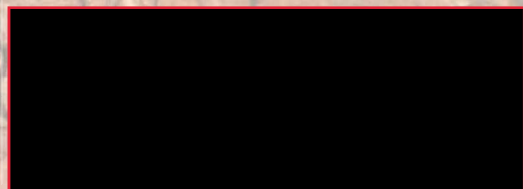


Stream Environment and Water

Reconnaissance and Targeted Flora and Vegetation Survey, Cowaramup Bay Road

SHIRE OF AUGUSTA MARGARET RIVER
NOVEMBER, 2020

Stream Environment and Water Pty Ltd



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1 Introduction

1.1 Scope and objectives

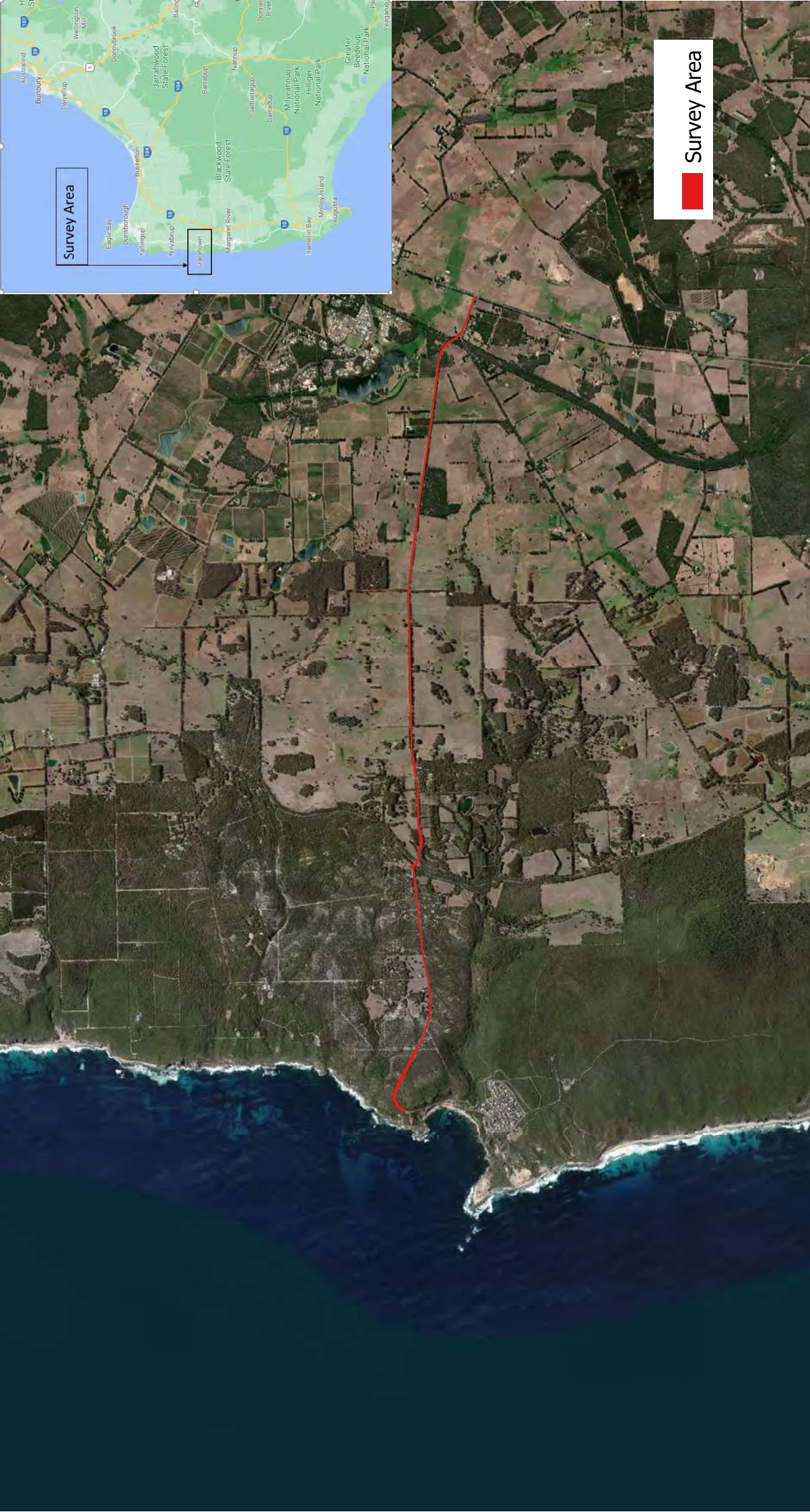
Stream Environment and Water Pty Ltd (Stream Environment and Water) were commissioned by the Shire of Augusta-Margaret River (the Shire) to undertake a flora and vegetation survey (incorporating reconnaissance and targeted level surveys) within the road reserve along Cowaramup Bay Road. The results of the survey will inform the preparation of a clearing permit (and potentially other environmental approvals) in association with proposed road widening and associated works.

