

LOT 827 INJUNE WAY JOONDALUP

FLORA AND VEGETATION ASSESSMENT

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PGV
ENVIRONMENTAL

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1 INTRODUCTION

1.1 Background

Lot 827 Injune Way, Joondalup (the site) is located in the City of Joondalup, approximately 23km north west of the Perth Central Business District (Figure 1). Lot 827 (0.3685ha) is proposed to be the eastern portion of Lot 9004 Hodges Drive following subdivision of the parent lot, the balance of which is to the west of the Joondalup rail line. The site is bound by Injune Way to the north, Joondalup rail line to the west, and vacant land to the south and east (Figure 2).

The site is mostly cleared but contains some Tuarts on the western boundary. The trees and any associated understorey will highly likely need to be cleared in the future development of the site

PGV Environmental was commissioned by LandCorp to undertake a Flora and Vegetation Survey in order to assess the impacts of the planned future clearing of the site.

1.2 Scope of Works

The Flora and Vegetation assessment of the site includes a description of the following:

- Physical characteristics including:
 - Landform;
 - Drainage and water bodies; and
 - Geological, hydrogeological and hydrological characteristics;
- Recent and present land use including:
 - Surrounding land uses; and
 - Assessment of current and historical activities on the subject site and surrounding areas which have the potential to result in contamination issues at the site;
- A Flora and Vegetation Survey including:
 - Desktop search and review of the Department of Biodiversity, Conservation and Attractions (DBCA) Declared Rare and Priority Flora database and Threatened Ecological Communities databases;
 - Desktop search of publicly available databases such as Naturemap and the Protected Matters Search Tool;
 - Examination of recent aerial photography and contour maps to provisionally identify vegetation types and condition;
 - Undertake a site survey to describe the flora and vegetation on the site (vegetation type, condition, flora species);
 - Assess the vegetation according to the Tuart Woodland TEC description; and
 - Assess whether there are any other aspects of the vegetation that may be of ecological importance, such as habitat for Carnaby's Black Cockatoo.

2 EXISTING ENVIRONMENT

2.1 Land Use

Examination of historic aerial photographs shows that the site largely remained uncleared up until 1989 (Plate 1). Development around the site for the Mitchell Freeway and the Joondalup rail line commenced in the early 1990s. Bulk earthworks around the site commenced in 2007-2008 (Plate 2). The trees on the western portion of the site have been retained throughout that time (Plates 2-4). The balance of the site was completely cleared and remains mostly bare sand. Domestic rubbish dumping is prevalent on the western part of the site under the trees.

Plate 1: Landgate Aerial 1989 (Landgate, July 2019).



Plate 2: Landgate Aerial 2008 (Landgate, July 2019)

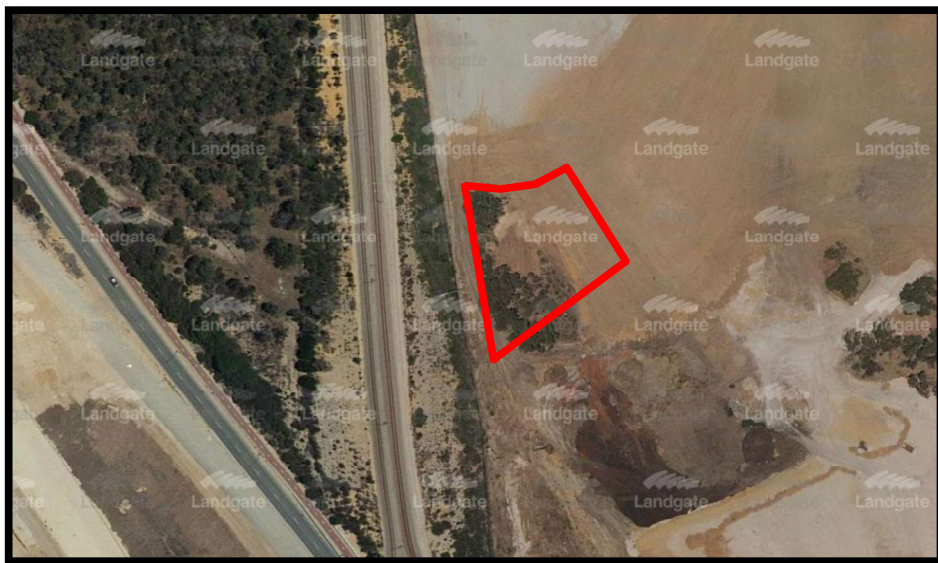


Plate 3: Landgate Aerial 2014 (Landgate, July 2019)

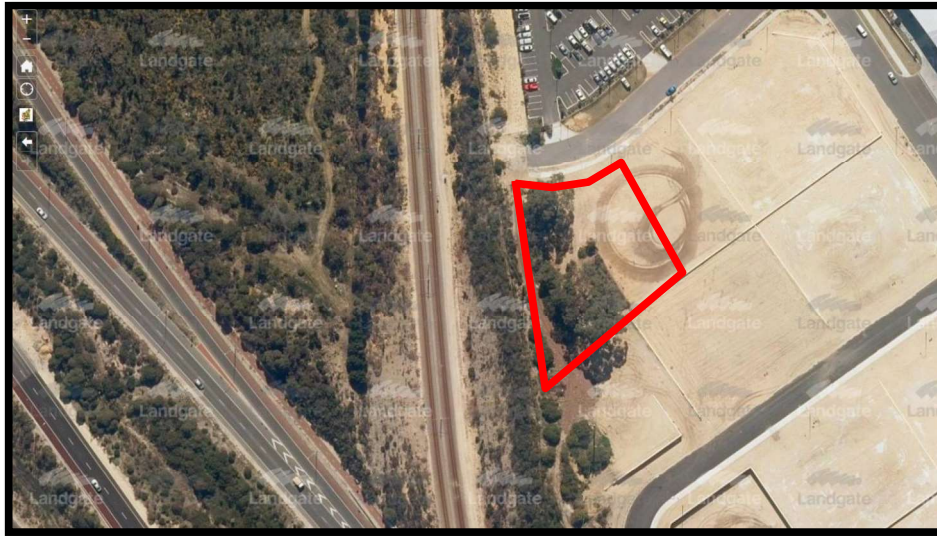
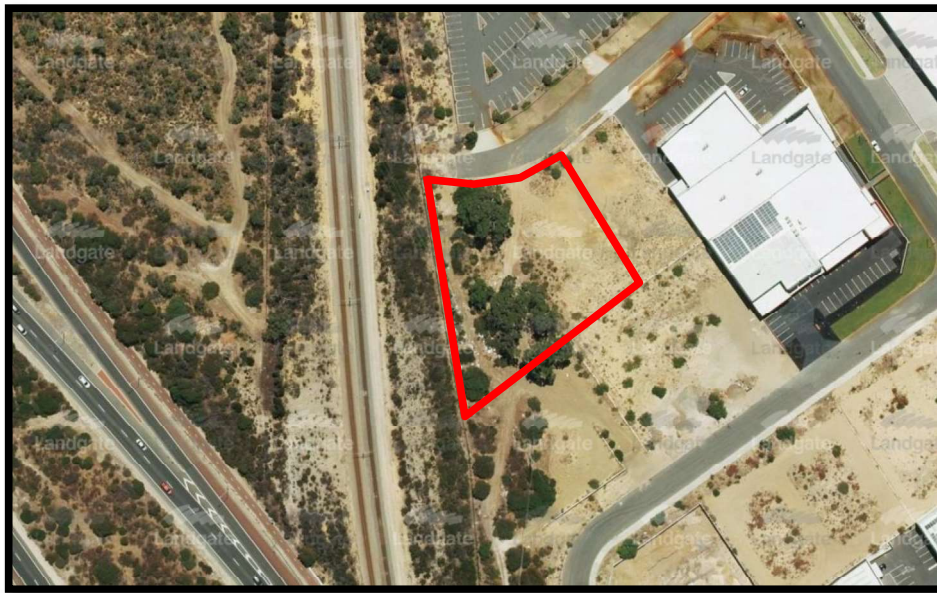


Plate 4: Landgate Aerial 2019 (Landgate, July 2019)



2.2 Topography

The site is generally flat with an elevation of 40m AHD. The southwestern corner is slightly elevated at around 41m AHD. A track dissects the small raised area in the southwestern corner.

2.3 Geology and Soils

The soils on the site are on the Spearwood Dune System and are described as sand dunes and plains with yellow deep sands, pale deep sands and yellow/brown shallow sands. The soil sub-system is mapped as Karrakatta Sand Yellow Phase and Karrakatta shallow soils Phase (DAFWA, 2015).

2.4 Hydrology

The Perth Groundwater Atlas maps the groundwater at 4.3m AHD (accessed 19 Nov 16). There are no surface water flows or wetlands associated with the site.

3 Legislation

The environmental assessment of this site has taken into consideration the following legislation, policy and guidelines.

3.1 Environmental Protection Act 1986

Any proposal that may have an impact on the environment may be referred to the Environmental Protection Authority (EPA) under Section 38 of the *Environmental Protection Act, 1986* (EP Act). PGV Environmental considers that development of the site in accordance with an approved subdivision plan, would not need to be referred.

Under the EP Act, clearing of native vegetation requires a permit from the Department of Water and Environmental Regulation (DWER) unless there is an exemption under the EP Act or the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Vegetation clearing in accordance with an approved plan of subdivision may be exempt under Schedule 6 of the EP Act and clearing less than 5ha of native vegetation in accordance with an approved Development Application for a building or structure are considered exemptions from requiring a clearing permit provided the vegetation is not declared as an Environmentally Sensitive Area.

3.2 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important heritage places, ecological communities, flora and fauna that are defined in the Act as matters of national environmental significance.

The EPBC Act applies to the following seven matters of national environmental significance:

- World heritage sites;
- National heritage places;
- Wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed);
- Nationally threatened species and ecological communities;
- Migratory species;
- Commonwealth marine areas; and
- Nuclear actions.

The EPBC Act applies to 'actions' which:

- Have a 'significant impact' on 'matters of national environmental significance';
- Are undertaken by Commonwealth government agencies and have a significant impact on the environment anywhere in the world; or
- Are undertaken by any person and have a significant impact on Commonwealth land (even if the activity is not actually carried out on the Commonwealth land).

A significant impact, under the EPBC Act, is determined by the value, quality and sensitivity of the environment which is to be impacted and the magnitude, duration, intensity and geographic extent of the impacts (DoE, 2013). *The Matters of National Environmental Significance. Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999* (DoE, 2013) provides a guide for determining the significance of an impact. Proposed actions that are deemed to have a significant impact should be referred to the Minister.

4 Flora and Vegetation

4.1 Methodology

A Reconnaissance Flora and Vegetation Survey was undertaken in accordance with EPA Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016a). A Reconnaissance survey was undertaken rather than a Detailed survey due to the requirement for the site to be cleared in the second half of 2019 prior to the peak spring flora period. The timing for the survey is considered to be adequate due to the highly degraded condition of the vegetation on site.

Desktop studies were undertaken to identify potential threatened species and communities that may occur on the site.

A site reconnaissance survey was conducted by Dr Paul van der Moezel from PGV Environmental on 12 July 2019. The survey included walking through the site to record vegetation types, vegetation condition and recording plant species from two quadrats (10m x 10m).

4.2 Desktop Studies

4.2.1 Flora Database Searches

A search of the DBCA Threatened Flora Databases: the WA Herbarium database (WAHerb and the Threatened (Declared Rare) and Priority Flora Species List (TFPL) (Appendix 1), Naturemap (Appendix 2) (DBCA, 2016) and the EPBC Act Protected Matters Search Tool (Appendix 3) (DoEE, 2019a) indicates that a number of species that are listed as Endangered, Threatened or Priority are identified as potentially being located the site. The results from these database searches are shown in Table 1.

Table 1: Conservation Significant Flora known to occur near the Site

Scientific Name	Common Name	Conservation Status (WA)	Status under EPBC Act
<i>Acacia benthamii</i>		Priority 2	
<i>Andersonia gracilis</i>	Slender Andersonia	Schedule 3	Endangered
<i>Austrostipa mundula</i>	Neat Speargrass	Priority 2	
<i>Baeckea sp. Limestone (N. Gibson & M.N. Lyons 1425)</i>	Baeckea	Priority 2	
<i>Calectasia elegans</i>	Elegant Tinsel Lily	Priority 1	
<i>Conostylis bracteata</i>		Priority 3	
<i>Drosera x sidjamesii</i>		Priority 1	
<i>Fabronia hampeana</i>	Moss	Priority 2	
<i>Grevillea sp. Ocean Reef (D. Pike Joon 4)</i>		Priority 1	
<i>Hibbertia spicata subsp. leptotheca</i>		Priority 3	
<i>Jacksonia sericea</i>	Waldjumi	Priority 4	
<i>Leucopogon sp. Yanchep (M. Hislop 1986)</i>		Priority 3	

Scientific Name	Common Name	Conservation Status (WA)	Status under EPBC Act
<i>Marianthus paralius</i>		Threatened	Endangered
<i>Melaleuca sp. Wanneroo (G.J. Keighery 16705)</i>		Priority 1	
<i>Pimelea calcicola</i>		Priority 3	
<i>Sarcozona bicarinata</i>		Priority 3	
<i>Schoenus griffinianus</i>		Priority 4	
<i>Stylidium paludicola</i>		Priority 3	
<i>Tetralia sp. Chandala (G.J. Keighery 17055)</i>		Priority 2	
<i>Thelymitra variegata</i>	Queen of Sheba	Priority 2	

Definitions of the Conservation Codes are in Appendix 4

4.2.2 Vegetation Complex

The vegetation on the site is part of the Cottesloe – Central and South Vegetation Complex which described as ranging from “Mosaic of woodland of *Eucalyptus gomphocephala* and open forest of *Eucalyptus gomphocephala* - *Eucalyptus marginata* – *Eucalyptus calophylla*: closed heath on limestone outcrops”. The vegetation on the site meets the general description of this vegetation complex.

4.2.3 TEC Database Searches

A search of DBCA’s Threatened (TEC) and Priority Ecological Communities (PEC) database was conducted within a radius of 5km around the site (Appendix 5) and a search of DoEE’s Protected Matters database was conducted within a radius of 1km around the site (Appendix 3). Two Threatened Ecological Communities were identified under the EPBC Act and PECs were identified as having conservation status in WA (Table 2).

Table 2: TEC identified in database searches within 1km of the site

Number	Description	Conservation Status in WA	Status under the EPBC Act
Banksia WL SCP	Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	Priority 3	Endangered
Tuart WL SCP	Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain Ecological Community	Priority 3	Critically Endangered
SCP24	Northern Spearwood shrublands and woodlands	Priority 3	
SCP20a	<i>Banksia attenuata</i> woodlands over species rich dense shrublands	Endangered	Endangered as part of the Banksia WL SCP
SCP25	Southern <i>Eucalyptus gomphocephala</i> - <i>Agonis flexuosa</i> woodlands	Priority 3	
SCP29a	Coastal shrublands on shallow sands	Priority 3	

4.3 Site Survey

4.3.1 Vegetation Types

The Reconnaissance Survey recorded one vegetation type for the western part of the site as follows:

- *Eucalyptus gomphocephala* (Tuart) over a sparse cover of native species such as *Acacia saligna*, *Jacksonia sternbergiana*, *Jacksonia calcicola*, *Acacia pulchella* and *Xanthorrhoea preissii* as well as an abundant weed presence including *Chamelaucium uncinatum* (Geraldton Wax), *Oxalis pes-caprae*, *Ehrharta calycina*, *Briza maxima*, *Lupinus cosentinii* and *Gladiolus caryophyllaceus* (Plate 5).

One small area containing native understorey species was recorded in the south-east part of the Tuart woodland (Plate 6). Quadrat IW2 was sampled in this area. The vegetation consisted of *Banksia sessilis* Shrubland with *Melaleuca systema* a common smaller shrub. Other native species reasonably common in this small area included *Hakea trifurcata*, *Corynotheca micrantha*, *Scaevola canescens* and *Mesomelaena pseudostygia*. Common weed species included *Ehrharta calycina*, *Briza maxima*, *Romulea rosea* and *Pelargonium capitatum*.

The eastern half of the site was cleared with bare sand and weeds (Plate 7).

4.3.2 Vegetation Condition

The condition of the vegetation was assessed according to the system devised by Keighery and described in Bush Forever (Government of Western Australia, 2000) (Table 3).

Table 3: Vegetation Condition Rating Scale.

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
Very Good	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 and grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbance. 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 and grazing.
Degraded	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 and grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Source: Government of Western Australia, 2000.

The condition of the vegetation using the Keighery scale ranged from Degraded to Completely Degraded. A small area of native understorey described by quadrat IW2 was rated in Good condition.

Plate 5: Tuarts on the western half of the site



Plate 6: Small area of understorey vegetation in Good condition



Plate 7: Cleared eastern half of the site in Completely Degraded condition



The Conservation Advice for the Tuart Woodland TEC has a different method of assessing the condition of a patch of vegetation (See Table 5, Section 3.5.1 of the advice). The method uses two criteria to determine condition, ie. percentage cover of native versus non-native species and the number of native understorey species per 0.01ha (10m x 10m plot or equivalent sample unit).

