		
181	Gastropoda	Hydrococcidae	Hydrococcus brazieri (Tenison-Woods, 1876)		
182	Gastropoda	Nassariidae	Nassarius pyrrhus (Menke, 1843)		
183	Gastropoda	Orbitestellidae Iredale, 1917	Microdiscula charopa (Tate, 1889)		
184	Gastropoda	Planorbidae Rafinesque, 1815	Glyptophysa Crosse, 1872		
185	Gastropoda	Punctidae	Punctidae		
186	Gastropoda	Pyramidellidae Fischer, 1840	Chrysallida mariellaeformis Nomura, 1938		
187	Gastropoda	Rissoidae Gray, 1847	Rissoidae Gray, 1847		
188	Gastropoda	Succineidae Beck, 1837	Succinea Draparnaud, 1801		
189	Gastropoda	Tomichiidae Wenz, 1938	Coxiella Smith, 1894		
190	Gastropoda	Tomichiidae Wenz, 1938	Coxiella striatula (Menke, 1843)		
191	Insecta	None	Coleoptera		
192	Insecta	None	Diptera		
193	Insecta	None	Hemiptera		
194	Insecta	Aeshnidae	Adversaeschna brevistyla (Rambur, 1842)		
195	Insecta	Aeshnidae	Anax papuensis (Burmeister, 1839)		
196	Insecta	Argiolestidae	Archiargiolestes parvulus (Watson, 1977)		
197	Insecta	Argiolestidae	Archiargiolestes pusillus (Tillyard, 1908)		
198	Insecta	Buprestidae Leach, 1815	Xyroscelis crocata (Gory & Laporte, 1839)		
199	Insecta	Carabidae Latreille, 1802	Clivina Latreille, 1802		
200	Insecta	Castniidae	Synemon gratiosa Westwood, 1877	native	P4
201	Insecta	Coenagrionidae	Ischnura aurora aurora Brauer, 1865		
202	Insecta	Colletidae	Euhesma (Euhesma) morrisoni (Houston, 1992)		
203	Insecta	Colletidae	Hyleoides zonalis Smith, 1853		
204	Insecta	Colletidae	Leioproctus (Exleycolletes) microdontus (Cockerell, 1929)		
205	Insecta	Corduliidae	Hemicordulia tau (Selys, 1871)		
206	Insecta	Corduliidae	Procordulia affinis (Selys, 1871)		
207	Insecta	Curculionidae	Atrichonotus taeniatulus Berg, 1881		
208	Insecta	Formicidae Latreille, 1809	Formicidae Latreille, 1809		
209	Insecta	Gomphidae	Austrogomphus (Austrogomphus) collaris Hagen, 1854		
210	Insecta	Gryllotalpidae Leach, 1815	Gryllotalpa Latreille, 1802		
211	Insecta	Halictidae	Lipotriches (Austronomia) Michener, 1965	mixed	
212	Insecta	Lestidae	Austrolestes aleison Watson & Moulds, 1979		
213	Insecta	Lestidae	Austrolestes analis (Rambur, 1842)		
214	Insecta	Lestidae	Austrolestes annulosus (Selys, 1862)		
215	Insecta	Lestidae	Austrolestes io (Selys, 1862)		