In accordance with the proposal by Stream Environment and Water, the scope of the Flora and Vegetation Survey was as follows:

- Undertake a desktop review to identify soil types, vegetation types, significant flora and ecological communities using information from the Department of the Environment and Energy's (DAWE's) Protected Matters Search Tool, Department of Biodiversity, Conservation and Attractions (DBCA) NatureMap and FloraBase, and other sources as appropriate;
- Carry out a flora and vegetation survey, incorporating both reconnaissance and targeted flora surveys, in accordance with EPA Technical Guidance (EPA, 2016) and other relevant State and Commonwealth guidelines;
- Mapping and reporting of vegetation types and condition within the study area using a combination of recent aerial photographs and field surveys; and
- Mapping and reporting of any priority or threatened flora and vegetation communities found within the study area using a combination of recent aerial photographs and field surveys to ground-truth.

1.2 Site location and details

The survey was conducted within the road corridor of Cowaramup Bay Road in the Shire of Augusta Margaret River (Figure 1). The desktop review included a 10km buffer.

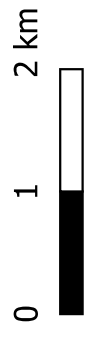


 Survey Area

Figure 1: Location of Survey Area

Reconnaissance and Targeted Flora and Vegetation Survey
Cowaramup Bay Road

Ref: 202201
Date: 24/11/20 Author: 



Projection: GDA zone 50

Source: Base map © ESRI and its data suppliers, Landgate (2020).
Regional Map: Google Maps (2020)



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2 Background information

2.1 Climate

The southwest of Western Australia has a Mediterranean climate with mild wet winters and hot dry summers. Cowaramup (BOM 2020, Climate Data Station 09636) has an average annual rainfall of 1120.1mm (1926 to current), with most of the rain falling between May and September (BOM, 2020). Climate statistics for nearby town of Witchcliffe show a temperature range from an average maximum of 27.2°C in the hottest month of February to an average minimum of 8.2°C in July and August (BOM 2020, Climate Data Station 009746).

2.2 Soils and landforms

Soil mapping by the Department of Agriculture and Food (Tille and Lantzke 1990) identifies eleven soil units within the survey area along Cowaramup Bay Road (Figure 2):

- Cowaramup undifferentiated upland phase – Flats and gentles slopes (0-5% gradient) with gravelly duplex (Forest Grove) and pale grey mottled (Mungite) soils.
- Cowaramup ironstone rises phase –Flats and gentle slopes (0-5% gradient) with some laterite outcrop and shallow gravelly sands over laterite.
- Cowaramup wet vales phase – Small, broad U-shaped drainage depressions with swampy floors. Gravelly duplex (Forest Grove) soils on sideslopes and poorly drained alluvial soils on valley floor.
- Cowaramup flats phase –Poorly drained flats and slight depressions with pale grey mottled (Mungite) soils.
- Cowaramup wet flats phase -Poorly drained flats and slight depressions with pale grey mottled (Mungite) soils.
- Cowaramup wet vales phase - Small, broad U-shaped drainage depressions with swampy floors. Gravelly duplex (Forest Grove) soils on sideslopes and poorly drained alluvial soils on valley floor.
- Cowaramup deep sandy rises phase -Flats and gently sloping rises (gradients 0-5%), with deep bleached sands. Some areas of low and moderate slopes (gradients 5-15%).
- Cowaramup rocky gentle slopes phase - Flats and gentle slopes (0-5% gradient) with shallow rocky soils and some granitic outcrop.
- Cowaramup gentle slope phase - Gentle slope (2-5% gradient) with gravelly duplex (Forest Grove) soils.
- Gracetown exposed slopes phase - Moderate slopes (gradients 10-15%) on the west coast exposed to prevailing wind directly off the ocean, with deep and shallow yellow brown siliceous sands over limestone (i.e. Spearwood Sands).
- Wilyabrup gentle slope phase –Gradients 5-10%
- Wilyabrup narrow valley floor phase –Narrow V-shaped drainage depressions.