The Conservation Advice method assessment has four condition categories: Very High, High, Moderate and Poor. The condition is based on either the percentage of native vegetation cover OR the number of native understorey species.

PGV Environmental measured the percentage cover and species richness in three quadrats determined to be representative of the range of condition within the immediate surrounds of the Tuart woodland vegetation. The results are provided in Appendix 6 and are summarised below in Table 4.

Table 4: Summary of Quadrat Data

Quadrat	% Cover		Species Richness		Condition Category
	Native	Non-native	Native	Non-native	
IW1	0	1	0	4	Poor
IW2	15	20	10	7	High
IW3	15	25	5	7	Medium

4.3.3 Flora

The site contains vegetation in a Degraded to Completely Degraded condition. A total of 43 species were recorded during the survey, including 28 native species and 15 introduced species (Appendix 7).

Some ephemeral species are likely to be recorded in a spring survey, however given the poor quality of most of the site the number of ephemeral species is likely to be very low.

None of the conservation significant flora were recorded during the survey.

Based on the site survey the likelihood of Listed and Priority Flora occurring on the site is shown in Table 5.

Table 5: Likelihood of Identified Significant Flora Species Occurring on the Site

Scientific Name	Conservation Status (WA)	EPBC Status	Habitat*	Likelihood to occur on the site
<i>Acacia benthamii</i>	Priority 2		<i>Acacia benthamii</i> grows on sand, typically on limestone breakaways	No – no suitable habitat
<i>Andersonia gracilis</i>	Schedule 3	Endangered	White/grey sand, sandy clay, gravelly loam near winter wet swamps	No- no suitable habitat
<i>Austrostipa mundula</i>	Priority 3		Sandy to clay loams. In grassland, heathland and shrubland associated with Eucalyptus spp. and in mallee vegetation. Sometimes associated with limestone.	No – no suitable habitat
<i>Baeckea</i> sp. Limestone (N. Gibson & M.N. Lyons 1425)	Priority 2		Yellow/grey sand over limestone.	No – no suitable habitat
<i>Calectasia elegans</i>	Priority 2		Deep grey quartz soils. Gentle slopes, above damplands.	No – no suitable habitat
<i>Conostylis bracteata</i>	Priority 3		Sand, limestone. Consolidated sand dunes.	No- no suitable habitat
<i>Drosera x sidjamesii</i>	Priority 1		Peaty sand, along lake margins, close to winter high-water line.	No – no suitable habitat
<i>Fabronia hampeana</i>	Priority 2		Endemic to WA between Neerabup National Park and Kinross	No – south of distribution range
<i>Grevillea</i> sp. Ocean Reef (D. Pike Joon 4)	Priority 1		Dry brown/grey sand, yellow brown sand. Sandy dune, gully.	No – not a coastal location
<i>Hibbertia spicata</i> subsp. <i>leptotheca</i>	Priority 3		Grey black sand over limestone in coastal areas	No – not a coastal location
<i>Jacksonia sericea</i>	Priority 4		Waldjumi grows in calcareous and sandy soils.	Potentially occurs on the site but not recorded in the survey

Scientific Name	Conservation Status (WA)	EPBC Status	Habitat*	Likelihood to occur on the site
<i>Leucopogon sp.</i> <i>Yanchep (M. Hislop 1986)</i>	Priority 3		Light grey-yellow sand, brown loam, limestone, laterite, granite. Coastal plain, breakaways, valley slopes, low hills.	No – no suitable habitat
<i>Marianthus paralius</i>	Threatened	Endangered	White sand over limestone. Low coastal cliffs.	No – not a coastal location
<i>Melaleuca sp.</i> <i>Wanneroo (G.J. Keighery 16705)</i>	Threatened		Rugged limestone ridge. Mossy black sand (Western Australian Herbarium, 2008)	No – not a suitable habitat
<i>Pimelea calcicola</i>	Priority 3		Sand. Coastal limestone ridges.	No – not a suitable habitat
<i>Sarcozona bicarinata</i>	Priority 3		Grey sand over rocky limestone outcrops	No – not a suitable habitat
<i>Schoenus griffinianus</i>	Priority 4		White sand	No – not a suitable habitat
<i>Stylidium paludicola</i>	Priority 3		Grows in sandy flats near winter wet damplands	No – not a suitable habitat
<i>Tetralia sp.</i> <i>Chandala (G.J. Keighery 17055)</i>	Priority 2		Mound spring. Peaty sand (Western Australian Herbarium, 2005)	No – not a suitable habitat
<i>Thelymitra variegata</i>	Priority 2		Sandy clay, sand, laterite	No – not a suitable habitat

* sourced from Florabase, DBCA database searches and SPRAT (DoEE, 2019a) unless otherwise denoted

4.4 Conservation Significance of Flora and Vegetation

4.4.1 Flora

One conservation significant species had the potential to occur on the site, *Jacksonia sericea* (Table 5). This species is identifiable at any time of the year and was not recorded during the site survey. No other species are likely to occur on the site therefore a spring survey should not be required.

4.4.2 Vegetation

The vegetation on the site prior to the significant amount of clearing in 2004 would have been part of the Cottesloe – Central and South Vegetation Complex (Hedde et al. 1980). According to Bush Forever (Government of Western Australia, 2000) approximately 12,362ha (36%) of the original 34,429ha on the Southern Swan Coastal Plain remains of which 6,085ha (18%) has some protection. The percentage protection is above the 10% minimum criteria for vegetation complexes in the Perth Metropolitan Region Constrained Area. Any areas of good quality vegetation on the site therefore do not meet the criteria of regional significance.

Accordingly, the vegetation on the site was not recognised as a Bush Forever site (Government of Western Australia 2000).

Most of the vegetation is in a degraded condition and is therefore not representative of any ecological communities recognised in Gibson *et al.* (1994).

The small area of Tuarts may be representative of the EPBC listed Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain Ecological Community. An assessment of the Tuart Woodland area against the criteria provided in the EPBC *Approved Conservation Advice (incorporating listing advice) for the Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain ecological community* is provided in Section 3.5.

4.5 Tuart Woodlands and Forests TEC

4.5.1 TEC Description

The Tuart Woodlands and Forests of the Swan Coastal Plain was recently listed as a Threatened Ecological Community (TEC) under the Commonwealth EPBC Act on 4 July 2019. A description of the Tuart Woodland TEC is available through the EPBC Act listing and more specifically the *Approved Conservation Advice (incorporating listing advice) for the Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain ecological* released by the Commonwealth Government. According to the Conservation Advice the diagnostic characteristics of the TEC are:

4.5.2 Key diagnosis characteristics

- The ecological community is limited to patches of vegetation (with their associated biota) that meet all of the following key diagnostic characteristics:
- Occurs in the Swan Coastal Plain Bioregion, Western Australia (IBRA v7. Department of the Environment 2012).
- Primarily occurs on the Spearwood and Quindalup dune systems but can also occur on the Bassendean dunes and Pinjarra Plain. It can occur on the banks of rivers and wetlands.
- The primary defining feature is the presence of at least two living established *Eucalyptus gomphocephala* (Tuart) trees in the uppermost canopy layer, although they may co-occur with trees of other species. There is a gap of no more than 60 m between the outer edges of the canopies of adjacent Tuart trees. These trees may occur either as single stemmed trees or as a mallee growth form.
- Most often occurs as a woodland but can occur in other structural forms, For example, forest, open forest, woodland, open woodland, and various mallee forms (NVIS Technical Working Group 2017).
- Other tree species may be present in the canopy or sub-canopy. They commonly include: *Agonis flexuosa* (Peppermint) and *Banksia grandis* (Bull Banksia) (both in the southern part of the range), *Banksia attenuata* (Candlestick Banksia), *Eucalyptus marginata* (Jarrah); and less commonly, *Corymbia calophylla* (Marri), *Banksia menziesii* (Firewood Banksia) and *Banksia prionotes* (Acorn Banksia).
- An understorey of native plants is typically present, which may include grasses, herbs and shrubs, although this is often modified by disturbance.

4.5.3 Defining a patch of the ecological community

- A patch of the ecological community is a discrete and mostly continuous area of vegetation that meets the key diagnostic characteristics.
- Boundaries for a patch can extend beyond a site or property boundary, or potential area of impact for a proposed action.
- 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 (stags). See Plate 8.
- Where a dead Tuart tree (stag) is being considered for inclusion in a patch of the ecological community, the vertical projection of its outermost remaining branches is used to define the edge of its canopy. If the species of a stag tree is unclear, if the edge of its canopy is within 60 m of an identified Tuart tree the stag is presumed to be a Tuart.
- Patches of Tuart woodlands and forests may contain areas that vary in structural or biological complexity. One part of a patch may have a larger number of mature trees and more ecological diversity, whereas another part of the same patch may demonstrate fewer mature trees and less groundcover. Areas with soil exposed and/or plant litter can also be expected within this ecological community.
- Variation in quality or condition of vegetation across a patch should not necessarily be considered to be evidence of multiple patches. Patches of the ecological community can be spatially variable and are often characterised by one or more areas within a patch that meet higher condition thresholds amongst areas of lower condition.
- If an area meets the key diagnostic characteristics but the average condition across that area falls below the minimum condition thresholds, the largest area or areas of at least 0.5 ha that meet minimum condition thresholds on average, should be specified as the patch or patches of the nationally listed ecological community. This may result in multiple patches of the ecological community being identified within the overall area first identified as meeting the key diagnostics.
- A patch may include small areas without understorey vegetation, such as bare ground, as well as waterbodies or hardscape (e.g. roads, paths, car parks, or buildings) that do not significantly alter the overall function of the ecological community. These small areas do not break up a patch, or divide a patch into multiple patches, as long as there are some parts of the canopy within 60 m of the outer edges of the canopies of adjacent Tuart trees (Plate 9). However, existing buildings and other human-made structures and gardens are not part of the nationally protected ecological community and should be excluded from the calculation of patch size and condition. See Plate 9.

Patches of the ecological community extend to 30 m beyond the outermost canopy of the Tuart trees (DoEE, 2019b).

Plate 8: Figure 3 from the Tuart Woodland Listing Advice

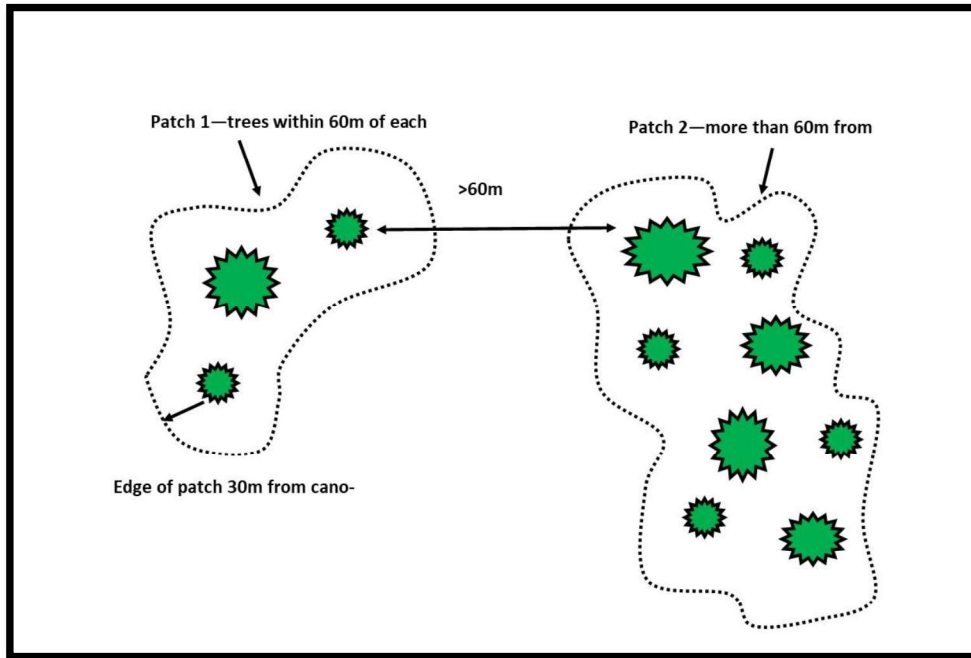
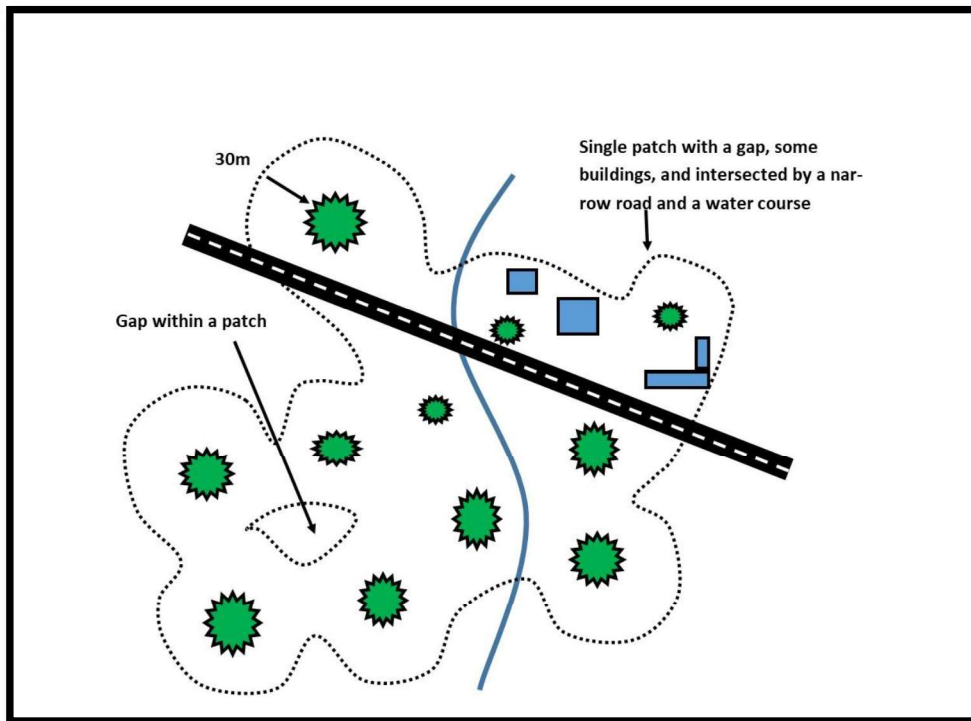


Plate 9: Figure 4 from the Tuart Woodland Listing Advice



4.5.4 Condition thresholds and categories

For confirmed patches of the ecological community, following the key diagnostic characteristics and patch definition above (Step 1), determine the following requirements for information on condition to indicate if they are part of the TEC:

- If the patch is smaller than 0.5ha 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, ground surveys are required to determine which condition category applies (Table 6). Patches in this size range are presumed to be part of the nationally protected ecological community unless surveys indicate they do not meet the minimum condition required for national protection. For patches in this size range inclusion in the nationally protected ecological community is determined by surveyed characteristics such as native plant species richness and contribution to cover, habitat values, evidence of regeneration and landscape characteristics.
- All patches of 5 ha or greater that meet the key diagnostic characteristics are part of the nationally protected ecological community.

Table 6: Tuart Woodland TEC Condition Categories and Thresholds

Biotic thresholds	Patch size	
	≥2 ha <5 ha	≥0.5 ha <2 ha
Very high condition ≥80 % of all understorey [^] vegetation cover is native# Or At least 12 native understorey [^] species per 0.01 ha (10 m x 10 m plot or equivalent sample unit)	Medium sized patches with very high condition understorey. PART OF THE PROTECTED ECOLOGICAL COMMUNITY	Smaller patches with very high condition understorey. PART OF THE PROTECTED ECOLOGICAL COMMUNITY
High condition ≥60 % of all understorey [^] vegetation cover is native# Or At least 8 native understorey [^] species per 0.01 ha (10 m x 10 m plot or equivalent sample unit)	Medium sized patches with high condition understorey. PART OF THE PROTECTED ECOLOGICAL COMMUNITY	Smaller patches with high condition understorey. AND That either: have an important landscape role (≤100 m to native vegetation)* OR have a habitat role (≥2 very large trees per 0.5 ha)* OR show regeneration (≥15 seedlings and/or saplings per 0.5 ha)* PART OF THE PROTECTED ECOLOGICAL COMMUNITY
Moderate condition ≥50 % of all understorey [^] vegetation cover is native# Or	Medium sized patches with moderate condition understorey. AND That either: have an important landscape role (≤100 m to native vegetation)* OR have a habitat role (≥2 very large trees per 0.5 ha)* OR	<u>NOT</u> PART OF THE PROTECTED ECOLOGICAL COMMUNITY (but may be a focus for local protection or restoration)

Biotic thresholds	Patch size	
	≥2 ha <5 ha	≥0.5 ha <2 ha
At least 4 native understorey^ species per 0.01 ha (10 m x 10 m plot or equivalent sample unit)	show regeneration (≥15 seedlings and/or saplings per 0.5 ha)* PART OF THE PROTECTED ECOLOGICAL COMMUNITY	
Poor Has minimal or no native cover and species richness. That is: <50 % of all understorey^ vegetation cover is native# And Less than 4 native understorey^ species per 0.01 ha (10 m x 10 m plot or equivalent sample unit)	<u>NOT</u> PART OF THE PROTECTED ECOLOGICAL COMMUNITY (but may be a focus for local protection or restoration)	<u>NOT</u> PART OF THE PROTECTED ECOLOGICAL COMMUNITY (but may be a focus for local protection or restoration)

4.5.5 TEC Assessment

The Tuart vegetation on the site was assessed against the Tuart Woodlands TEC criteria. Field Results are in Appendix 6. The results are summarised in Table 7 and diagnostic analysis in Table 8.