216	Insecta	Libellulidae	Austrothemis nigrescens (Martin, 1901)		
217	Insecta	Libellulidae	Diplacodes bipunctata (Brauer, 1865)		
218	Insecta	Libellulidae	Diplacodes haematodes (Burmeister, 1839)		
219	Insecta	Libellulidae	Orthetrum caledonicum (Brauer, 1865)		
220	Insecta	Lycaenidae	Cyprotides cyprotus cyprotus (Olliff, 1886)		
221	Insecta	Lycaenidae	Erina gilesi (M.R. Williams & Bollam, 2001)		
222	Insecta	Lycaenidae	Theclinesthes serpentatus serpentatus (Herrich-Schäffer, 1869)		
223	Insecta	Megachilidae	Megachile (Hackeriapis) Cockerell, 1922		
224	Insecta	Megachilidae	Megachile ignita Smith, 1853		
225	Insecta	Miridae	Miridae		
226	Insecta	Nymphalidae Rafinesque, 1815	Geitoneura minyas (Waterhouse & Lyell, 1914)		
227	Insecta	Ochteridae	Ochterus Latreille, 1807		
228	Insecta	Pergidae	Lophyrotoma Ashmead, 1898		
229	Insecta	Reduviidae	Gminatus australis (Erichson, 1842)		
230	Insecta	Rhinotermitidae	Coptotermes acinaciformis raffrayi Wasmann, 1900		
231	Insecta	Rhinotermitidae	Coptotermes michaelseni Silvestri, 1909		
232	Insecta	Rhinotermitidae	Heterotermes platycephalus Froggatt, 1897		
233	Insecta	Scarabaeidae	Onthophagus evanidus Harold, 1869		
234	Insecta	Synthemistidae	Archaeosynthemis leachii (Selys, 1871)		
235	Insecta	Termitidae	Occasitermes occasus (Silvestri, 1909)		
236	Malacostraca	Parastacidae	Cherax quinquecarinatus (Gray, 1845)		
237	Mammalia	Balaenidae	Eubalaena australis (Desmoulins, 1822)	native	VU
238	Mammalia	Balaenopteridae	Megaptera novaeangliae Borowski, 1781	native	CD, MI
239	Mammalia	Canidae	Canis familiaris L., 1758	alien	
240	Mammalia	Canidae	Vulpes vulpes Linnaeus, 1758	alien	
241	Mammalia	Dasyuridae	Dasyurus geoffroii Gould, 1841	native	VU
242	Mammalia	Dasyuridae	Dasyurus geoffroii fortis Thomas, 1906	native	Cons code inherited from parent
243	Mammalia	Dasyuridae	Phascogale tapoatafa (Meyer, 1793)	native	Parent of conservation listed taxa
244	Mammalia	Dasyuridae	Phascogale tapoatafa wambenger Aplin, Rhind, Ten Have & Chesser, 2015 *(South-western Brush-tailed Phascogale, Wambenger)*	native	CD
245	Mammalia	Delphinidae	Tursiops aduncus (Ehrenberg, 1833)	native	MI
246	Mammalia	Felidae	Felis catus Linnaeus, 1758	alien	
247	Mammalia	Kogiidae	Kogia sima (Owen, 1866)	native	
248	Mammalia	Leporidae	Oryctolagus cuniculus (Linnaeus, 1758)	alien	
249	Mammalia	Macropodidae	Macropus fuliginosus (Desmarest, 1817)	native	
250	Mammalia	Macropodidae	Notamacropus irma (Jourdan, 1837) *(Western Brush Wallaby)*	native	P4
251	Mammalia	Molossidae	Austronomus australis Gray, 1838	native	
252	Mammalia	Molossidae	Ozimops kitcheneri McKenzie, Reardon & Adams, 2014	native	
253	Mammalia	Muridae	Hydromys chrysogaster Geoffroy, 1804 *(Water-rat)*	native	P4
254	Mammalia	Muridae	Mus musculus Linnaeus, 1758	alien	
255	Mammalia	Muridae	Rattus rattus (Linnaeus, 1758)	alien	
256	Mammalia	Myrmecobiidae	Myrmecobius fasciatus Waterhouse, 1836	native	EN
257	Mammalia	Otariidae	Arctocephalus tropicalis (Gray, 1872)	native	VU
258	Mammalia	Otariidae	Neophoca cinerea (Peron, 1816)	native	EN
259	Mammalia	Peramelidae	Isoodon fusciventer (Gray, 1841)	native	P4
260	Mammalia	Phalangeridae	Trichosurus vulpecula (Kerr, 1793)	native	
261	Mammalia	Pseudocheiridae	Pseudocheirus occidentalis (Thomas, 1888) *(ngwayir, Western Ringtail Possum)*	native	CR
262	Mammalia	Suidae	Sus scrofa Linnaeus, 1758	alien	
263	Mammalia	Vespertilionidae	Chalinolobus gouldii (Gray, 1841)	native	
264	Mammalia	Vespertilionidae	Falsistrellus mackenziei Kitchener, Caputi & Jones, 1986	native	P4