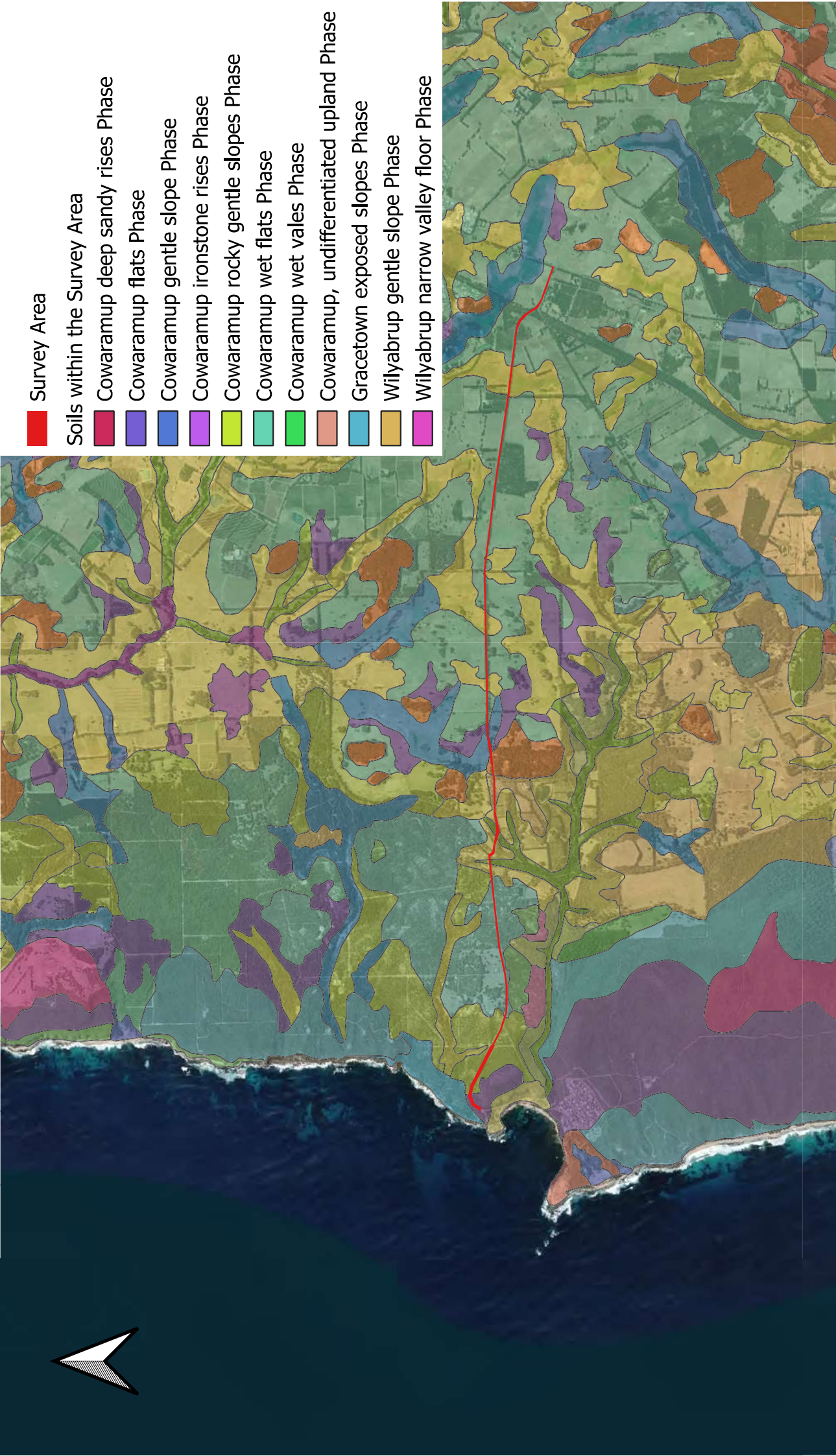


Figure 2: Soils of the Survey Area

2.3 Vegetation

West of Caves Road areas of native vegetation within the survey area is relatively intact with adjacent land use including the Leeuwin Naturaliste National Park and rural residential areas. East of Caves Road (between Caves Road and Bussell Highway) there has been more widespread historical clearing for agriculture adjacent to the survey area and generally only roadside remnants of native vegetation remain.