In summary, the Tuart vegetation on the site was assessed as not meeting the criteria for the Tuart Woodlands and Forests of the Swan Coastal Plain TEC as the size of the patch (0.8ha) and condition category (Poor to Medium) did not meet the threshold criteria for the TEC.

Table 7: Tuart Woodlands and Forests TEC Assessment

Key diagnostic characteristics [†]	Information	Key diagnostic questions* (Refer to Section 3.2 of the Approved Conservation Advice for a complete explanation of these diagnostic features – other sections of the Approved Conservation Advice are referenced where relevant)	Response (yes/no/possibly) and detailed comments.
Location and physical environment	Bioregion	Is the proposal site within the Swan Coastal Plain IBRA bioregion?	Yes
Soils and Landform	Soil type	Is the soil type consistent with where the Tuart Woodlands and Forests may occur? (see Section 2.2.1 [†])	Yes – Spearwood Dunes
	Location in the landscape, topography	Is the topography/physical environment consistent with where the Tuart Woodlands and Forests may occur? Is the site associated with any hydrology (groundwater/surface water)?	Yes
Structure	Presence of Tuart trees	How many Tuart trees are present and are they consistent with the characteristics set out in the Approved Conservation Advice? Note: Please present this information in terms of total number of trees (dead, established, seedlings etc.) and trees per hectare of the footprint. Diagrams/maps should also be provided.	Nine established Tuarts (>15cm dbh) on site and one in the road reserve to the north
	Structural form	What structural form is the vegetation?	Woodland
Composition	Dominant tree species, emergent tree layer, understory	Is the composition of the community consistent with the characteristics set out in the Approved Conservation Advice? What other tree species are present? How many native understory species are present and what is the number of weedy species/proportion of weeds?	Dominant tree species is Tuart. No other tree species present. Understorey is a mix of weeds and native species directly under and around the Tuarts and bare sand and weeds surrounding the Tuart tree within 30m of the canopy.

Key diagnostic characteristics [†]	Information	Key diagnostic questions* (Refer to Section 3.2 of the Approved Conservation Advice for a complete explanation of these diagnostic features – other sections of the Approved Conservation Advice are referenced where relevant)	Response (yes/no/possibly) and detailed comments.
Defining a patch of Tuart Woodlands and Forests	Patch definition	<p>What is the extent of the patch?</p> <p>Note: Descriptions of patch extent must include analysis of canopy extent and associated understorey vegetation (see Section 3.2.2[*]). Patches may extend beyond the project area or include areas of infrastructure (i.e. road, powerline). The referral should make clear how, and how much of the patch will be directly or indirectly impacted.</p>	The patch as shown in Figure 3 is 0.8ha
Relationship with other ecological communities	Other vegetation communities	<p>Are other vegetation communities present? What are they and how do they intergrade and/or interact with the Tuart Woodlands and Forests TEC? (see Section 3.2.3[*])</p>	No other natural stands of native vegetation occur within the patch. Revegetated shrubs occur in the rail reserve to the west, weeds, landscaped verges and bare sand occur elsewhere within the patch.

The complete key diagnostic characteristics are provided in the Approved Conservation Advice

* The Tuart Woodlands and Forests may include restored, planted or revegetated flora. Do not exclude vegetation from being classed as the Tuart Woodlands and Forests because it is a planted, restoration or revegetation site (unless it is a garden).

[†] Comments should include references to appropriate supporting information and data.

Table 8: Tuart Woodland TEC Diagnostic Analysis

Size and condition♦	Information	Relevant content to be discussed in the referral (Refer to Section 3.3 of the Approved Conservation Advice for a complete explanation of these diagnostic features)	Detailed comments.#
Patch Size	Patch size in hectares	<p>Is the patch size large enough to meet the minimum patch size in this section? (Section 3.3*)</p> <p>Note: Patch boundaries are not limited to the proposal site. You must make clear that the patch boundary is consistent with Section 3.2.2*.</p>	Yes, 0.8ha
Patch condition	Condition thresholds	<p>Using the condition categories in this section, what is the patch condition? (Section 3.3.1*)</p> <p>What is the quality and size (hectares) of the vegetation community in and around the site where the proposed action will occur? Is the patch expected to improve in condition (e.g. after appropriate fire management) or is there a threatening process underway that will reduce the current size and/or condition?</p> <p>Note:</p> <p>Refer to Section 3.4 – Step 3 – Further information to assist in identifying patches of the protected ecological community and avoiding significant adverse impacts</p> <p>If patch quality varies over the site; characterisation of the variation should be provided.</p> <p>Patch condition includes consideration of thresholds for characteristics such as plant species richness, landscape features, Tuart tree age and size and other habitat roles of the vegetation. Other vegetation condition measures (e.g. Keighery scale) do not necessary reflect the condition thresholds and both should be provided, where relevant. Where threats are identified (i.e. those listed in Appendix C of the Approved Conservation Advice) please provide further information on what these are and how they have impacted the condition.</p>	<p>Mostly Poor, some Moderate and a small area of High. See Section 3.3.2 for results of Condition Category assessment and Figure 4. Overall, the condition category is rated as Poor to Moderate. The small area (0.02ha or 2.5%) of the site that is in High condition is too small to be representative of the condition of the patch.</p>

♦ Further information on the key diagnostic characteristics is provided in the Approved Conservation Advice

Comments should include references to appropriate supporting information and data.

5 Black Cockatoo Habitat

5.1 Habitat Assessment

The site is within the habitat range of Carnaby's Black Cockatoo.

The site has very little value for foraging for Carnaby's Black Cockatoo as the only foraging habitat species on the site are a few plants of Parrot Bush (*Banksia sessilis*). No evidence of foraging was observed during the site survey.

No evidence of roosting was observed on the Tuart trees.

No evidence of breeding was observed in the Tuart trees. No trees had any hollows or spouts.

Five of the 9 Tuart trees on the site have a diameter at breast height (DBH) greater than 50cm and therefore meet the definition of potential breeding habitat trees for Carnaby's Black Cockatoos (Appendix 8).

5.2 Impact Assessment

According to the generic *EPBC Act Significant Impact Assessment Guidelines 1.1*, PGV Environmental considers the potential clearing of a few Parrot Bush trees and up to five potential breeding habitat trees would not have a significant impact on Carnaby's Black Cockatoos. Therefore, clearing the trees and understorey on the site should not need a referral under the EPBC Act.

However, according to the more specific *EPBC Act referral guidelines for three threatened Black Cockatoo species: Carnaby's cockatoo (endangered) Calyptorhynchus latirostris Baudin's cockatoo (vulnerable) Calyptorhynchus baudinii Forest red-tailed Black Cockatoo (vulnerable) Calyptorhynchus banksii naso* (SEWPaC, 2012) (EPBC Act Referral Guidelines for Black Cockatoos), the clearing of more than one potential breeding habitat tree could lead to a significant impact and require referral.

6 Summary and Conclusions

6.1 Summary

The Flora and Vegetation survey found the following:

- A total of 43 plant species were recorded during the Reconnaissance survey undertaken in July 2019. The total included 28 native and 15 introduced species;
- One conservation significant species had the potential to occur on the site, *Jacksonia sericea*, but was not recorded during the site survey. No other species are likely to occur on the site, therefore a spring survey should not be required;
- The western half of the site contains some natural Tuart trees over a mix of native and introduced species. The balance of the site is either completely cleared or contains non-native plant species;
- The condition of the Tuart woodland using the Keighery scale is mostly Degraded to Completely Degraded with a very small area of Good understorey;
- The site contains nine established Tuart trees in close proximity to each other which has the potential to be identified as the Tuart Woodlands and Forests of the Swan Coastal Plain Threatened Ecological Community which is listed under the EPBC Act;
- The 'patch' of Tuart trees, as defined in the Tuart Woodlands TEC Conservation Advice, is around 0.8ha which is above the minimum 0.5ha for the TEC. The patch includes the Tuart trees and understorey and an area extending to 30m around the outside of the Tuart tree canopies. The surrounding 30m around the canopies is mostly cleared bare sand and non-native plants;
- The condition category of the 'patch' of Tuart woodland is mostly Poor to Medium with one small area rated as High using the Condition Category criteria in the Conservation Advice;
- The size and condition of the Tuart woodland patch do not meet the criteria to be identified as the Tuart Woodlands TEC;
- The site has a very small amount of foraging habitat for Black Cockatoos. No evidence of foraging, roosting or breeding by Black Cockatoos was observed on the site;
- Five of the Tuart trees are defined as potential breeding habitat as they have a DBH >50cm. None of the trees contained hollows or spouts for Black Cockatoo breeding;
- Clearing the potential breeding habitat trees may require referral under the Commonwealth EPBC Act.

6.2 Conclusion

The site does not contain any flora or vegetation of conservation significance. As a result, the vegetation on the site is not listed as an Environmentally Sensitive Area under the State EP Act.

At the State level, clearing the vegetation on the site should be exempt from a clearing permit under Regulation 5 Item 1 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* as the site is only 0.36ha in size and a proposal to construct a building on the site will be under the 5ha limit for requiring a clearing permit.

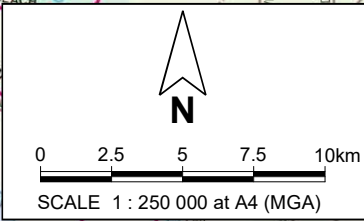
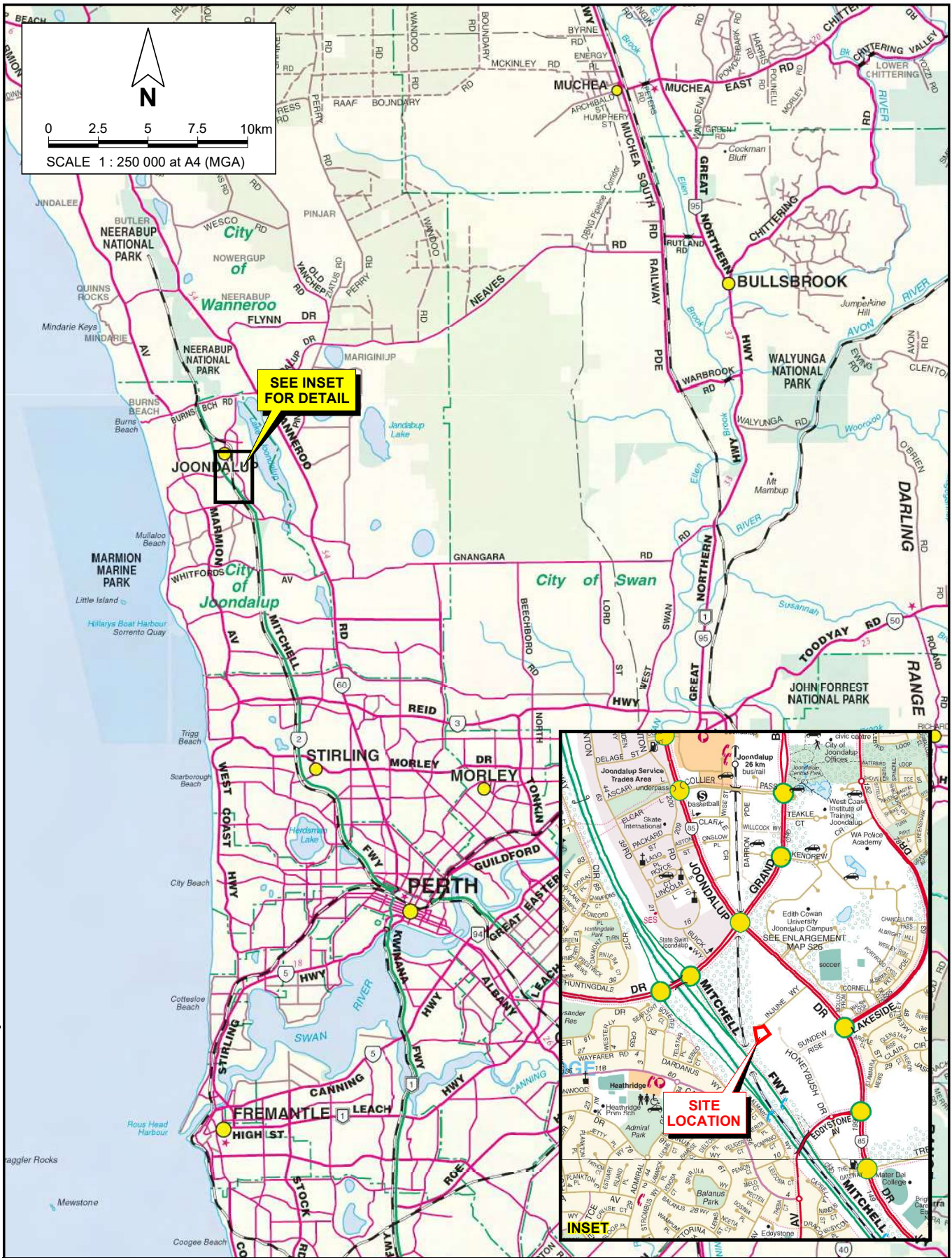
At the Commonwealth level the Tuart woodland on the site was assessed as not meeting the criteria for the Tuart Woodlands and Forests of the Swan Coastal Plain TEC as the size of the patch (0.8ha) and condition category (Poor to Medium) did not meet the threshold criteria for the TEC.

However, the number of potential breeding habitat trees that may be cleared for development (5 Tuarts) could be considered significant under the EPBC Act Black Cockatoo Referral Guidelines and a referral may be required.

7 REFERENCES

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- Environmental Protection Authority (EPA) (2016a) with EPA Technical Guidance *Flora and Vegetation Surveys for Environmental Impact Assessment* Perth Western Australia
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FIGURES



SEE INSET FOR DETAIL

SITE LOCATION

INSET

2019-455-101.dgn
 PINPOINT CARTOGRAPHICS (08) 9562 7136

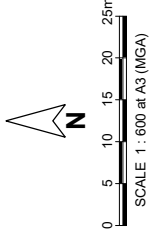


LandCorp
 FLORA AND VEGETATION ASSESSMENT
 LOT 827 INJUNE WAY JOONDALUP

Drawn: B. Heath	Date: 24 Jul 2019
Job: 10367 Rpt: 2019-455	Revision: A

SITE LOCATION

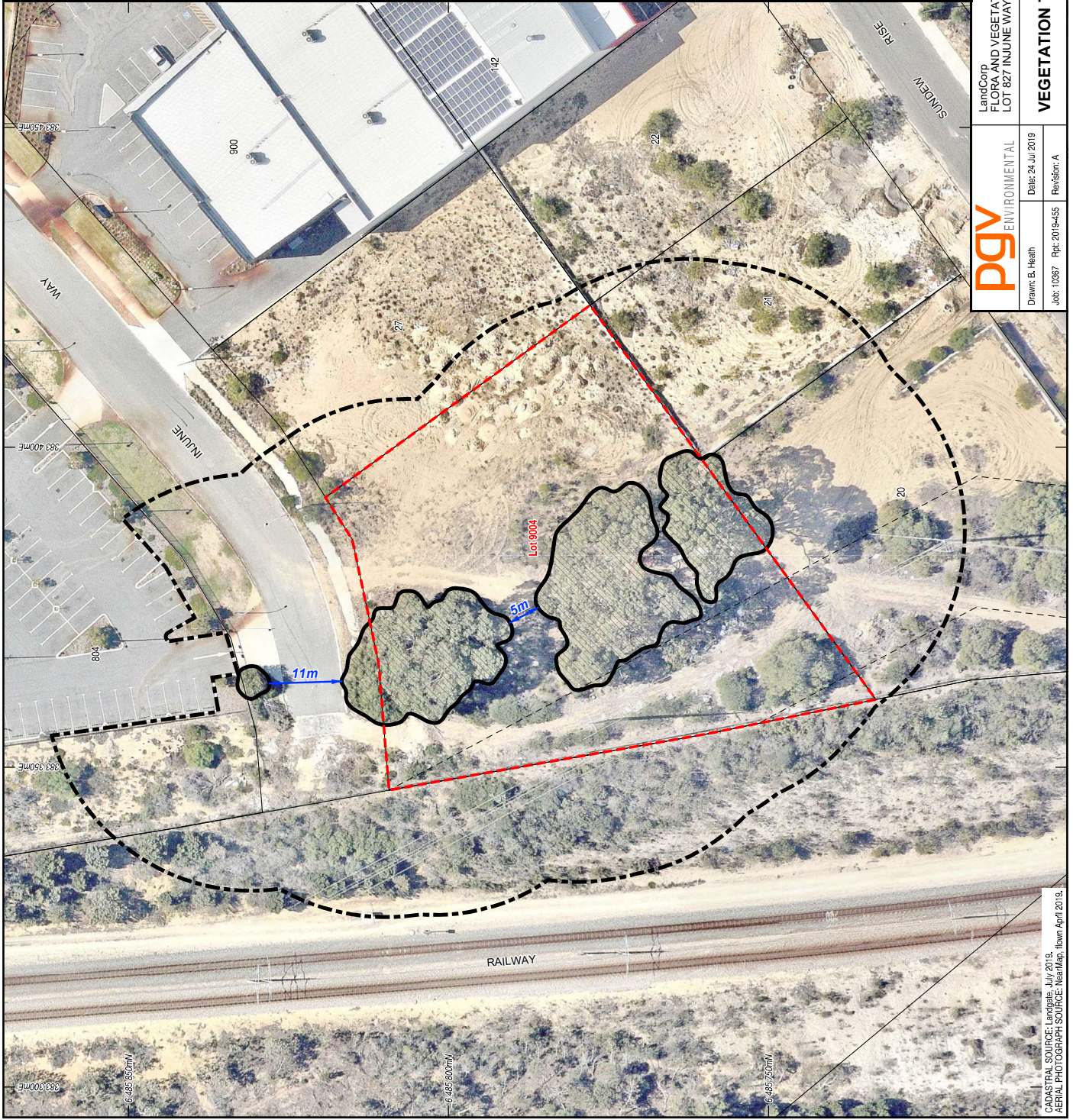
Figure 1



- Legend**
- Site Boundary
 - Cadastral Boundary
 - Easement Boundary

	LandCorp LAND VEGETATION ASSESSMENT FLOOY INJUNE WAY JOONDALUP LOT 827 INJUNE WAY JOONDALUP	
	Date: 24 Jul 2019	Revision: A
Drawn: B. Heath Job: 10357 Rpt. 2019-455	SITE LOCATION	