265	Mammalia	Vespertilionidae	Nyctophilus geoffroyi Leach, 1821	native	
266	Mammalia	Vespertilionidae	Nyctophilus major Gray, 1844	native	
267	Mammalia	Vespertilionidae	Vespadelus regulus (Thomas, 1906)	native	
268	Reptilia	Agamidae	Pogona minor minor (Sternfeld, 1919)	native	
269	Reptilia	Cheloniidae	Caretta caretta Linnaeus, 1758	native	EN
270	Reptilia	Elapidae	Hydrophis platurus platurus (Linnaeus, 1766) *(Yellow-bellied Seasnake)*	native	
271	Reptilia	Elapidae	Pseudonaja affinis Gunther, 1872	native	
272	Reptilia	Elapidae	Simoselaps bertholdi (Jan, 1859)	native	
273	Reptilia	Gekkonidae	Christinus marmoratus (Gray, 1845)	native	
274	Reptilia	Pygopodidae	Lialis burtonis Gray, 1835	native	
275	Reptilia	Scincidae	Acritoscincus trilineatus (Gray, 1839)	native	
276	Reptilia	Scincidae	Cryptoblepharus buchananii (Gray, 1838)	native	
277	Reptilia	Scincidae	Ctenotus impar Storr, 1969	native	
278	Reptilia	Scincidae	Ctenotus ora Kay & Keogh, 2012	native	P3
279	Reptilia	Scincidae	Egernia formosa Fry, 1914	native	
280	Reptilia	Scincidae	Egernia napoleonis (Gray, 1838)	native	
281	Reptilia	Scincidae	Hemiergis peronii (Fitzinger, 1826)	native	
282	Reptilia	Scincidae	Hemiergis quadrilineata (Dumeril & Bibron, 1839)	native	
283	Reptilia	Scincidae	Lerista elegans (Gray, 1845)	native	
284	Reptilia	Scincidae	Lerista lineata Bell, 1883 *(Perth Slider)*	native	P3
285	Reptilia	Scincidae	Menetia greyii Gray, 1845 *(Common Dwarf Skink)*	native	
286	Reptilia	Scincidae	Tiliqua rugosa (Gray, 1825)	native	
287	Reptilia	Varanidae	Varanus gouldii (Gray, 1838)	native	
288	Reptilia	Varanidae	Varanus rosenbergi Mertens, 1957	native	

Conservation status definitions

Threatened species

- CR – Critically Endangered
- EN – Endangered
- VU – Vulnerable
- EX – Extinct
- EW – Extinct in the Wild
- CD – Species of special conservation interest (conservation dependent)
- OS – Species otherwise in need of special protection (other specially protected)
- MI – Migratory
- SP – Specially protected species

Priority species

- P1 – Priority 1: Poorly-known species – known from few locations, none on conservation lands
- P2 – Priority 2: Poorly-known species – known from few locations, some on conservation lands
- P3 – Priority 3: Poorly-known species – known from several locations
- P4 – Priority 4: Rare, Near Threatened and other species in need of monitoring

Dandjoo specific codes

- Parent of conservation listed taxa
- Cons code inherited from parent, X

Read full definitions at https://bio.wa.gov.au/guide/conservation-status-definitions

Disclaimer

Further note, precise locations of conservation listed species are considered sensitive. To protect this information, obfuscation has been applied to conservation-listed species records. For these species, the true location is ±10km from the search area used to generate this species list.