Vegetation complex mapping is used to represent ecological communities in the south west of Western Australia. Vegetation complexes in the south west forest zone were mapped by Mattiske and Havel (1998) as part of the regional forest assessment (RFA). Seven vegetation complexes (classes) are mapped and described within the survey area (Figure 3, Table 1). The State and Federal governments' policies to manage environmental impacts and clearing, apply a target to retain >30% of pre-clearing extent for ecological communities (DER 2014).

All but one of the vegetation complexes occurring within the survey area have greater than 30% of their pre-clearing extent intact. Within Shire of Augusta Margaret River LGA the Cowaramup Cw2 complex has 16.24% of its pre-clearing extent remaining.

Table 1: Vegetation Complexes and Classes mapped within survey area

Vegetation complex	Description	% pre-European extent remaining
Cowaramup C2	Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> - <i>Banksia grandis</i> on lateritic uplands in perhumid and humid zones.	63.13
Cowaramup Cd	Woodland of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> - <i>Banksia ilicifolia</i> on sandy rises and low woodland of <i>Melaleuca preissiana</i> on lower slopes in the hyperhumid to humid zones.	82.59
Cowaramup Cw2	Woodland of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> on slopes and low woodland of <i>Melaleuca preissiana</i> - <i>Banksia littoralis</i> on depressions in perhumid and humid zones.	16.24
Cowaramup Cr	Woodland of <i>Corymbia calophylla</i> - <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Agonis flexuosa</i> , woodland of <i>Banksia littoralis</i> and closed heath on rocky slopes in hyperhumid and perhumid zone.	82.59
Gracetown GE	Closed heath of <i>Olearia axillaris</i> - <i>Rhagodia baccata</i> - <i>Agonis flexuosa</i> on seaward slopes in hyperhumid to humid zones.	94.78
Wilyabrup W1	Tall open forest of <i>Eucalyptus diversicolor</i> - <i>Corymbia calophylla</i> - <i>Allocasuarina decussata</i> - <i>Agonis flexuosa</i> on deeply incised valleys in the hyperhumid zone.	53.67

Wilyabrup Ww1

Tall open forest of *Eucalyptus diversicolor*-*Agonis flexuosa*-*Callistachys lanceolata* with some *Corymbia calophylla* on flats and valleys in the hyperhumid zone.