Figure 2



0 5 10 15 20 25m
SCALE 1 : 600 at A3 (MGA)

Legend

- - - Site Boundary
- Cadastral Boundary
- - - Easement Boundary

Vegetation Types

- Tuart Tree Canopy (>15cm Diameter)
- - - 30m Canopy Buffer

LandCorp
FLORA AND VEGETATION ASSESSMENT
LOT 827 INJUNE WAY JOONDALUP

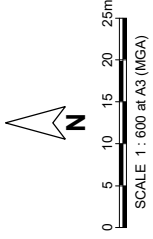
PGV ENVIRONMENTAL
Drawn: B. Heath
Job: 10857 Rpt. 2019-455

Date: 24 Jul 2019
Revision: A

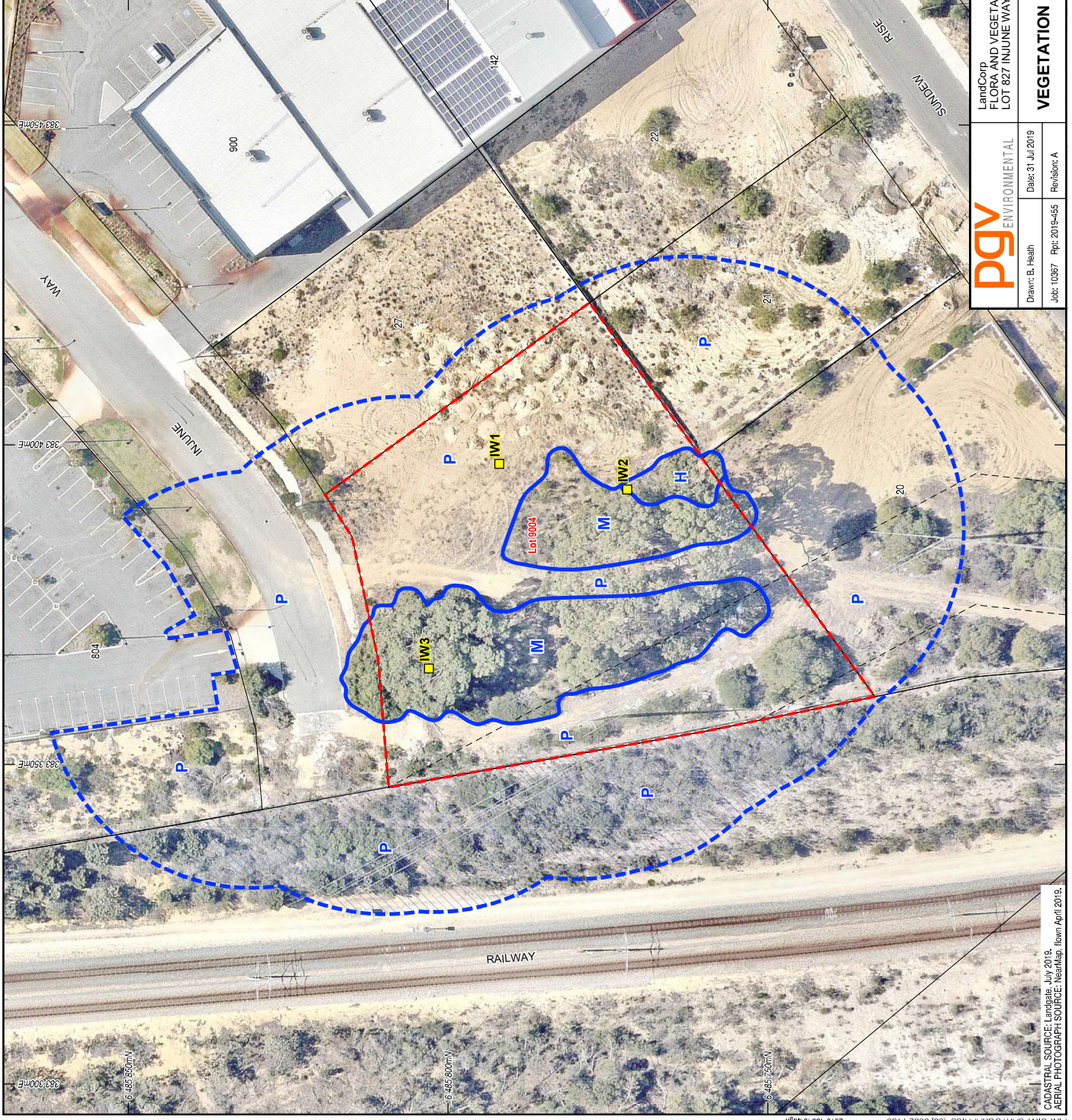
VEGETATION TYPES

Figure 3

PNPOINT CARTOGRAPHICS (08) 9562 7136
2019-454-03.0m
CADASTRAL SOURCE: Landgate, July 2019.
AERIAL PHOTOGRAPH SOURCE: NearMap, from April 2019.



- Legend**
- Site Boundary
 - Cadastral Boundary
 - Easement Boundary
 - Quadrat Location
- Vegetation Condition**
- H High
 - M Moderate
 - P Poor
 - /// Inferred



PGV ENVIRONMENTAL

LandCorp LAND VEGETATION ASSESSMENT
 FLOOYAN ROAD
 LOT 827 INJUNE WAY JOONDALUP

Drawn: B. Heath Date: 31 Jul 2019
 Job: 10327 Rpt: 2019-455 Revision: A

VEGETATION CONDITION

Figure 4

APPENDIX 1
DBCA Flora Database Search

FID_	Sheet	NameID	Taxon	Cons_Code	Plant_Desc	Site	Vegetation	Frequency
	920320	3237	Acacia ben	2				
	718297	3237	Acacia ben	2				
	703656	3237	Acacia ben	2				
	5166071	35317	Austrostipa	2			Tuart wood	
	8443122	34161	Baeckea sp	1	Erect shrub	Limestone	Heath thick	widespread
	3378640	34161	Baeckea sp	1	Tall compa	Grey sand.	Banksia wo	
	3378632	34161	Baeckea sp	1	Open shrub	Soil - sand		
	3416089	34161	Baeckea sp	1				
	5305691	1425	Conostylis	3	Perennial h	Plain near I	Jarraah with	occasional.
	5939658	20162	Fabronia h	2	Fertile mos	On trunk o	Emergent l	
	8422605	33737	Grevillea sp	1	Erect, spre	Sand dune	Coastal sar	40 - 60 plar
	8422710	33737	Grevillea sp	1	Erect, spre	Sand dune.	Coastal sar	40 - 60 plar
	8509603	33737	Grevillea sp	1	Compact p	Broad dun	Acacia rost	26-50 plant
	7860579	33737	Grevillea sp	1	Dense, spr	Quindalup	Tall shrubl	One appar
	3096424	11461	Hibbertia s	3	Domed gre	Sea cliff. G	Low Melale	
	1131192	4027	Jacksonia s	4	Prostrate s	Hilltop, san	Banksia lov	
	2171449	4027	Jacksonia s	4	Low spreac	In yellowis	In open wo	
	1131176	4027	Jacksonia s	4	Low spreac	Highly dist	Highly dist	
	8386811	25819	Marianthu: T			Well drain	Melaleuca	
	7782144	25819	Marianthu: T		Prostrate s	Limestone	Dense Hea	9 plants rec
	3409171	5237	Pimelea ca	3	Shrub-like l		Heathland.	
	4583744	17543	Sarcozona	3	Herbaceou	Grey sand	Edge of Dry	
	4583736	17543	Sarcozona	3	Herbaceou	Grey sand	Dryandra s	
	8540942	25800	Stylidium p	3		Sandy flats	Low woodl	
	4864743	35581	Tetraria sp.	2	Rhizomato	Mound spr	Assoc. vegr	
	278696	1717	Thelymitra	2	Petals purp	On limesto		

Other_Not	Locality	Latitude	Longitude	Datum	Geocode_↑	Precision	Date
	E [of] Wann	-31.7483	115.7997	GDA94	AUTO	3	#####
	East Wann	-31.7483	115.7997	GDA94	AUTO	3	#####
	Wanneroo	-31.75	115.8	GDA94	MAN	0	
	Yanchep R	-31.7514	115.7708	GDA94	AUTO	4	
	Edgewater	-31.762	115.7748	GDA94	GPS	1	#####
	Trischett R	-31.7667	115.8	GDA94	MAN	0	#####
	Trichet Ro	-31.7483	115.7997	GDA94	AUTO	3	#####
	Wanneroo	-31.7483	115.7997	GDA94	AUTO	3	
	Remnant B	-31.75	115.7833	GDA94	MAN	0	#####
	Between N	-31.7167	115.75	GDA94	MAN	3	#####
Does not a	Ocean Reef	-31.7586	115.7308	GDA94	GPS	1	#####
	Ocean Reef	-31.7586	115.7308	GDA94	GPS	1	#####
	Bush Forev	-31.7587	115.7311	GDA94	GPS	1	#####
	Ocean Reef	-31.7586	115.7311	GDA94	GPS	1	
Abundance	Burns Beac	-31.7333	115.7167	GDA94	AUTO	3	#####
Abundance	Ocean Reef	-31.75	115.7667	GDA94	MAN	3	#####
	NW corner	-31.775	115.7814	GDA94	MAN	0	#####
	Lake Joond	-31.75	115.7833	GDA94	MAN	3	
Condition c	Dual use pa	-31.75	115.7667	GDA94	TOPO	3	#####
	Iluka forest	-31.7359	115.7208	GDA94	GPS	1	#####
	N of Wann	-31.7483	115.7997	GDA94	AUTO	3	#####
No evidenc	Iluka-Beaur	-31.7333	115.7333	GDA94	AUTO	3	#####
Abundance	Iluka-Beaur	-31.7333	115.7333	GDA94	AUTO	3	#####
	Edith Cowa	-31.75	115.7667	GDA94	MAN	3	
Abundance	Property or	-31.7483	115.8	GDA94	MAN	0	#####
'Leopard O	Wanneroo	-31.7483	115.7997	GDA94	AUTO	3	

Taxon	Status	Rank	IUCN Criter	EPBC	DPaW Regi	DPaW Distr	Distributio	Flowering P
Acacia ben		2			SWAN	SWAN COA	Wanneroo, Kings Park,	
Baeckea sp		1			SWAN	SWAN COA	Wanneroo, North Bea	
Calectasia c		2			SWAN	SWAN COA	Pinjar (War	Jul-Oct
Conostylis		3			SWAN	SWAN COA	Mullaloo, E	Jul, Aug
Drosera x s		1			SWAN	SWAN COA	Gnangarra,	Nov-Mar
Grevillea sp		1			SWAN	SWAN COA	Ocean Ree	Nov
Jacksonia s		4			SWAN	SWAN COA	Wanneroo,	Oct-Jan
Leucopogo		3			SWAN	SWAN COA	Yanchep N.	Apr-Jun, Se
Melaleuca		1			SWAN	SWAN COA	Wanneroo	Dec
Sarcozona		3			SCST, SWAN	ESPERANCI	Hepburn Heights,	Burn
Schoenus g		4			MWST, SW	MOORA, GE	Eneabba,	V Oct-Nov
Tetraria sp.		2			SWAN	SWAN COA	Gingin,	Wanneroo, Mu

RecoveryPlan
Stake Hill
ch, Scarborough, Yanchep, Marmion

p

is Beach, Wanneroo, Yanchep, Seabrid, Espereance, Guilderton, S. Aust,

ichea

FID_	PopId	Nameid	Taxon	ConsStatus	WARank	PopNumbe	SubPopCoc	Gda94Lat
	86275	3237	Acacia ben		2		1	-31.7154
	84822	1425	Conostylis		3		4	-31.731
	94987	20162	Fabronia hi		2		2	-31.7167
	100789	11461	Hibbertia s		3		4 A	-31.7356
	100790	11461	Hibbertia s		3		4 B	-31.7359
	86874	4027	Jacksonia s		4		1	-31.7627
	98915	4027	Jacksonia s		4		4 A	-31.7542
	98916	4027	Jacksonia s		4		4 B	-31.7602
	98917	4027	Jacksonia s		4		4 C	-31.7602
	98919	4027	Jacksonia s		4		5 A	-31.7248
	98920	4027	Jacksonia s		4		5 B	-31.7248
	98921	4027	Jacksonia s		4		5 C	-31.7248
	98922	4027	Jacksonia s		4		5 D	-31.7264
	98923	4027	Jacksonia s		4		5 E	-31.726
	98924	4027	Jacksonia s		4		5 F	-31.7267
	98929	4027	Jacksonia s		4		9 A	-31.7745
	98930	4027	Jacksonia s		4		9 B	-31.7738
	95536	25819	Marianthu: T		CR		2	-31.7359
	103688	17543	Sarcozona		3		1 A	-31.7363
	103689	17543	Sarcozona		3		1 B	-31.7362

Gda94Long	PopStatus	Location	District	Vesting	Purpose1	Purpose2	CountDate	Method
115.807		Lake edge,	SWAN COA	PRI			#####	
115.7874		UCL land.	RSWAN COA	NON	UCL		#####	
115.7514		Private Pro	SWAN COA	PRI			#####	
115.7208		Crown Res	SWAN COA	LGA	REC		#####	
115.7216		Crown Res	SWAN COA	LGA	REC		#####	
115.7931		Lake Joond	SWAN COA	LGA	PAR	REC	#####	
115.7692		[PP Lot 805	SWAN COA	PRI			#####	
115.7736		Between Jc	SWAN COA	NON	UCL		#####	
115.7734		[PP Lot 807	SWAN COA	PRI			#####	
115.7496		[Crown Res	SWAN COA	RAI	RRE		#####	
115.7503		700 - 900 n	SWAN COA	MRD	VER		#####	
115.7509		700 m S of	SWAN COA	MRD	VER		#####	
115.7513		1 km S of B	SWAN COA	MRD	VER		#####	
115.7502		[Crown res	SWAN COA	RAI	RRE		#####	
115.7501		[Private Pr	SWAN COA	PRI			#####	
115.7836		N verge of	SWAN COA	LGA	VER		#####	ESTMT
115.7829		NW corner	SWAN COA	PRI			#####	ESTMT
115.7208		Iluka Coast	SWAN COA	LGA	PAR		#####	ACT_IND
115.7211		Coastal Res	SWAN COA	LGA	REC		#####	
115.7217		[Crown Res	SWAN COA	LGA	REC		#####	ESTMT

MatureCo	JuvenileCo	SeedlingCo	LiveTotal	PlantTypeC	AreaOccup	inFlower	Population
0			0			N	
0			0			N	
0			0			N	
0			0			Y	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
0			0			N	
280			280			N	
7200			7200			N	
9			0	PLANTS		Y	HEALTHY
0			0			N	
0			25			Y	

APPENDIX 2

Naturemap report

NatureMap Species Report

Created By Jackalyn Hams on 10/03/2016

Current Names Only Yes
 Core Datasets Only Yes
 Method 'By Circle'
 Centre 115°45' 56" E,31°44' 12" S
 Buffer 4km
 Group By Conservation Status