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 29-Mar-2026

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	26
Listed Migratory Species:	13

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity
Peel-yalgorup system	Within 10km of Ramsar site

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community may occur within area
Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion	Critically Endangered	Community may occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Zanda baudinii listed as Calyptorhynchus baudinii Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo [87736]	Endangered	Species or species habitat likely to occur within area
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Species or species habitat known to occur within area
MAMMAL		

Scientific Name	Threatened Category	Presence Text
Dasyurus geoffroii		
Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Pseudocheirus occidentalis		
Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area
PLANT		
Andersonia gracilis		
Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Caladenia huegelii		
King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat may occur within area
Chamelaucium lullfitzii listed as Chamelaucium sp. Gingin (N.G.Marchant 6)		
Gingin Wax [92777]	Endangered (listed as Chamelaucium sp. Gingin	Species or species habitat may occur within area
Diuris drummondii		
Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat may occur within area
Diuris micrantha		
Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei		
Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha		
Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
Morelotia australiensis listed as Tetraria australiensis		
Southern Tetraria [92784]	Vulnerable	Species or species habitat may occur within area
Thelymitra variegata		
Queen of Sheba [12582]	Critically Endangered	Species or species habitat may occur within area
SHARK		

Scientific Name	Threatened Category	Presence Text
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Limestone quarry expansion	2005/2268	Not Controlled Action	Completed
Limestone Quarry Expansion, Lots 3618 and 1794, Finn Road	2005/2332	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