53.71

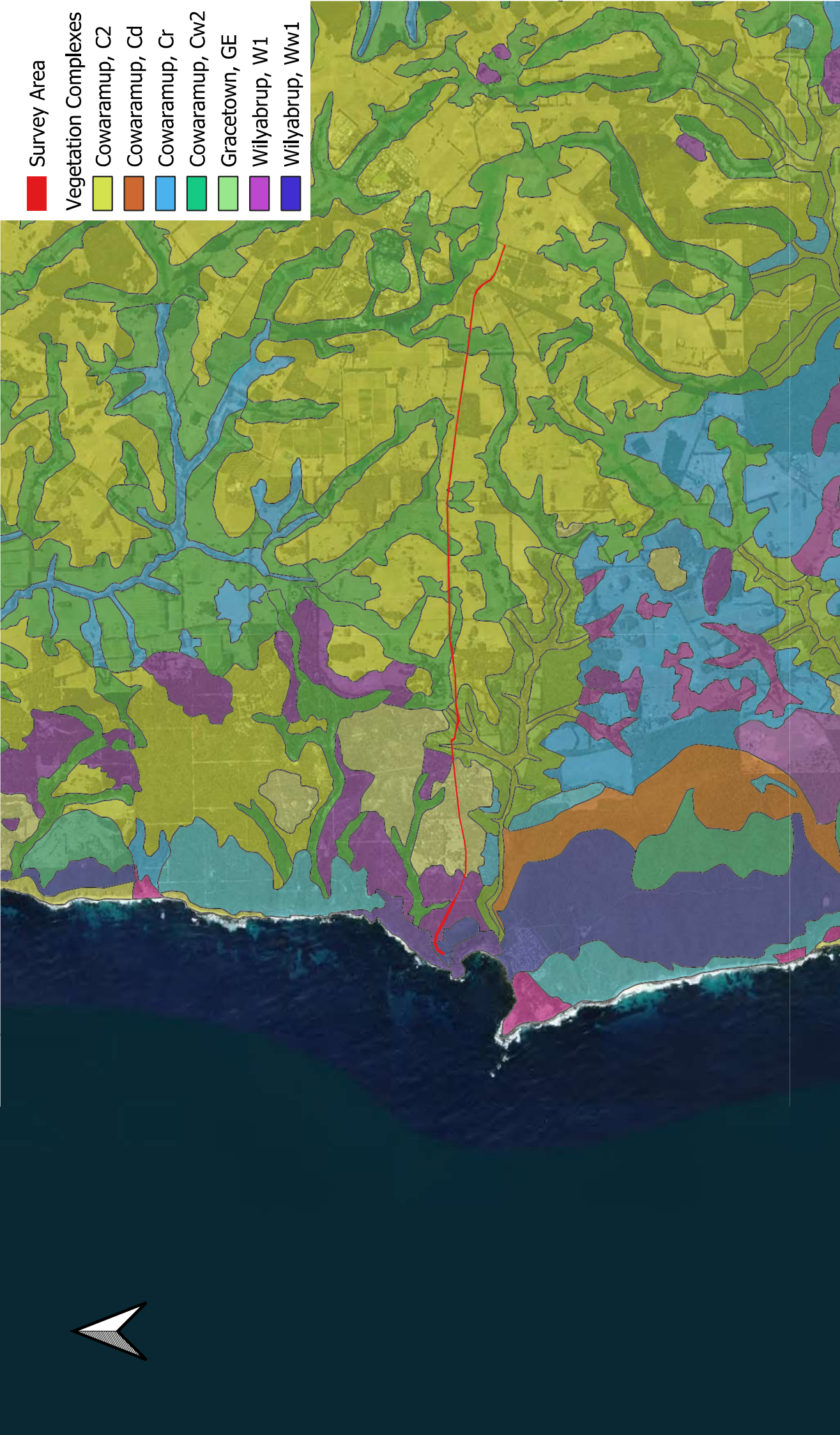


Figure 3: Vegetation Complexes of the Survey Area

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Cowaramup Bay Road

Ref: 202201
Date: 24/11/20 Author: [Redacted]

Projection: GDA zone 50
Source: Base map © ESRI and its data suppliers, Landgate (2020).



2.4 Threatened Ecological Communities

Ecological communities are defined as a naturally occurring group of plants, animals and other organisms interacting in a unique habitat. The Department of Biodiversity, Conservation and Attractions (DBCA) identifies and lists ecological communities as a threatened ecological community (TEC) if the community is presumed to be totally destroyed or at risk of becoming totally destroyed. Threatened communities can be classed as critically endangered (CR), endangered (EN), vulnerable (VU) or presumed totally destroyed (PD) (see Appendix A for details).

Where communities are considered rare but not (currently) threatened or there is insufficient information available for the community to be considered a TEC, communities can be listed as priority ecological communities (PECs) (definitions of priority classes are provided in Appendix A).

The Environment Protection and Biodiversity Conservation Act (1999) (EPBC Act) provides statutory listing and protection for TECs at a Federal level. Under the EPBC Act TECs can be listed as critically endangered, endangered, or vulnerable (Appendix A). Communities listed under the EPBC Act as threatened have statutory protection.

2.5 Threatened and priority flora

All native flora in Western Australia is protected under the Environmental Protection Act (1986) (EP Act) by virtue of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA). Specific flora species may be afforded special protection under the Biodiversity Conservation Act (2016) (BC Act) for flora taxa declared as 'Rare Flora'. In addition, DBCA also classifies flora under four Priority codes where they are under consideration for future listing as declared rare flora but there is insufficient information or they are not currently threatened but could become so if circumstances change (Appendix B).

Flora species can also be listed under the EPBC Act as threatened species and are classed as either extinct, extinct in the wild, critically endangered, endangered, vulnerable or conservation dependant (Appendix B). Any actions likely to have significant impact on species (or communities) listed under the EPBC Act require referral for assessment and approval from the Federal Minister for the Environment.