Conservation Status	Species	Records
Non-conservation taxon	800	11707
Other specially protected fauna	3	8
Priority 1	2	4
Priority 2	5	9
Priority 3	6	13
Priority 4	4	75
Priority 5	2	8
Protected under international agreement	11	234
Rare or likely to become extinct	10	83
TOTAL	843	12141

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Rare or likely to become extinct				
1.	24345 <i>Botaurus poiciloptilus</i> (Australasian Bittern)		T	
2.	1596 <i>Caladenia huegellii</i> (Grand Spider Orchid)		T	
3.	24784 <i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
4.	24733 <i>Calyptrorhynchus baidinii</i> (Baudin's Cockatoo (long-billed black-cockatoo), Baudin's Cockatoo)		T	
5.	24734 <i>Calyptrorhynchus latirostris</i> (Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo)		T	
6.	25335 <i>Caretta caretta</i> (Loggerhead Turtle)		T	
7.	25819 <i>Marianthus paralius</i>		T	
8.	24098 <i>Phascogale calura</i> (Red-tailed Phascogale, Kenngoor)		T	
9.	24530 <i>Sterna nereis subsp. nereis</i> (Fairy Tern)		T	
Protected under international agreement				
10.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
11.	25554 <i>Apus pacificus</i> (Fork-tailed Swift)		IA	
12.	25558 <i>Ardea ibis</i> (Cattle Egret)		IA	
13.	41324 <i>Ardea modesta</i> (Eastern Great Egret)		IA	
14.	24788 <i>Calidris ruficollis</i> (Red-necked Stint)		IA	
15.	25575 <i>Charadrius leschenaultii</i> (Greater Sand Plover)		IA	
16.	24293 <i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)		IA	
17.	25741 <i>Limosa limosa</i> (Black-tailed Godwit)		IA	
18.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)		IA	
19.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
20.	24808 <i>Tringa nebularia</i> (Common Greenshank)		IA	
Other specially protected fauna				
21.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
22.	24475 <i>Falco peregrinus subsp. macropus</i> (Australian Peregrine Falcon)		S	
23.	25240 <i>Morelia spilota subsp. imbricata</i> (Carpet Python)		S	
Priority 1				
24.	34161 <i>Baeckea sp. Limestone</i> (N. Gibson & M.N. Lyons 1425)		P1	
25.	24347 <i>Ixobrychus flavicollis subsp. australis</i> (Australian Black Bittern)		P1	
Priority 2				
26.	3237 <i>Acacia benthamii</i>		P2	
27.	35317 <i>Austrostipa mundula</i>		P2	
28.	20162 <i>Fabronia hampeana</i>		P2	
29.	35581 <i>Tetralia sp. Chandala</i> (G.J. Keighery 17055)		P2	
30.	1717 <i>Thelymitra variegata</i> (Queen of Sheba)		P2	
Priority 3				

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
31.	1425 <i>Conostylis bracteata</i>		P3	
32.	5038 <i>Lasiopetalum membranaceum</i>		P3	
33.	25249 <i>Neelaps calonotos</i> (Black-striped Snake)		P3	
34.	5237 <i>Pimelea calcicola</i>		P3	
35.	17543 <i>Sarcozona bicarinata</i>		P3	
36.	25800 <i>Stylidium paludicola</i>		P3	
Priority 4				
37.	4027 <i>Jacksonia sericea</i> (Waldjumi)		P4	
38.	24133 <i>Macropus irma</i> (Western Brush Wallaby)		P4	
39.	24328 <i>Oxyura australis</i> (Blue-billed Duck)		P4	
40.	33992 <i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
Priority 5				
41.	25478 <i>Isoodon obesulus</i> (Southern Brown Bandicoot)		P5	
42.	24153 <i>Isoodon obesulus</i> subsp. <i>fusciventer</i> (Quenda, Southern Brown Bandicoot)		P5	
Non-conservation taxon				
43.	15466 <i>Acacia applanata</i>			
44.	3262 <i>Acacia cochlearis</i> (Rigid Wattle)			
45.	3282 <i>Acacia cyclops</i> (Coastal Wattle)			
46.	11611 <i>Acacia lasiocarpa</i> var. <i>lasiocarpa</i>			
47.	17861 <i>Acacia longifolia</i>	Y		
48.	15481 <i>Acacia pulchella</i> var. <i>glaberrima</i>			
49.	3525 <i>Acacia rostellifera</i> (Summer-scented Wattle)			
50.	3527 <i>Acacia saligna</i> (Orange Wattle, Kudjong)			
51.	30032 <i>Acacia saligna</i> subsp. <i>saligna</i>			
52.	3541 <i>Acacia sessilis</i>			
53.	3584 <i>Acacia truncata</i>			
54.	3602 <i>Acacia willdenowiana</i> (Grass Wattle)			
55.	24559 <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)			
56.	<i>Acanthiza</i> (<i>Acanthiza</i>) <i>apicalis</i> subsp. <i>apicalis</i>			
57.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
58.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
59.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
60.	1208 <i>Acanthocarpus preissii</i>			
61.	<i>Acantholophus amycteroides</i>			
62.	<i>Acantholophus humeralis</i>			
63.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
64.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
65.	24281 <i>Accipiter cirrocephalus</i> subsp. <i>cirrocephalus</i> (Collared Sparrowhawk)			
66.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
67.	17774 <i>Acetosella vulgaris</i>	Y		
68.	42368 <i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
69.	25755 <i>Acrocephalus australis</i> (Australian Reed Warbler)			
70.	11837 <i>Adenanthos cygnorum</i> subsp. <i>cygnorum</i> (Common Woollybush)			
71.	1790 <i>Adenanthos meisneri</i>			
72.	<i>Adversaeschna brevistyla</i>			
73.	<i>Agraptocorixa eurynome</i>			
74.	184 <i>Aira caryophyllea</i> (Silvery Hairgrass)	Y		
75.	<i>Aleurodiscus</i> sp.			
76.	1728 <i>Allocasuarina fraseriana</i> (Sheoak, Kondil)			
77.	2652 <i>Alternanthera nodiflora</i> (Common Joyweed)			
78.	2653 <i>Alternanthera pungens</i> (Khaki Weed)	Y		
79.	<i>Alternaria</i> sp.			
80.	6565 <i>Alyxia buxifolia</i> (Dysentery Bush)			
81.	<i>Amanita</i> sp.			
82.	25840 <i>Amaranthus blitum</i>	Y		
83.	<i>Amaranthus</i> sp.			
84.	<i>Amblyomma triguttatum</i>			
85.	20184 <i>Amphipogon laguroides</i> subsp. <i>laguroides</i>			
86.	200 <i>Amphipogon turbinatus</i>			
87.	<i>Aname mainae</i>			
88.	<i>Aname tepperi</i>			
89.	24310 <i>Anas castanea</i> (Chestnut Teal)			
90.	24312 <i>Anas gracilis</i> (Grey Teal)			
91.	24313 <i>Anas platyrhynchos</i> (Mallard)			
92.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
93.	<i>Anas</i> sp.			
94.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
95.	6311 <i>Andersonia heterophylla</i>			
96.	11471 <i>Andersonia lehmanniana</i> subsp. <i>lehmanniana</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
97.	<i>Anhinga novaehollandiae</i>			
98.	1409 <i>Anigozanthos humilis</i> (Catspaw)			
99.	11434 <i>Anigozanthos humilis</i> subsp. <i>humilis</i>			
100.	<i>Anisops thienemanni</i>			
101.	<i>Anser anser</i>			
102.	<i>Anser</i> sp.			
103.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
104.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
105.	<i>Antichiropus whistleri</i>			
106.	6210 <i>Apium annuum</i>			
107.	8595 <i>Apium graveolens</i> (Wild Celery)	Y		
108.	24991 <i>Aprasia repens</i> (Sand-plain Worm-lizard)			
109.	<i>Aptorchis</i> sp.			
110.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
111.	25538 <i>Aquila morphnoides</i> (Little Eagle)			
112.	24286 <i>Aquila morphnoides</i> subsp. <i>morphnoides</i> (Little Eagle)			
113.	<i>Archaeosynthemis leachii</i>			
114.	<i>Archaeosynthemis occidentalis</i>			
115.	7838 <i>Arctotheca calendula</i> (Cape Weed)	Y		
116.	38967 <i>Arcyria incarnata</i>			
117.	38969 <i>Arcyria minuta</i>			
118.	38971 <i>Arcyria occidentalis</i>			Y
119.	24340 <i>Ardea novaehollandiae</i> (White-faced Heron)			
120.	24341 <i>Ardea pacifica</i> (White-necked Heron)			
121.	<i>Arenopsaltria fullo</i>			
122.	1264 <i>Arnocrinum preissii</i>			
123.	25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)			
124.	24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)			
125.	20283 <i>Astartea scoparia</i>			
126.	7851 <i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
127.	6323 <i>Astroloma ciliatum</i> (Candle Cranberry)			
128.	6331 <i>Astroloma microcalyx</i> (Native Cranberry)			
129.	6334 <i>Astroloma pallidum</i> (Kick Bush)			
130.	6339 <i>Astroloma xerophyllum</i>			
131.	<i>Austracantha minax</i>			
132.	<i>Austroagrion cyane</i>			
133.	<i>Austrolestes analis</i>			
134.	24318 <i>Aythya australis</i> (Hardhead)			
135.	16346 <i>Bacopa monnieri</i>	Y		
136.	38978 <i>Badhamia panicea</i>			
137.	1800 <i>Banksia attenuata</i> (Slender Banksia, Piara)			
138.	1822 <i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
139.	1830 <i>Banksia littoralis</i> (Swamp Banksia, Pungura)			
140.	1834 <i>Banksia menziesii</i> (Firewood Banksia)			
141.	32077 <i>Banksia sessilis</i> var. <i>cygnorum</i>			
142.	32315 <i>Barbula calycina</i>			
143.	<i>Barnardius zonarius</i>			
144.	741 <i>Baumea articulata</i> (Jointed Rush)			
145.	743 <i>Baumea juncea</i> (Bare Twigrush)			
146.	745 <i>Baumea preissii</i>			
147.	5382 <i>Beaufortia elegans</i>			
148.	25788 <i>Billardiera fraseri</i> (Elegant Pronaya)			
149.	24319 <i>Biziura lobata</i> (Musk Duck)			
150.	749 <i>Bolboschoenus caldwellii</i> (Marsh Club-rush)			
151.	17665 <i>Boronia purdieana</i> subsp. <i>purdieana</i>			
152.	11381 <i>Boronia ramosa</i> subsp. <i>anethifolia</i>			
153.	3710 <i>Bossiaea eriocarpa</i> (Common Brown Pea)			
154.	7867 <i>Brachyscome bellidioides</i>			
155.	7878 <i>Brachyscome iberidifolia</i>			
156.	42381 <i>Brachyuophis semifasciatus</i> (Southern Shovel-nosed Snake)			
157.	11187 <i>Brassica barrelieri</i> subsp. <i>oxyrrhina</i> (Smooth-stem Turnip)	Y		
158.	244 <i>Briza maxima</i> (Blowfly Grass)	Y		
159.	245 <i>Briza minor</i> (Shivery Grass)	Y		
160.	249 <i>Bromus diandrus</i> (Great Brome)	Y		
161.	32331 <i>Bryum lanatum</i>			
162.	12770 <i>Burchardia congesta</i>			
163.	1385 <i>Burchardia multiflora</i> (Dwarf Burchardia)			
164.	25713 <i>Cacatua galerita</i> (Sulphur-crested Cockatoo)			
165.	25714 <i>Cacatua pastinator</i> (Western Long-billed Corella)			
166.	25715 <i>Cacatua roseicapilla</i> (Galah)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
167.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
168.	<i>Cacatua</i> sp.			
169.	24729 <i>Cacatua tenuirostris</i> (Eastern Long-billed Corella)	Y		
170.	25598 <i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
171.	24427 <i>Cacomantis flabelliformis</i> subsp. <i>flabelliformis</i> (Fan-tailed Cuckoo)			
172.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
173.	1276 <i>Caesia micrantha</i> (Pale Grass Lily)			
174.	<i>Cairina moschata</i>			
175.	15330 <i>Caladenia arenicola</i>			
176.	1592 <i>Caladenia flava</i> (Cowslip Orchid)			
177.	15348 <i>Caladenia flava</i> subsp. <i>flava</i>			
178.	15352 <i>Caladenia georgei</i>			
179.	1599 <i>Caladenia latifolia</i> (Pink Fairy Orchid)			
180.	15360 <i>Caladenia longicauda</i> subsp. <i>borealis</i>			
181.	15361 <i>Caladenia longicauda</i> subsp. <i>calcigena</i>			
182.	15377 <i>Caladenia reptans</i> subsp. <i>reptans</i>			
183.	2848 <i>Calandrinia corrigioloides</i> (Strap Purslane)			
184.	19309 <i>Calectasia narragara</i>			
185.	10861 <i>Callistachys lanceolata</i> (Wonnich)			
186.	<i>Calotemognatha varicollis</i>			
187.	<i>Calotemognatha yarelli</i> subsp. <i>yarelli</i>			
188.	5415 <i>Calothamnus lateralis</i>			
189.	5426 <i>Calothamnus quadrifidus</i> (One-sided Bottlebrush, Kwowdjard)			
190.	35816 <i>Calothamnus quadrifidus</i> subsp. <i>quadrifidus</i>			
191.	5429 <i>Calothamnus sanguineus</i> (Silky-leaved Blood flower, Pindak)			
192.	25717 <i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
193.	<i>Calyptorhynchus</i> sp.			
194.	5460 <i>Calytrix fraseri</i> (Pink Summer Calytrix)			
195.	5476 <i>Calytrix sapphirina</i>			
196.	32338 <i>Campylopus introflexus</i>	Y		
197.	<i>Cantareus apertus</i>			
198.	<i>Carassius auratus</i>			
199.	3005 <i>Cardamine hirsuta</i> (Common Bittercress)	Y		
200.	<i>Cardamine</i> sp.			
201.	18555 <i>Cardamine</i> sp. <i>Jandakot</i> (P. Luff s.n. 4/7/1969)	Y		
202.	753 <i>Carex appressa</i> (Tall Sedge)			
203.	754 <i>Carex divisa</i> (Divided Sedge)	Y		
204.	755 <i>Carex fascicularis</i> (Tassel Sedge)			
205.	43241 <i>Carex thecata</i>			
206.	2798 <i>Carpobrotus virescens</i> (Coastal Pigface, Kolboko)			
207.	1162 <i>Cartonema philydroides</i>			
208.	2957 <i>Cassyltha racemosa</i> (Dodder Laurel)			
209.	<i>Castiarina aureola</i>			
210.	<i>Castiarina bazilisca</i>			
211.	<i>Castiarina flaviceps</i>			
212.	<i>Castiarina pallidiventris</i>			
213.	18314 <i>Casuarina cunninghamiana</i> subsp. <i>cunninghamiana</i>	Y		
214.	<i>Catadromus</i> sp.			
215.	13685 <i>Catapodium rigidum</i> (Rigid Fescue)	Y		
216.	6214 <i>Centella asiatica</i>			
217.	1125 <i>Centrolepis drummondiana</i>			
218.	2889 <i>Cerastium glomeratum</i> (Mouse Ear Chickweed)	Y		
219.	32462 <i>Ceratodon purpureus</i> subsp. <i>convolutus</i>			
220.	24086 <i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)			
221.	<i>Cercophonius sulcatus</i>			
222.	18156 <i>Chamaecytisus palmensis</i> (Tagasaste)	Y		
223.	1280 <i>Chamaescilla corymbosa</i> (Blue Squill)			
224.	<i>Chamaelaucium</i> sp.			
225.	5498 <i>Chamaelaucium uncinatum</i> (Geraldton Wax)			
226.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
227.	1513 <i>Chasmanthe floribunda</i> (African Cornflag)	Y		
228.	<i>Chelodina (Macrodiemys) colliei</i>			
229.	43380 <i>Chelodina colliei</i> (Oblong Turtle)			
230.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
231.	2490 <i>Chenopodium glaucum</i> (Glaucous Goosefoot)	Y		
232.	2491 <i>Chenopodium macrospermum</i>	Y		
233.	<i>Cheramoeca leucosterna</i>			
234.	17833 <i>Chordifex microcodon</i>			
235.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
236.	<i>Chroicocephalus novaehollandiae</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
237.	24432 <i>Chrysococcyx lucidus</i> subsp. <i>plagusus</i> (Shining Bronze Cuckoo)			
238.	<i>Chrysopogon melanorrhinus</i>			
239.	24288 <i>Circus approximans</i> (Swamp Harrier)			
240.	24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
241.	<i>Clavibacter</i> sp.			
242.	24396 <i>Climacteris rufa</i> (Rufous Treecreeper)			
243.	<i>Clitocybe</i> sp.			
244.	<i>Cochliobolus</i> sp.			
245.	26675 <i>Codium laminarioides</i>			
246.	<i>Coleosporium</i> sp.			
247.	<i>Colletotrichum acutatum</i>			
248.	<i>Colletotrichum simmondsii</i>			
249.	<i>Colletotrichum</i> sp.			
250.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
251.	24613 <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)			
252.	38771 <i>Coltriciella dependens</i>			
253.	24399 <i>Columba livia</i> (Domestic Pigeon)	Y		
254.	4550 <i>Comesperma calymega</i> (Blue-spike Milkwort)			
255.	15607 <i>Conospermum acerosum</i> subsp. <i>acerosum</i>			
256.	15516 <i>Conospermum canaliculatum</i> subsp. <i>canaliculatum</i>			
257.	1876 <i>Conospermum incurvum</i> (Plume Smokebush)			
258.	6348 <i>Conostephium pendulum</i> (Pearl Flower)			
259.	6349 <i>Conostephium preissii</i>			
260.	1418 <i>Conostylis aculeata</i> (Prickly Conostylis)			
261.	1423 <i>Conostylis aurea</i> (Golden Conostylis)			
262.	1427 <i>Conostylis candicans</i> (Grey Cottonhead)			
263.	1436 <i>Conostylis juncea</i>			
264.	11597 <i>Conostylis setigera</i> subsp. <i>setigera</i>			
265.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
266.	<i>Cormocephalus aurantiipes</i>			
267.	277 <i>Cortaderia selloana</i> (Pampas Grass)	Y		
268.	<i>Cortinarius radicans</i>			
269.	24416 <i>Corvus bennetti</i> (Little Crow)			
270.	25592 <i>Corvus coronoides</i> (Australian Raven)			
271.	<i>Corvus</i> sp.			
272.	17104 <i>Corymbia calophylla</i> (Marri)			
273.	11283 <i>Corynotheca micrantha</i> var. <i>micrantha</i>			
274.	7945 <i>Cotula coronopifolia</i> (Waterbuttons)	Y		
275.	25701 <i>Coturnix ypsilophora</i> (Brown Quail)			
276.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
277.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
278.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
279.	3137 <i>Crassula colorata</i> (Dense Stonecrop)			
280.	3140 <i>Crassula glomerata</i>	Y		
281.	3146 <i>Crassula thunbergiana</i>	Y		
282.	38998 <i>Craterium minutum</i>			
283.	38780 <i>Crepidotus eucalyptorum</i>			
284.	38999 <i>Cribraria argillacea</i>			Y
285.	25400 <i>Crinia insignifera</i> (Squelching Froglet)			
286.	30893 <i>Cryptoblepharus buchananii</i>			
287.	30899 <i>Ctenophorus adelaidensis</i> (Southern Heath Dragon, Western Heath Dragon)			
288.	25027 <i>Ctenotus australis</i>			
289.	25039 <i>Ctenotus fallens</i>			
290.	15114 <i>Cyanicula gemmata</i>			
291.	25087 <i>Cyclodomorphus celatus</i> (Western Slender Blue-tongue)			
292.	24322 <i>Cygnus atratus</i> (Black Swan)			
293.	283 <i>Cynodon dactylon</i> (Couch)	Y		
294.	18318 <i>Cyperus involucratus</i>	Y		
295.	816 <i>Cyperus tenuiflorus</i> (Scaly Sedge)	Y		
296.	10916 <i>Cyrtostylis huegelii</i>			
297.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
298.	7454 <i>Dampiera linearis</i> (Common Dampiera)			
299.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
300.	<i>Darwinocoris australicus</i>			
301.	1218 <i>Dasypogon bromeliifolius</i> (Pineapple Bush)			
302.	6218 <i>Daucus glochidiatus</i> (Australian Carrot)			
303.	3805 <i>Daviesia decurrens</i> (Prickly Bitter-pea)			
304.	18560 <i>Daviesia divaricata</i> subsp. <i>divaricata</i>			
305.	3824 <i>Daviesia nudiflora</i>			
306.	16585 <i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
307.	3832 <i>Daviesia physodes</i>			
308.	<i>Daviesia</i> sp.			
309.	3845 <i>Daviesia triflora</i>			
310.	24999 <i>Delma grayii</i>			
311.	1259 <i>Dianella revoluta</i> (Blueberry Lily)			
312.	25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird)			
313.	306 <i>Dichelachne crinita</i> (Longhair Plumegrass)			
314.	39020 <i>Didymium difforme</i>			
315.	320 <i>Digitaria sanguinalis</i> (Crab Grass)	Y		
316.	<i>Dingosa serrata</i>			
317.	<i>Diplacodes bipunctata</i>			
318.	24929 <i>Diplodactylus granariensis</i> subsp. <i>granariensis</i>			
319.	24939 <i>Diplodactylus polyophthalmus</i>			
320.	4453 <i>Diplolaena angustifolia</i> (Yanchep Rose)			
321.	7054 <i>Dischisma arenarium</i>	Y		
322.	11049 <i>Diuris corymbosa</i>			
323.	12939 <i>Diuris magnifica</i>			
324.	1640 <i>Drakaea glyptodon</i> (King-in-his-carriage)			
325.	3095 <i>Drosera erythrorhiza</i> (Red Ink Sundew)			
326.	3106 <i>Drosera macrantha</i> (Bridal Rainbow)			
327.	14298 <i>Drosera macrantha</i> subsp. <i>macrantha</i>			
328.	3109 <i>Drosera menziesii</i> (Pink Rainbow)			
329.	11853 <i>Drosera menziesii</i> subsp. <i>menziesii</i>			
330.	13216 <i>Drosera menziesii</i> subsp. <i>penicillaris</i>			
331.	3116 <i>Drosera omissa</i> (Bright Sundew)			
332.	32351 <i>Eccremidium pulchellum</i>			
333.	25251 <i>Echiopsis curta</i> (Bardick)			
334.	25100 <i>Egernia napoleonis</i>			
335.	<i>Egretta garzetta</i>			
336.	<i>Egretta novaehollandiae</i>			
337.	11485 <i>Ehrharta brevifolia</i> var. <i>cuspidata</i>	Y		
338.	349 <i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
339.	<i>Elanus axillaris</i>			
340.	24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
341.	25250 <i>Elapognathus coronatus</i> (Crowned Snake)			
342.	<i>Eiseyornis melanops</i>			
343.	1643 <i>Elythranthera brunonis</i> (Purple Enamel Orchid)			
344.	<i>Encarsia formosa</i>			
345.	<i>Encarsia sophia</i>			
346.	<i>Eodelena convexa</i>			
347.	<i>Eolophus roseicapillus</i>			
348.	6132 <i>Epilobium ciliatum</i>	Y		
349.	6133 <i>Epilobium hirtigerum</i> (Hairy Willow Herb)			
350.	14289 <i>Epilobium tetragonum</i> subsp. <i>tetragonum</i>	Y		
351.	24567 <i>Epthianura albifrons</i> (White-fronted Chat)			
352.	376 <i>Eragrostis curvula</i> (African Lovegrass)	Y		
353.	14104 <i>Eremaea pauciflora</i> var. <i>pauciflora</i>			
354.	7215 <i>Eremophila glabra</i> (Tar Bush)			
355.	<i>Eretmocerus warrae</i>			
356.	<i>Eriophora biapicata</i>			
357.	4333 <i>Erodium cicutarium</i> (Common Storksbill)	Y		
358.	15446 <i>Eryngium pinnatifidum</i> subsp. <i>pinnatifidum</i>			
359.	24379 <i>Erythrogonyx cinctus</i> (Red-kneed Dotterel)			
360.	<i>Ethmostigmus rubripes</i>			
361.	5649 <i>Eucalyptus foecunda</i> (Narrow-leaved Red Mallee)			
362.	5708 <i>Eucalyptus marginata</i> (Jarrah, Djara)			
363.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
364.	13541 <i>Eucalyptus petrensis</i>			
365.	5763 <i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
366.	5790 <i>Eucalyptus totidiana</i> (Coastal Blackbutt)			
367.	3872 <i>Euchilopsis linearis</i> (Swamp Pea)			
368.	<i>Euomus insculptus</i>			
369.	4638 <i>Euphorbia peplus</i> (Petty Spurge)	Y		
370.	4648 <i>Euphorbia terracina</i> (Geraldton Carnation Weed)	Y		
371.	25621 <i>Falco berigora</i> (Brown Falcon)			
372.	25622 <i>Falco cenchroides</i> (Australian Kestrel)			
373.	24472 <i>Falco cenchroides</i> subsp. <i>cenchrionides</i> (Australian Kestrel)			
374.	25623 <i>Falco longipennis</i> (Australian Hobby)			
375.	24616 <i>Faluncululus frontatus</i> subsp. <i>leucogaster</i> (Western Shrike-tit, Crested Shrike-tit)			
376.	24041 <i>Felis catus</i> (Cat)	Y		