APPENDIX E

DETAILS - POTENTIAL BLACK COCKATOO BREEDING HABITAT TREES

Potential Black Cockatoo Breeding Habitat Trees

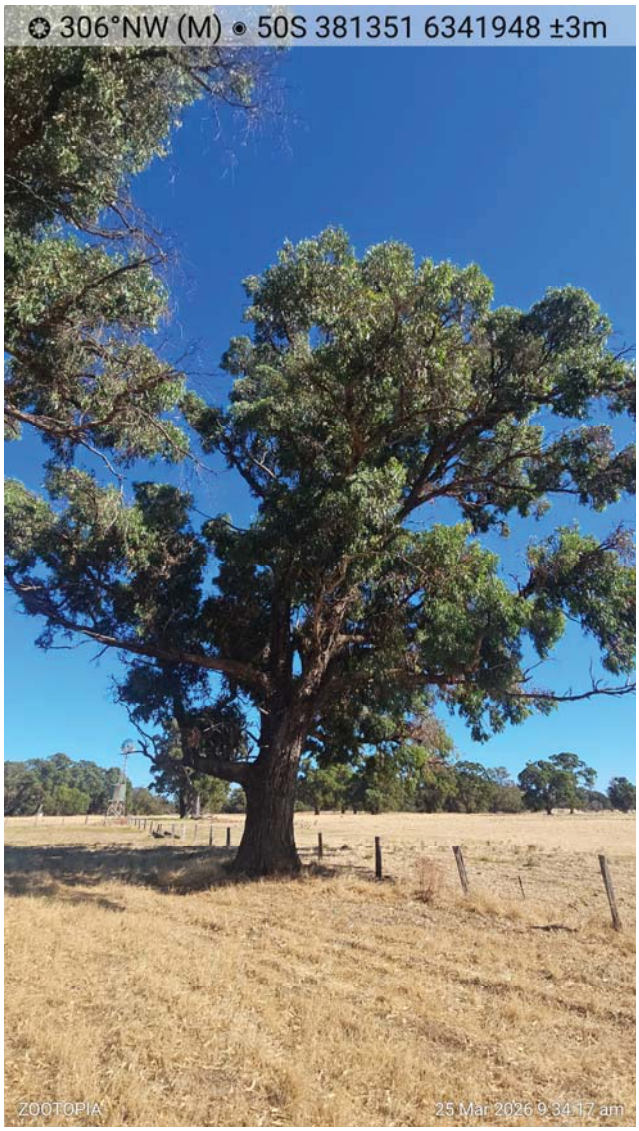
DBH >30cm

Datum - GDA2020/MGA Zone 50

Entrance Size Ranges - Small = >5cm, Medium = 5 to 12cm, Large = >12cm

Waypoint Number	Datum	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow	Comments
wpt001	GDA 2020	50H	381336	6341954	Tuart	20+	>30	0					
wpt002	GDA 2020	50H	381203	6342365	Tuart	20+	>30	2+	Small & Medium	No signs	No signs	No	Examined with drone
wpt003	GDA 2020	50H	381168	6342340	Tuart	20+	>30	0					Possible small hollows in dead branches
wpt004	GDA 2020	50H	381211	6342196	Tuart	20+	>30	1	Medium	No signs	No signs	No	Knot hole
wpt005	GDA 2020	50H	381212	6342168	Tuart	20+	>30	0					
wpt006	GDA 2020	50H	381150	6342188	Tuart	20+	>30	1	Medium	No signs	No signs	No	Knot hole
wpt007	GDA 2020	50H	381159	6342143	Tuart	20+	>30	0					Some dead branches, no hollows visible
wpt008	GDA 2020	50H	381161	6342106	Tuart	20+	>30	0					
wpt009	GDA 2020	50H	381145	6342085	Tuart	20+	>30	0					
wpt010	GDA 2020	50H	381191	6342002	Tuart	20+	>30	1	Medium	No signs	No signs	No	Elongate fissure in trunk
wpt011	GDA 2020	50H	381212	6341995	Tuart	20+	>30	0					

Plate 1: Habitat Tree 1



Wpt: wpt001 **Coordinates:** 381336 mE 6341954 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, no hollows detected.

Plate 2: Habitat Tree 2

Wpt: wpt002 **Coordinates:** 381203 mE 6342365 mN

Species: Tuart **DBH:** >50 cm

Primary Hollow/s: Two hollows with small/medium sized (<12cm) entry's detected in upper branches using drone.

Comments: Large tuart. Hollows appear unsuitable for black cockatoos due to small/medium sized entrances. No evidence of use by fauna.

Plate 3: Habitat Tree 3

Wpt: wpt003 **Coordinates:** 381168 mE 6342340 mN

Species: Tuart **DBH:** >50 cm

Primary Hollow/s: No hollows detected

Comments: Large tuart. No hollows detected however some dead branched observed have to potential to harbour small sized hollows.

Plate 4: Habitat Tree 4

Wpt: wpt004 **Coordinates:** 381211 mE 6342196 mN

Species: Tuart **DBH:** >50 cm

Primary Hollow/s: One knot hole in main trunk with medium sized (<12cm) entry.

Comments: Large tuart. Hollow appears unsuitable for black cockatoos due to unsuitable sized entrance. No conclusive evidence of use by fauna.

Plate 5: Habitat Tree 5

Wpt: wpt005 **Coordinates:** 381212 mE 6342168 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, no hollows detected.

Plate 6: Habitat Tree 6

Wpt: wpt006 **Coordinates:** 381150 mE 6342188 mN

Species: Tuart **DBH:** >50 cm

Primary Hollow/s: One knot hole in main trunk with medium sized (<12cm) entry.

Comments: Large tuart. Hollow appears unsuitable for black cockatoos due to unsuitable sized entrance. No conclusive evidence of use by fauna.