3 Survey methods

3.1 Desktop survey

A desktop review was completed ahead of field surveys using DBCA and DAWE datasets to identify potential environmentally significant flora species and vegetation types occurring within the survey area. Database searches were performed using the DAWE Protected Matters Search Tool (Appendix C), DBCA Threatened and Priority Flora Database (DBCA 2020a) and DBCA NatureMap (Appendix D, DBCA 2020b). Key features of threatened flora species identified as likely to occur in the survey area were reviewed as part of preparation for the targeted field survey.

Mapping of vegetation associations (e.g. Beard 1981) and vegetation complexes (Mattiske and Havel 1998), and other available regional studies, were reviewed to identify potential vegetation types occurring within the survey area. Potential threatened ecological communities were identified through searches of DBCA Threatened and Priority Communities Database (DBCA 2020c) and the Protected Matters Search Tool (Appendix C) and supplemented through review of relevant literature.

Soil mapping from Tille and Lantzke (1990) was used to identify soil types and relevant literature utilised to develop a description of the landforms and geomorphology of the survey area.

3.2 Field survey

A field survey incorporating reconnaissance level survey and targeted flora searches was completed by Stream Environment and Water from the 21st-23rd September 2020.

Description of vegetation communities was completed using unmarked relevé sampling. At each location the following information was recorded using standardised field sheets:

- Location and Coordinates
- Soil description and landforms
- Vegetation structure and community description in accordance with the National Vegetation Information System (NVIS) structure and floristics (ESCAVI 2003)
- Vascular plant species (denoting native and introduced species)
- Vegetation condition (according to Keighery 1994)

Targeted searching for threatened and priority flora species was completed through foot traverses along each side of Cowaramup Bay Road. Where located, the coordinates of threatened or priority flora species were recorded along with the number of plants.

Observations on changes in vegetation condition were recorded opportunistically during foot traverses and species lists for community descriptions were supplemented by opportunistic recording of additional species.

Any flora species that were not able to be identified in the field were collected or photographed. Relevant taxonomic literature and databases were used to identify collected specimens.

Refer to Figure 4 for survey effort, showing the location of showing traverses and relevé sites.

3.3 Survey limitations

The survey limitations were considered consistent with EPA Technical Guidance (EPA 2016) and are summarised in Table 2.

Table 2: Assessment of survey limitations

Aspect	Constraint	Comment
Available regional and local information	Negligible	The region is well surveyed with regional vegetation association and complex mapping available.
Competency of personnel	Negligible	The survey was completed by Mike Braimbridge, Jane Wilshaw and Ben Eckerman who all have >20 years' experience in conducting flora and vegetation surveys in the Western Australia, including the south west.
Proportion of flora identified	Low	The survey was completed during spring flowering period. Where required specimens were collected or photographed and identified using relevant taxonomic literature.
Survey effort and extent	Negligible	Targeted searching covered the survey area on either side of Cowaramup Bay Road. The survey was conducted over the peak spring flowering period. Relevés were considered suitable given the scale of the proposed disturbance and size of the project area.
Accessibility	Negligible	Site is within a public road reserve and was accessible.
Survey timing and season	Negligible	The survey was completed in mid September during peak Spring flowering period.
Disturbance	Negligible	There have been historical drainage modifications causing disturbance to native vegetation in several areas along the road.