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377.	32369 <i>Fissidens tenellus</i>			
378.	25727 <i>Fulca atra</i> (Eurasian Coot)			
379.	<i>Fusarium</i> sp.			
380.	11571 <i>Galenia pubescens</i> var. <i>pubescens</i>	Y		
381.	7976 <i>Galinsoga parviflora</i> (Potato Weed)	Y		
382.	7323 <i>Galium murale</i> (Small Goosegrass)	Y		
383.	25729 <i>Gallinula tenebrosa</i> (Dusky Moorhen)			
384.	24763 <i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
385.	25730 <i>Gallirallus philippensis</i> (Buff-banded Rail)			
386.	<i>Gambusia affinis</i>			
387.	20475 <i>Gastrolobium capitatum</i>			
388.	20483 <i>Gastrolobium linearifolium</i>			
389.	20482 <i>Gastrolobium nervosum</i>			
390.	16311 <i>Gazania linearis</i>	Y		
391.	32380 <i>Gemmabryum pachytheicum</i>			
392.	32381 <i>Gemmabryum preissianum</i>			
393.	4341 <i>Geranium solanderi</i> (Native Geranium)			
394.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
395.	1520 <i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
396.	<i>Gladiolus</i> sp.			
397.	33620 <i>Glischrocaryon angustifolium</i>			
398.	24735 <i>Glossopsitta porphyrocephala</i> (Purple-crowned Lorikeet)			
399.	<i>Gnomonia</i> sp.			
400.	11051 <i>Gomphocarpus physocarpus</i>	Y		
401.	11083 <i>Gompholobium scabrum</i>			
402.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
403.	6161 <i>Gonocarpus pithyoides</i>			
404.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
405.	1982 <i>Grevillea crithmifolia</i>			
406.	15839 <i>Grevillea preissii</i> subsp. <i>preissii</i>			
407.	12824 <i>Grevillea vestita</i> subsp. <i>vestita</i>			
408.	5011 <i>Guichenotia ledifolia</i>			
409.	<i>Gymnomyces costatisporus</i>			
410.	<i>Gymnopilus allantopus</i>			
411.	1468 <i>Haemodorum laxum</i>			
412.	2146 <i>Hakea costata</i> (Ribbed Hakea)			
413.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
414.	2197 <i>Hakea prostrata</i> (Harsh Hakea)			
415.	2214 <i>Hakea trifurcata</i> (Two-leaf Hakea)			
416.	24295 <i>Haliastur sphenurus</i> (Whistling Kite)			
417.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
418.	38791 <i>Hebeloma crustuliniforme</i>			
419.	<i>Helea perforata</i>			
420.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
421.	<i>Helicoverpa armigera</i>			
422.	3016 <i>Heliophila pusilla</i>	Y		
423.	8084 <i>Helminthotheca echioides</i>	Y		
424.	439 <i>Hemarthria uncinata</i> (Matgrass)			
425.	6836 <i>Hemiandra incana</i>			
426.	6839 <i>Hemiandra pungens</i> (Snakebush)			
427.	25119 <i>Hemiergis quadriineata</i>			
428.	<i>Henicops dentatus</i>			
429.	1293 <i>Hensmania turbinata</i>			
430.	5112 <i>Hibbertia aurea</i>			
431.	5134 <i>Hibbertia huegelii</i>			
432.	5135 <i>Hibbertia hypericoides</i> (Yellow Buttercups)			
433.	5154 <i>Hibbertia perfoliata</i>			
434.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
435.	43280 <i>Hibbertia sericosepala</i>			
436.	5173 <i>Hibbertia subvaginata</i>			
437.	25734 <i>Himantopus himantopus</i> (Black-winged Stilt)			
438.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
439.	25629 <i>Hirundo nigricans</i> (Tree Martin)			
440.	<i>Hogna crispipes</i>			
441.	444 <i>Holcus lanatus</i> (Yorkshire Fog)	Y		
442.	445 <i>Holcus setiger</i> (Annual Fog)	Y		
443.	6222 <i>Homaloscladium homalocarpum</i>			
444.	449 <i>Hordeum leporinum</i> (Barley Grass)	Y		
445.	3966 <i>Hovea pungens</i> (Devil's Pins, Puyenak)			
446.	3968 <i>Hovea trisperma</i> (Common Hovea)			

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447.	5216 <i>Hybanthus calycinus</i> (Wild Violet)			
448.	6226 <i>Hydrocotyle callicarpa</i> (Small Pennywort)			
449.	6229 <i>Hydrocotyle diantha</i>			
450.	<i>Hydroprogne caspia</i>			
451.	<i>Hymenochaete</i> sp.			
452.	5817 <i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
453.	5825 <i>Hypocalymma robustum</i> (Swan River Myrtle)			
454.	8086 <i>Hypochaeris glabra</i> (Smooth Catsear)	Y		
455.	<i>Idiommata blackwallii</i>			
456.	<i>Idiosoma sigillatum</i>			
457.	<i>Ischnura aurora</i>			
458.	20200 <i>Isolepis cernua</i> var. <i>setiformis</i>			
459.	917 <i>Isolepis marginata</i> (Coarse Club-rush)			
460.	<i>Isometroides vesucus</i>			
461.	<i>Isopeda leishmanni</i>			
462.	3992 <i>Isotropis cuneifolia</i> (Granny Bonnets)			
463.	<i>Ixobrychus dubius</i>			
464.	4010 <i>Jacksonia floribunda</i> (Holly Pea)			
465.	4012 <i>Jacksonia furcellata</i> (Grey Stinkwood)			
466.	4029 <i>Jacksonia sternbergiana</i> (Stinkwood, Kapur)			
467.	1188 <i>Juncus pallidus</i> (Pale Rush)			
468.	<i>Kaloterme aemulus</i>			
469.	4044 <i>Kennedia prostrata</i> (Scarlet Runner)			
470.	20019 <i>Lachnagrostis filiformis</i>			
471.	8096 <i>Lactuca serriola</i> (Prickly Lettuce)	Y		
472.	18585 <i>Lagenophora huegelii</i>			
473.	467 <i>Lagurus ovatus</i> (Hare's Tail Grass)	Y		
474.	<i>Lampona cylindrata</i>			
475.	25637 <i>Larus novaehollandiae</i> (Silver Gull)			
476.	25638 <i>Larus pacificus</i> (Pacific Gull)			
477.	4052 <i>Latrobea tenella</i>			
478.	<i>Latrodectus hasseltii</i>			
479.	11911 <i>Laxmannia ramosa</i> subsp. <i>ramosa</i>			
480.	1309 <i>Laxmannia squarrosa</i>			
481.	7568 <i>Lechenaultia biloba</i> (Blue Leschenaultia)			
482.	7574 <i>Lechenaultia floribunda</i> (Free-flowering Leschenaultia)			
483.	6880 <i>Leonotis leonurus</i> (Lion's Ear)	Y		
484.	925 <i>Lepidosperma angustatum</i>			
485.	937 <i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
486.	938 <i>Lepidosperma persecans</i>			
487.	944 <i>Lepidosperma scabrum</i>			
488.	15418 <i>Leptoceras menziesii</i>			
489.	2350 <i>Leptomeria pauciflora</i> (Sparse-flowered Currant Bush)			
490.	25133 <i>Lerista elegans</i>			
491.	25148 <i>Lerista lineopunctulata</i>			
492.	25165 <i>Lerista praepedita</i>			
493.	19821 <i>Lessertia frutescens</i>	Y		
494.	6360 <i>Leucopogon australis</i> (Spiked Beard-heath)			
495.	6405 <i>Leucopogon insularis</i>			
496.	6425 <i>Leucopogon oxycedrus</i>			
497.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
498.	6434 <i>Leucopogon polymorphus</i>			
499.	6436 <i>Leucopogon propinquus</i>			
500.	<i>Leucopogon</i> sp.			
501.	19579 <i>Leucopogon</i> sp. <i>Murdoch</i> (M. Hislop 1037)			
502.	40803 <i>Leucopogon squarrosus</i> subsp. <i>squarrosus</i>			
503.	25005 <i>Lialis burtonis</i>			
504.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
505.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
506.	6489 <i>Limonium sinuatum</i> (Perennial Sea Lavender)	Y		
507.	36160 <i>Liparophyllum capitatum</i>			
508.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
509.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
510.	7408 <i>Lobelia tenuior</i> (Slender Lobelia)			
511.	36860 <i>Lobelia tenuior</i> subsp. <i>dictyosperma</i>			
512.	475 <i>Lolium multiflorum</i> (Italian Ryegrass)	Y		
513.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
514.	1228 <i>Lomandra hermaphrodita</i>			
515.	1231 <i>Lomandra maritima</i>			
516.	1232 <i>Lomandra micrantha</i> (Small-flower Mat-rush)			