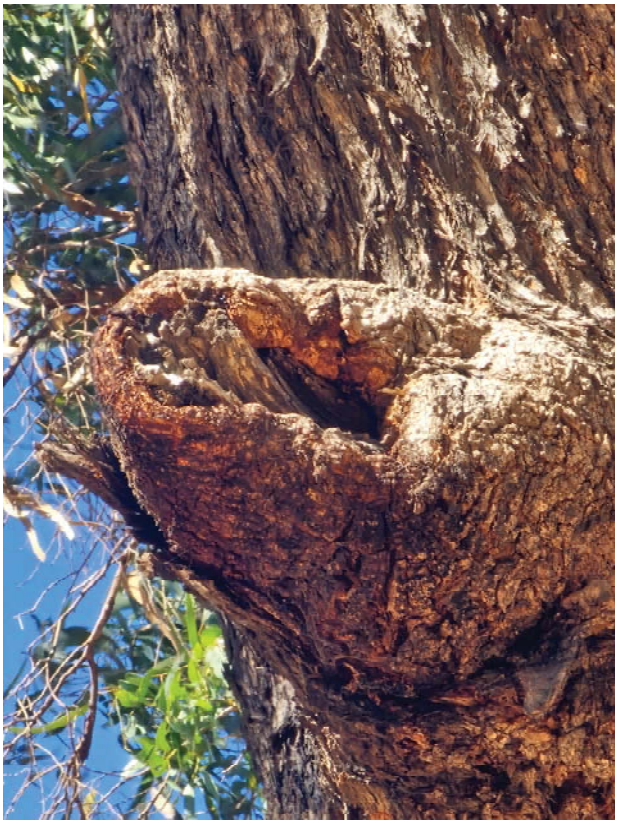


Plate 7: Habitat Tree 7

Wpt: wpt007 **Coordinates:** 381159 mE 6342143 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, many dead branches but no hollows detected.

Plate 8: Habitat Tree 8

Wpt: wpt008 **Coordinates:** 381161 mE 6342106 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, no hollows detected.

Plate 9: Habitat Tree 9

Wpt: wpt009 **Coordinates:** 381145 mE 6342085 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, no hollows detected.

Plate 10: Habitat Tree 10

Wpt: wpt010 **Coordinates:** 381191 mE 6342002 mN

Species: Tuart **DBH:** >50 cm

Primary Hollow/s: One fissure type hollow in main trunk with elongate medium sized (<12cm) entry.

Comments: Large tuart. Hollow appears unsuitable for black cockatoos due to unsuitable sized entrance. No conclusive evidence of use by fauna.

Plate 11: Habitat Tree 11

Wpt: wpt011 **Coordinates:** 381212 mE 6341995 mN
Species: Tuart **DBH:** >50cm
Primary Hollow/s: No hollows detected.
Comments: Large tuart, no hollows detected.

APPENDIX F

FAUNA OBSERVED DURING SURVEY PERIOD

Fauna Recorded within Survey Area

Lot 10 (#6274) Forrest Hwy - Myalup

Approx. Centroid - 33.052468°S and 115.727907°E

Compiled by Greg Harewood - March 2026

Class **Family** *Species*	Common Name	Conservation Status
Birds		
Cacatuidae Cockatoos, Corellas		
Eolophus roseicapilla	Galah	LC
Halcyonidae Tree Kingfishers		
Dacelo novaeguineae	Laughing Kookaburra	Introduced
Meliphagidae Honeyeaters, Chats		
Anthochaera carunculata	Red Wattlebird	LC
Dicruridae Monarchs, Magpie Lark, Flycatchers, Fantails, Drongo		
Rhipidura leucophrys	Willie Wagtail	LC
Corvidae Ravens, Crows		
Corvus coronoides	Australian Raven	LC

BC Act/EPBC Act Status - CR = Critically Endangered EN = Endangered, VU = Vulnerable, EX = Extinct, DBCA Priority Status - P1 to P4, OS CD, Int. Agmts - CA = CAMBA, JA = JAMBA, RK = ROKAMBA, IUCN Red List Category Definitions LC = Least Concern - see Appendix A and https://www.iucnredlist.org/resources/categories-and-criteria for others.

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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.

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