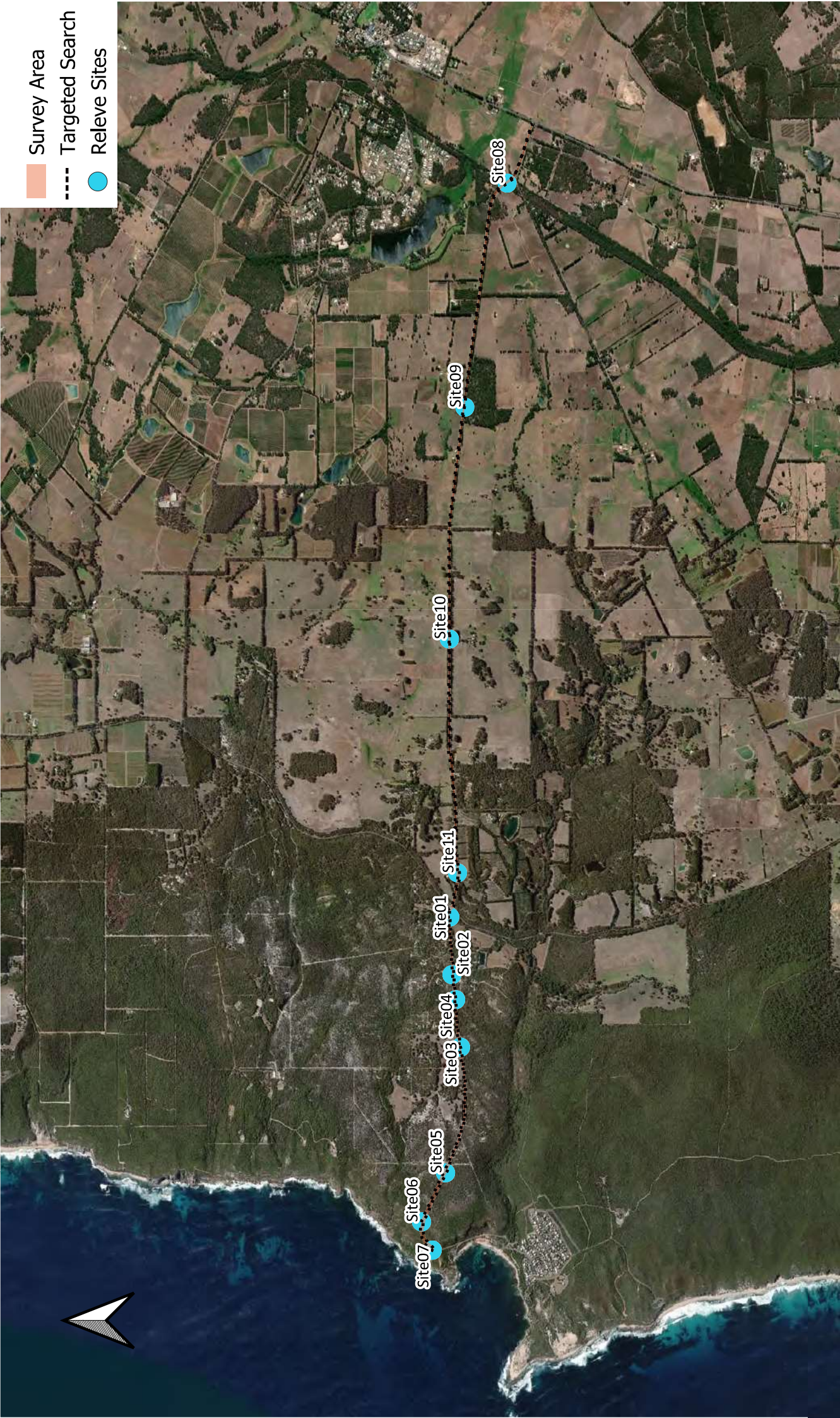


Figure 4: Survey Effort

Reconnaissance and Targeted Flora and Vegetation Survey
Cowaramup Bay Road

Ref: 202201
Date: 24/11/20 Author: [Redacted]



4 Results

4.1 Desktop survey

4.1.1 Potential threatened communities and species

Communities

The desktop survey found there are no federally or state listed threatened ecological communities (TEC) present within 5 km of the survey area. One state priority ecological community (PEC) identified under state government policy is known to occur within the survey area:

Low Shrublands on acidic grey-brown sands of the Gracetown soil-landscape system (Priority 2) has been previously identified and mapped within and adjacent to the survey area (Figure 5). The community is described as a low shrubland or heath occurring on grey brown sand with a bleached surface derived from granite gneiss near the west coast of the Leeuwin-Naturaliste Ridge (Smith 2005). Dominant or characteristic shrub species include; *Calothamnus sanguineus*, *Darwinia citriodora*, *Hakea prostrata*, *Hakea trifurcata*, *Jacksonia horrida*, *Kunzea ciliata*, *Pimelea ferruginea*, *Pimelea rosea*, *Spyridium globulosum*, *Verticordia plumosa* var. *plumosa*, *Xanthorrhoea brunonis*. Common herbs, grasses and sedges include; *Asteridea pulverulenta*, *Austrodanthonia setacea*, *Austrostipa compressa*, *Brachyscome iberidifolia*, *Lepidosperma squamatum*, *Platysace haplosciadia*, *Trichocline spathulata* and *Velleia trinervis*.