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517.	1234 <i>Lomandra nigricans</i>			
518.	1239 <i>Lomandra preissii</i>			
519.	1243 <i>Lomandra sericea</i> (Silky Mat Rush)			
520.	1246 <i>Lomandra suaveolens</i>			
521.	<i>Lophoictinia isura</i>			
522.	10900 <i>Lycopersicon esculentum</i>	Y		
523.	6456 <i>Lysinema ciliatum</i> (Curry Flower)			
524.	34736 <i>Lysinema pentapetalum</i>			
525.	5281 <i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
526.	2838 <i>Macarthuria apetala</i>			
527.	24690 <i>Macronectes giganteus</i> (Southern Giant Petrel)			
528.	<i>Macrophomina</i> sp.			
529.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
530.	85 <i>Macrozamia riedlei</i> (Zamia, Djiridji)			
531.	24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
532.	25651 <i>Malurus lamberti</i> (Variegated Fairy-wren)			
533.	25652 <i>Malurus leucopterus</i> (White-winged Fairy-wren)			
534.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
535.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
536.	4079 <i>Medicago polymorpha</i> (Burr Medic)	Y		
537.	25758 <i>Megalurus gramineus</i> (Little Grassbird)			
538.	34676 <i>Meionectes brownii</i> (Swamp Raspswort)			
539.	5887 <i>Melaleuca cardiophylla</i> (Tangling Melaleuca)			
540.	5920 <i>Melaleuca huegelii</i> (Chenille Honey-myrtle)			
541.	13271 <i>Melaleuca huegelii</i> subsp. <i>huegelii</i>			
542.	5921 <i>Melaleuca incana</i> (Grey Honey-myrtle)			
543.	5952 <i>Melaleuca preissiana</i> (Moonah)			
544.	5959 <i>Melaleuca rhaphiophylla</i> (Swamp Paperbark)			
545.	5964 <i>Melaleuca seriata</i>			
546.	18598 <i>Melaleuca systema</i>			
547.	5978 <i>Melaleuca teretifolia</i> (Banbar)			
548.	5983 <i>Melaleuca trichophylla</i>			
549.	4516 <i>Melia azedarach</i> (White Cedar)			
550.	4085 <i>Melilotus indicus</i>	Y		
551.	25663 <i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
552.	<i>Melobasis gloriosa</i>			
553.	<i>Melobasis wannerua</i>			
554.	25184 <i>Menetia greyii</i>			
555.	955 <i>Mesomelaena pseudostygia</i>			
556.	<i>Microcarbo melanoleucos</i>			
557.	25693 <i>Microeca fascinans</i> (Jacky Winter)			
558.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
559.	15419 <i>Microtis media</i> subsp. <i>media</i>			
560.	8105 <i>Millotia myosotidifolia</i>			
561.	8106 <i>Millotia tenuifolia</i> (Soft Millotia)			
562.	4100 <i>Mirbelia spinosa</i>			
563.	<i>Missulena granulosa</i>			
564.	29418 <i>Monoculus monstrosus</i>	Y		
565.	19179 <i>Moraea flaccida</i> (One-leaf Cape Tulip)	Y		
566.	25192 <i>Morethia obscura</i>			
567.	<i>Morus serrator</i>			
568.	2415 <i>Muehlenbeckia polybotrya</i>			
569.	24223 <i>Mus musculus</i> (House Mouse)	Y		
570.	25610 <i>Myiagra inquieta</i> (Restless Flycatcher)			
571.	25420 <i>Myobatrachus gouldii</i> (Turtle Frog)			
572.	7289 <i>Myoporum caprarioides</i> (Slender Myoporum)			
573.	7291 <i>Myoporum insulare</i> (Blueberry Tree, boobialla)			
574.	6199 <i>Myriophyllum tillaeoides</i>			
575.	25248 <i>Neelaps bimaculatus</i> (Black-naped Snake)			
576.	24738 <i>Neophema elegans</i> (Elegant Parrot)			
577.	25748 <i>Ninox novaeseelandiae</i> (Boobook Owl)			
578.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
579.	2401 <i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
580.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			
581.	<i>Ocrisiona leucomis</i>			
582.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
583.	16390 <i>Oenothera drummondii</i> subsp. <i>drummondii</i>	Y		
584.	8127 <i>Olearia axillaris</i> (Coastal Daisybush)			
585.	8149 <i>Olearia rudis</i> (Rough Daisybush)			
586.	7122 <i>Orobanche minor</i> (Lesser Broomrape)	Y		

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587.	<i>Orithrum caledonicum</i>			
588.	11749 <i>Orthrosanthus laxus</i> var. <i>laxus</i> (Morning Iris)			
589.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
590.	25679 <i>Pachycephala pectoralis</i> (Golden Whistler)			
591.	24623 <i>Pachycephala pectoralis</i> subsp. <i>fuliginosa</i> (Golden Whistler)			
592.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
593.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
594.	24693 <i>Pachyptila desolata</i> (Antarctic Prion)			
595.	<i>Pachysaga australis</i>			
596.	<i>Pandion cristatus</i>			
597.	<i>Panus fasciatus</i>			
598.	25253 <i>Parasuta gouldii</i>			
599.	25255 <i>Parasuta nigriceps</i>			
600.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
601.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
602.	1762 <i>Parietaria debilis</i> (Pellitory)			
603.	532 <i>Paspalum urvillei</i> (Vasey Grass)	Y		
604.	<i>Passalora</i> sp.			Y
605.	25687 <i>Passer domesticus</i> (House Sparrow)	Y		
606.	24641 <i>Passer domesticus</i> subsp. <i>domesticus</i> (House Sparrow)	Y		Y
607.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
608.	30472 <i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
609.	4343 <i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
610.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
611.	<i>Perenniporia</i> sp.			
612.	16477 <i>Pericalymma ellipticum</i> var. <i>ellipticum</i>			
613.	39057 <i>Perichaena corticalis</i>			
614.	39058 <i>Perichaena depressa</i>			
615.	39059 <i>Perichaena vermicularis</i>			
616.	<i>Peronospora</i> sp.			
617.	13911 <i>Persicaria decipiens</i>			
618.	16984 <i>Persicaria lapathifolia</i>	Y		
619.	2273 <i>Persoonia saccata</i> (Snottygobble)			
620.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
621.	24660 <i>Petroica multicolor</i> subsp. <i>campbelli</i> (Scarlet Robin)			
622.	20368 <i>Petrophile axillaris</i>			
623.	2286 <i>Petrophile brevifolia</i>			
624.	2299 <i>Petrophile linearis</i> (Pixie Mops)			
625.	2301 <i>Petrophile macrostachya</i>			
626.	2309 <i>Petrophile serruriae</i>			
627.	<i>Phaeomarasmus</i> sp.			
628.	25697 <i>Phalacrocorax carbo</i> (Great Cormorant)			
629.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
630.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
631.	25699 <i>Phalacrocorax varius</i> (Pied Cormorant)			
632.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
633.	18529 <i>Philotheca spicata</i> (Pepper and Salt)			
634.	1478 <i>Phlebocarya ciliata</i>			
635.	<i>Phoracantha semipunctatus</i>			
636.	6734 <i>Phyla nodiflora</i> var. <i>nodiflora</i>	Y		
637.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
638.	4675 <i>Phyllanthus calycinus</i> (False Boronia)			
639.	17794 <i>Phyllanthus tenellus</i>	Y		
640.	<i>Physa acuta</i>			
641.	39077 <i>Physarum straminipes</i>			Y
642.	2793 <i>Phytolacca octandra</i> (Red Ink Plant)	Y		
643.	<i>Phytophthora</i> sp.			
644.	5232 <i>Pimelea argentea</i> (Silvery Leaved Pimelea)			
645.	5244 <i>Pimelea floribunda</i>			
646.	5254 <i>Pimelea leucantha</i>			
647.	5268 <i>Pimelea sulphurea</i> (Yellow Banjine)			
648.	18352 <i>Pithocarpa pulchella</i> var. <i>melanostigma</i>			
649.	18353 <i>Pithocarpa pulchella</i> var. <i>pulchella</i>			
650.	<i>Pittosporum multiflorum</i>			
651.	7304 <i>Plantago major</i> (Greater Plantain)	Y		
652.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
653.	24842 <i>Platalea regia</i> (Royal Spoonbill)			
654.	<i>Platycephalus endrachtensis</i>			
655.	<i>Platycephalus</i> sp.			
656.	24747 <i>Platycercus spurius</i> (Red-capped Parrot)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
657.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
658.	25007 <i>Pletholax gracilis</i> subsp. <i>gracilis</i> (Keeled Legless Lizard)			
659.	571 <i>Poa annua</i> (Winter Grass)	Y		
660.	578 <i>Poa porphyroclados</i>			
661.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
662.	24679 <i>Podargus strigoides</i> subsp. <i>brachypterus</i> (Tawny Frogmouth)			
663.	25704 <i>Podiceps cristatus</i> (Great Crested Grebe)			
664.	24680 <i>Podiceps cristatus</i> subsp. <i>australis</i> (Great Crested Grebe)			
665.	8175 <i>Podolepis gracilis</i> (Slender Podolepis)			
666.	8179 <i>Podolepis nutans</i> (Nodding Podolepis)			
667.	8183 <i>Podotheca chrysantha</i> (Yellow Podotheca)			
668.	8184 <i>Podotheca gnaphalioides</i> (Golden Long-heads)			
669.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
670.	24681 <i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)			
671.	582 <i>Polypogon monspeliensis</i> (Annual Beardgrass)	Y		
672.	25722 <i>Polytelis anthopeplus</i> (Regent Parrot)			
673.	4689 <i>Poranthera ericoides</i> (Heath Poranthera)			
674.	4691 <i>Poranthera microphylla</i> (Small Poranthera)			
675.	<i>Poronia</i> sp.			
676.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
677.	24767 <i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
678.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
679.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
680.	1672 <i>Prasophyllum fimbria</i> (Fringed Leek Orchid)			
681.	1676 <i>Prasophyllum hians</i> (Yawning Leek Orchid)			
682.	<i>Psaldus</i> sp.			Y
683.	<i>Pseudogobius olorum</i>			
684.	25511 <i>Pseudonaja affinis</i> (Dugite)			
685.	25259 <i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
686.	25433 <i>Pseudophryne guentheri</i> (Crawling Toadlet)			
687.	38830 <i>Psilocybe coprophila</i>			
688.	<i>Pterohelaeus guerini</i>			
689.	<i>Pterohelaeus parallelus</i>			
690.	<i>Pterostylis</i> aff. <i>nana</i>			
691.	17267 <i>Pterostylis brevisepala</i>			
692.	12217 <i>Pterostylis sanguinea</i>			
693.	42340 <i>Ptilotula ornatus</i> (Yellow-plumed Honeyeater)			
694.	2718 <i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)			
695.	11260 <i>Ptilotus drummondii</i> var. <i>drummondii</i> (Pussytail)			
696.	2742 <i>Ptilotus manglesii</i> (Pom Poms, Mulamula)			
697.	15856 <i>Ptilotus sericostachyus</i> subsp. <i>sericostachyus</i>			
698.	<i>Puccinia</i> sp.			
699.	<i>Pucciniastrum</i> sp.			
700.	4181 <i>Pultenaea reticulata</i>			
701.	<i>Purpureicephalus spurius</i>			
702.	<i>Pycnopus coccineus</i>			
703.	25008 <i>Pygopus lepidopodus</i> (Common Scaly Foot)			
704.	8195 <i>Quinetia urvillei</i>			
705.	32480 <i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>			
706.	24243 <i>Rattus fuscipes</i> (Western Bush Rat)			
707.	24245 <i>Rattus rattus</i> (Black Rat)	Y		
708.	24776 <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
709.	6012 <i>Regelia ciliata</i>			
710.	6014 <i>Regelia inops</i>			
711.	18547 <i>Rhadinothamnus anceps</i>			
712.	11341 <i>Rhagodia baccata</i> subsp. <i>baccata</i>			
713.	25613 <i>Rhipidura fuliginosa</i> (Grey Fantail)			
714.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
715.	24454 <i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)			
716.	<i>Rhizoctonia</i> sp.			
717.	4703 <i>Ricinocarpos tuberculatus</i>			
718.	19942 <i>Ricinocarpos undulatus</i>			
719.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
720.	44608 <i>Rosulabryum billardieri</i>			
721.	38835 <i>Royoporus badius</i>			
722.	40426 <i>Rytidosperma occidentale</i>			
723.	7603 <i>Scaevola canescens</i> (Grey Scaevola)			
724.	7606 <i>Scaevola crassifolia</i> (Thick-leaved Fan-flower)			
725.	7614 <i>Scaevola globulifera</i>			
726.	7626 <i>Scaevola nitida</i> (Shining Fanflower)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
727.	12585 <i>Scaevola repens</i>			
728.	13181 <i>Scaevola repens</i> var. <i>angustifolia</i>			
729.	13152 <i>Scaevola thesioides</i> subsp. <i>thesioides</i>			
730.	<i>Scaraphites</i> sp.			
731.	<i>Schedorhinotermes reticulatus</i>			
732.	11027 <i>Schinus terebinthifolius</i>	Y		
733.	<i>Schizophyllum commune</i>			
734.	969 <i>Schoenoplectus validus</i> (Lake Club-rush)			
735.	982 <i>Schoenus clandestinus</i>			
736.	984 <i>Schoenus curvifolius</i>			
737.	992 <i>Schoenus grandiflorus</i> (Large Flowered Bogrush)			
738.	1016 <i>Schoenus subbarbatus</i> (Bearded Bog-rush)			
739.	<i>Sclerotinia</i> sp.			
740.	8220 <i>Senecio vulgaris</i> (Common Groundsel)	Y		
741.	25534 <i>Sericornis frontalis</i> (White-browed Scrubwren)			
742.	<i>Setosphaeria</i> sp.			Y
743.	8225 <i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
744.	25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
745.	<i>Simoselaps semifasciatus</i>			
746.	30948 <i>Smicromis brevisrostris</i> (Weebill)			
747.	<i>Solanum lycopersicum</i>			
748.	7022 <i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
749.	<i>Solanum physalifolium</i> var. <i>nitidibaccatum</i>			
750.	7037 <i>Solanum symonii</i>			
751.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
752.	1312 <i>Sowerbaea laxiflora</i> (Purple Tassels)			
753.	635 <i>Sporobolus virginicus</i> (Marine Couch)			
754.	4828 <i>Spyridium globulosum</i> (Basket Bush)			
755.	9069 <i>Stackhousia huegelii</i>			
756.	2918 <i>Stellaria media</i> (Chickweed)	Y		
757.	15066 <i>Stenanthemum notiale</i> subsp. <i>chamelum</i>			
758.	19403 <i>Stenopetalum gracile</i>			
759.	38840 <i>Stereum hirsutum</i>			
760.	24329 <i>Stictonetta naevosa</i> (Freckled Duck)			
761.	2316 <i>Stirlingia latifolia</i> (Blueboy)			
762.	25597 <i>Strepera versicolor</i> (Grey Currawong)			
763.	25589 <i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
764.	25590 <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
765.	24942 <i>Strophurus spinigerus</i> subsp. <i>spinigerus</i>			
766.	<i>Strumatophyma verrucosa</i>			
767.	7679 <i>Stylidium adpressum</i> (Trigger-on-stilts)			
768.	25831 <i>Stylidium araeophyllum</i> (Stilt Walker)			
769.	7693 <i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
770.	7696 <i>Stylidium calcaratum</i> (Book Triggerplant)			
771.	7710 <i>Stylidium cygnorum</i>			
772.	11808 <i>Stylidium diuroides</i> subsp. <i>diuroides</i>			
773.	25829 <i>Stylidium neurophyllum</i> (Coastal Plain Triggerplant)			
774.	7774 <i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
775.	15532 <i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>			
776.	32437 <i>Syntrichia antarctica</i>			
777.	32438 <i>Syntrichia pagorum</i>			
778.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
779.	24207 <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
780.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
781.	<i>Temognatha mitchellii</i>			
782.	<i>Temognatha</i> sp.			
783.	4256 <i>Templetonia retusa</i> (Cockies Tongues)			
784.	2791 <i>Tersonia cyathiflora</i> (Button Creeper)			
785.	40680 <i>Tetragonia tetragonioides</i> (New Zealand Spinach)			
786.	20649 <i>Tetrapanax papyrifer</i>	Y		Y
787.	1036 <i>Tetralia octandra</i>			
788.	4535 <i>Tetralthea hirsuta</i> (Black Eyed Susan)			
789.	<i>Thalasseus bergii</i>			
790.	1708 <i>Thelymitra fuscolutea</i> (Chestnut Sun Orchid)			
791.	5105 <i>Thomasia triphylla</i>			
792.	24844 <i>Threskiornis molucca</i> (Australian White Ibis)			
793.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
794.	25519 <i>Tiliqua rugosa</i>			
795.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
796.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
797.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
798.	<i>Trametes lilacinogilva</i>			
799.	<i>Tribonyx ventralis</i>			
800.	39094 <i>Trichia affinis</i>			
801.	39098 <i>Trichia favoginea</i>			
802.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
803.	24755 <i>Trichoglossus haematodus</i> subsp. <i>moluccanus</i> (Rainbow Lorikeet)	Y		
804.	32450 <i>Trichostomum eckelianum</i>			
805.	25521 <i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
806.	24158 <i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
807.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
808.	4292 <i>Trifolium campestre</i> (Hop Clover)	Y		
809.	14738 <i>Trifolium resupinatum</i> var. <i>resupinatum</i>	Y		
810.	11665 <i>Trymalium ledifolium</i> var. <i>ledifolium</i>			
811.	<i>Tyromyces</i> sp.			
812.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
813.	24983 <i>Underwoodisaurus milii</i> (Barking Gecko)			
814.	<i>Urodacus novaehollandiae</i>			
815.	8254 <i>Urospermum picroides</i> (False Hawkbit)	Y		
816.	8255 <i>Ursinia anthemoides</i> (Ursinia)	Y		
817.	<i>Ustilago</i> sp.			
818.	7125 <i>Utricularia australis</i>			
819.	7131 <i>Utricularia dichotoma</i> (Fairy Aprons)			
820.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
821.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			
822.	8257 <i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
823.	<i>Venatrix pullastra</i>			
824.	<i>Verticillium</i> sp.			
825.	6077 <i>Verticordia drummondii</i> (Drummond's Featherflower)			
826.	6101 <i>Verticordia nitens</i> (Morrison Featherflower, Kodjeningara)			
827.	6103 <i>Verticordia ovalifolia</i>			
828.	11474 <i>Vicia sativa</i> subsp. <i>nigra</i>	Y		
829.	11137 <i>Vulpia fasciculata</i>	Y		
830.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
831.	7388 <i>Wahlenbergia multicaulis</i>			
832.	7389 <i>Wahlenbergia preissii</i>			
833.	8282 <i>Waitzia suaveolens</i> (Fragrant Waitzia)			
834.	17910 <i>Washingtonia filifera</i>	Y		
835.	1401 <i>Wurmbea pygmaea</i>			
836.	<i>Xanthagrimon erythronum</i>			
837.	<i>Xanthomonas</i> sp.			
838.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
839.	2331 <i>Xylomelum occidentale</i> (Woody Pear, Djandin)			
840.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			
841.	24856 <i>Zosterops lateralis</i> subsp. <i>gouldi</i> (Grey-breasted White-eye)			
842.	36218 <i>Zygodon menziesii</i>			

Conservation Codes
T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

APPENDIX 3

Protected Matters Search Tool Report



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.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 10/03/16 20:00:04

[Summary](#)

[Details](#)

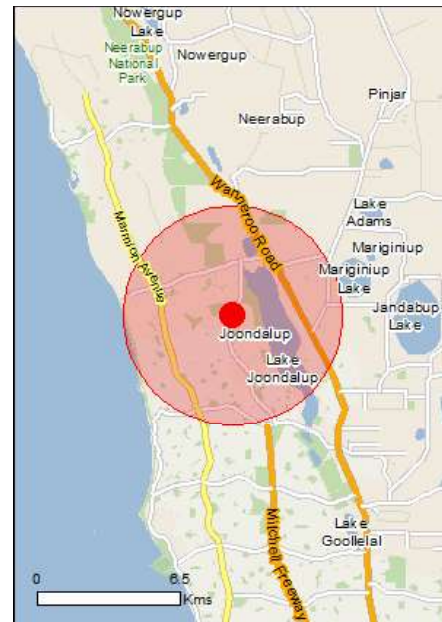
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental 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:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	40
Listed Migratory Species:	42

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 <http://www.environment.gov.au/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 Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	65
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	5
Regional Forest Agreements:	None
Invasive Species:	36
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora epomophora Southern Royal Albatross [25996]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora sanfordi Northern Royal Albatross [82331]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans amsterdamensis Amsterdam Albatross [82330]	Endangered	Species or species habitat may occur within area
Diomedea exulans exulans Tristan Albatross [82337]	Endangered	Species or species habitat may occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species

Name	Status	Type of Presence
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	habitat may occur within area Foraging, feeding or related behaviour known to occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta stedi White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris impavida Campbell Albatross [82449]	Vulnerable	Species or species habitat may occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Dasyurus geoffroi Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Neophoca cinerea Australian Sea-lion [22]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	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 likely to occur within area
Darwinia foetida Muchea Bell [83190]	Critically Endangered	Species or species habitat likely to 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 may occur within area
Drakaea elastica Glossy-leafed Hammer-orchid, Praying Virgin [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species

Name	Status	Type of Presence
Eucalyptus argutifolia Yanchep Mallee, Wabling Hill Mallee [24263]	Vulnerable	habitat may occur within area Species or species habitat likely to occur within area
Lepidosperma rostratum Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Sharks		
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat known to occur within area
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered*	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely to occur within area
Macronectes giganteus Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleishy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Sterna anaethetus Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
Sterna caspia Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area

Name	Threatened	Type of Presence
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land

[[Resource Information](#)]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Commonwealth Land -

Listed Marine Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered*	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Himantopus himantopus Black-winged Stilt [870]		Species or species habitat known to occur within area
Larus pacificus Pacific Gull [811]		Foraging, feeding or related behaviour may occur within area

Name	Threatened	Type of Presence
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat may occur within area
Macronectes giganteus Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Sterna anaethetus Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
Sterna caspia Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Fish		
Acentronura australe Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Stigmatopora argus Spotted Pipefish, Gulf Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Stigmatopora olivacea a pipefish [74966]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Mammals

Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion [22]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Reptiles

Aipysurus pooleorum Shark Bay Seasnake [66061]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Disteira kingii Spectacled Seasnake [1123]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans

Name	Status	Type of Presence
[Resource Information]		
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within

Name	Status	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Lake Joondalup	WA
Neerabup	WA
Unnamed WA21176	WA
Unnamed WA43290	WA
Woodvale Nature Reserve	WA

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		

Name	Status	Type of Presence
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Plants		
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large- leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Protasparagus densiflorus Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake,		Species or species

Name	Status	Type of Presence
Cacing Besi [1258]		habitat likely to occur within area

Nationally Important Wetlands [\[Resource Information \]](#)

Name	State
Joondalup Lake	WA

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

Coordinates

-31.7369 115.76571

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](#)
- [Parks and Wildlife Commission NT, Northern Territory Government](#)
- [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, Atherton and Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- 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.

Please feel free to provide feedback via the [Contact Us](#) page.

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APPENDIX 4
Conservation Codes

Conservation Codes for Western Australian Flora and Fauna

Specially protected fauna or flora are species* which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such.

Categories of specially protected fauna and flora are:

T Threatened species – Schedules 1-4

Published as Specially Protected under the *Wildlife Conservation Act 1950*, and listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

- **Threatened fauna** is that subset of ‘Specially Protected Fauna’ declared to be ‘likely to become extinct’ pursuant to section 14(4) of the Wildlife Conservation Act.
- **Threatened flora** is flora that has been declared to be ‘likely to become extinct or is rare, or otherwise in need of special protection’, pursuant to section 23F(2) of the Wildlife Conservation Act.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species – Schedule 1

Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN Endangered species – Schedule 2

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU Vulnerable species - Schedule 3

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX Presumed extinct species - Schedule 4

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA Migratory birds protected under an international agreement - Schedule 5

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD Conservation dependent fauna - Schedule 6

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS Other specially protected fauna - Schedule 7

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P Priority species

Possibly threatened species that do not meet survey criteria, 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 priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora or fauna.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes 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.

1 Priority 1: Poorly-known species

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, e.g. 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 and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 Priority 2: Poorly-known species

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, e.g. 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 and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

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. Such species are in need of further survey.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(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.

*Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

A list of the current rankings can be downloaded from the Parks and Wildlife Threatened Species and Communities webpage at <http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities>

Commonwealth of Australia Conservation Codes

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

Extinct

A native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.

Extinct in the wild

A native species is eligible to be included in the extinct in the wild category at a particular time if, at that time:

- a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
- b) it 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

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the five criteria for the category identified in Part 7.01 of the EPBC Regulations, and it is therefore considered to be facing an extremely high risk of extinction in the wild.

Endangered

A taxon is Endangered when the best available evidence indicates that it meets any of the five criteria for the category identified in Part 7.01 of the EPBC Regulations, and it is therefore considered to be facing a very high risk of extinction in the wild.

Vulnerable

A taxon is Vulnerable when the best available evidence indicates that it meets any of the five criteria for the category identified in Part 7.01 of the EPBC Regulations, and it is therefore considered to be facing a high risk of extinction in the wild.

Conservation dependent

A native species is eligible to be included in the conservation dependent category at a particular time if, at that time:

- a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered;
or
- b) the following subparagraphs are satisfied:
 - i. the species is a species of fish;

- ii. the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised;
- iii. the plan of management is in force under a law of the Commonwealth or of a State or Territory;
- iv. cessation of the plan of management would adversely affect the conservation status of the species.

The EPBC Act does not provide for listing in a data deficient category. Where sufficient data (evidence) is unavailable to allow assessment by the Threatened Species Scientific Committee against the criteria for listing, the species are found to be ineligible. A recommendation is made to the Minister to not include the species in any category under the EPBC Act. For reasons of transparency and to inform future research, the Threatened Species Scientific Committee publishes the names of those species found to be data deficient. As data deficient is not a listing category under the EPBC Act, this has no statutory implications and the species is not considered to be listed under the EPBC Act.

APPENDIX 5

TEC/PEC Database Search

OCC_UNIQUE_ID	COM_ID	COM_NAME	CT_DESC	S_ID_COUN	FIRST_S_ID	LAST_S_ID	BUFFER	BDY_ID
2646	SCP24	Northern Spearwood shrublands and woodlands	Priority 3	1	Neer01		500	1386
4058	SCP20a	Banksia attenuata woodlands over species rich dense shrublands	Endangered	1	MARIJINUP01		500	2091
17227	SCP20a	Banksia attenuata woodlands over species rich dense shrublands	Endangered	1	JosephBanksBlvd		500	14908
3116	SCP25	Southern Eucalyptus gomphocephala-Agonis flexuosa woodlands	Priority 3	1	yela03		700	0
4968	SCP29a	Coastal shrublands on shallow sands	Priority 3	1	BU01		500	0
4969	SCP29a	Coastal shrublands on shallow sands	Priority 3	1	BU02		500	0
4970	SCP29a	Coastal shrublands on shallow sands	Priority 3	1	BU04		500	0

QUADRAT IW1

50 383397 E 6485792 N

Vegetation: Bare Sand with a few weeds
Condition: Completely Degraded
Soil Type: Yellow sand
Landform: Flat



QUADRAT (10 x 10m)

SPECIES	HEIGHT (m)	COVER (%)
* <i>Lupinus cosentinii</i>	0.2	1
* <i>Chamelaucium uncinatum</i>	0.2	<1
* <i>Eragrostis curvula</i>	0.2	<1
* <i>Romulea rosea</i>	0.2	<1

* introduced species

QUADRAT IW2

50 383393 E 6485772 N

Vegetation: *Eucalyptus gomphocephala* (Tuart) Low Open Woodland over
Banksia sessilis/*Melaleuca systema* Closed Low Heath

Condition: Good

Soil Type: Yellow sand

Landform: Top of low ridge



QUADRAT (10 x 10m)

SPECIES	HEIGHT (m)	COVER (%)
<i>Eucalyptus gomphocephala</i>	6	5
<i>Banksia sessilis</i>	1.2	4
<i>Hakea trifurcata</i>	1	1
* <i>Ehrharta calycina</i>	0.6	10
<i>Melaleuca systema</i>	0.5	5
<i>Rhagodia baccata</i>	0.5	1
* <i>Gladiolus caryophyllaceus</i>	0.4	<1
* <i>Euphorbia terracina</i>	0.4	<1
* <i>Briza maxima</i>	0.3	5
<i>Corynotheca micrantha</i>	0.3	2
* <i>Pelargonium capitatum</i>	0.3	2
<i>Mesomelaena pseudostygia</i>	0.3	1
* <i>Romulea rosea</i>	0.3	1
<i>Scaevola thesioides</i>	0.3	<1
<i>Conostylis aculeata</i>	0.3	<1
<i>Desmocladus flexuosus</i>	0.2	<1
<i>Scaevola canescens</i>	0.1	1
* <i>Lupinus cosentinii</i>	0.1	<1

* introduced species

QUADRAT IW3

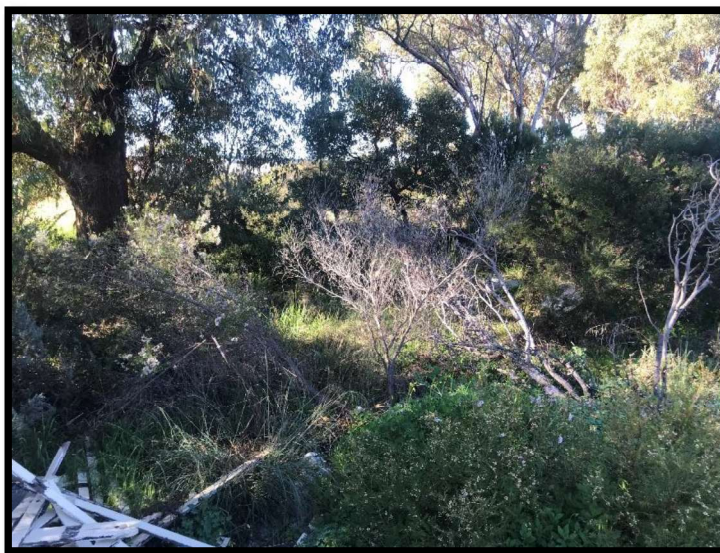
50 383365 E 6485803 N

Vegetation: *Eucalyptus gomphocephala* (Tuart) Low Open Woodland over
Chamelaucium uncinatum/*Rhagodia baccata* Open Low Heath

Condition: Degraded

Soil Type: Yellow sand

Landform: Flat



QUADRAT (10 x 10m)

SPECIES	HEIGHT (m)	COVER (%)
* <i>Chamelaucium uncinatum</i>	1.5	20
<i>Acacia rostellifera</i>	1.2	2
<i>Spyridium globulosum</i>	1.1	1
<i>Rhagodia baccata</i>	0.6	10
* <i>Ehrharta calycina</i>	0.6	1
<i>Mesomelaena pseudostygia</i>	0.4	1
* <i>Briza maxima</i>	0.3	2
* <i>Lupinus cosentinii</i>	0.2	1
* <i>Gladiolus caryophyllaceus</i>	0.2	<1
* <i>Urospermum picroides</i>	0.1	<1
<i>Scaevola canescens</i>	0.1	<1
* <i>Hypochaeris glabra</i>	Flat	<1

* introduced species

APPENDIX 7
Flora Species List

Lot 827 Injune Way, Joondalup – Plant Species List (12 July 2019)

Introduced Species

Briza maxima
Cenchrus clandestinus
Chamelaucium uncinatum
Ehrharta calycina
Eragrostis curvula
Euphorbia terracina
Gladiolus caryophyllaceus
Hypochaeris glabra
Lagurus ovatus
Lupinus cosentinii
Oxalis pes-caprae
Pelargonium capitatum
Romulea rosea
Trifolium campestre
Urospermum picroides

Native Species

Acacia cyclops
Acacia pulchella
Acacia rostellifera
Acacia saligna
Allocasuarina fraseriana
Banksia dallanneyi
Banksia sessilis
Conostylis aculeata
Corynotheca micrantha
Desmocladius flexuosus
Dianella revoluta var. divaricata
Eucalyptus gomphocephala
Gompholobium tomentosum
Hakea lissocarpha
Hakea trifurcata
Hardenbergia comptoniana
Hovea trisperma
Jacksonia calcicola
Jacksonia sternbergiana
Lechenaultia linarioides
Melaleuca systema
Mesomelaena pseudostygia
Olearia axillaris
Rhagodia baccata
Scaevola canescens
Scaevola thesioides
Spyridium globulosum
Xanthorrhoea preissii

APPENDIX 8

Black Cockatoo Habitat Tree Data

Lot 827 Injune Way, Joondalup

Tree #	Species	ht (m)	dbh (cm)	Easting	Northing	Health	Hollows etc
1	Tuart	11	85	383370	6485803	Healthy	None
2	Tuart	4	34	383388	6485775	Healthy	None
3	Tuart	3	26, 20	383390	6485773	Healthy	None
4	Tuart	8	59	383387	6485769	Healthy	None
5	Tuart	9	74	383388	6485757	Healthy	None
6	Tuart	8	53	383381	6485761	Healthy	None
7	Tuart	10	78	383375	6485768	Healthy	None
8	Tuart	7	34	383377	6485776	Healthy	None
9	Tuart	4	39, 27, 21, 16	383371	6485774	Resporouting from fallen limb	None