A second PEC that occurs along the Leeuwin Naturaliste ridge was identified as having potential to occur within the survey area:

Melaleuca lanceolata forests, Leeuwin Naturaliste Ridge – The community is described as a low closed forest to closed forest of *Melaleuca lanceolata* (“moonah”) occurring near the coastline of the Leeuwin-Naturaliste Ridge adjacent to limestone cliffs and down steeply sloping rock slopes on dark-grey, brown or, less commonly, pale-grey sands, often with outcropping limestone. The Moonah varies from 2 to 15 metres, reflecting depth of soil and wind pruning. Typical understorey shrubs are *Tetragonia implexicoma*, *Rhagodia baccata*, *Leucopogon propinquus* and *Suaeda australis*.

Species

The results of the database searches identified two threatened flora species and 20 priority flora species potentially occurring within 5km of the survey area (Table 3). The threatened orchid species *Caladenia excelsa* (T) and the priority species *Boronia anceps* (P3) were identified as previously recorded (known) within the survey area. Based on a review of the soils, landforms and proximity to the survey area, two species were identified with a high likelihood of occurring in habitats found within the survey area (Table 3):

- *Boronia* sp. *Leeuwin* (*J. Scott 235*) (P2)
- *Caladenia abbreviata* (P3)

Table 3: Potential threatened and Priority flora species previously found within 5km of the survey area and their likelihood of occurring

Species Name	Status (WA)	Status (EPBC)	Description and Habitat	Likelihood of occurrence
<i>Acacia inops</i>	P3	-	Weak, scrambling, pungent shrub, 0.4-1.1 m high. Fl. white-cream, Sep to Nov. Black peaty sand, clay. Swamps, creeks.	Moderate
<i>Banksia sessilis</i> var. <i>cordata</i>	P4	-	Non-lignotuberous shrub, to 2.5 m high. Fl. cream-yellow, Jul to Oct. White/grey sand. Coastal limestone.	Moderate
<i>Boronia anceps</i>	P3	-	Perennial, herb, 0.3-0.6 m high, lacking lignotuber, stem flattened and ancapitous when young. Fl. pink/pink-purple, Sep to Dec or Jan. White sand, gravelly laterite. Seasonally swampy heaths.	Known (Previous record))
<i>Boronia</i> sp. <i>Leeuwin</i> (<i>J. Scott 235</i>)	P2	-	-	High
<i>Caladenia abbreviata</i>	P3	-	Tuberous, perennial, herb, 0.2-0.35 m high. Fl. yellow & brown, Nov to Dec. Sand dunes	High
<i>Caladenia excelsa</i>	T	EN	Tuberous, perennial, herb, 0.45-0.9 m high. Fl. green & white & red, Sep to Oct. White, grey or brown sand, sandy loam.	Known (Previous Record)
<i>Chamaescilla gibsonii</i>	P3	-	Clumped tuberous, herb. Fl. blue, Sep. Clay to sandy clay. Winter-wet flats, shallow water-filled claypans.	Moderate
<i>Dampiera heteroptera</i>	P3	-	Erect to semi-prostrate perennial, herb or shrub, 0.3-0.6 m high. Fl. blue, Sep to Oct. Sandy soils. Swampy areas.	Moderate
<i>Drosera fimbriata</i>	P4	-	Erect tuberous, perennial, herb, 0.05-0.15 m high. Fl. white, Sep to Oct. White sand, granite.	Moderate
<i>Grevillea brachystylis</i> subsp. <i>australis</i>	T	VU	Prostrate or erect, non-lignotuberous shrub, 0.1-2 m high. Fl. red, Sep to Dec or Jan. Sand, sandy clay. Winter wet heath.	Moderate
<i>Grevillea bronwenae</i>	P3	-	Slender, erect shrub, 0.5-1.6 m high. Fl. red, Jun to Dec. Grey sand over laterite, lateritic loam. Hillslopes	Moderate
<i>Grevillea manglesioides</i> subsp. <i>ferricola</i>	P3	-	Erect or spreading shrub, 1.5 m high. Fl. red/green/red&green, Oct. Red sandy clay over ironstone. Winter wet flats.	Moderate
<i>Lasiopetalum laxiflorum</i>	P3	-	Shrub. Stems hairy. Leaves 20-105 mm long, 8-55 mm wide, not lobed; margins entire; indumentum present, with stellate hairs; stipules present but early deciduous (only visible on youngest leaves), 10-15 mm long. Flowering time October or November.	Moderate
<i>Leptomeria furtiva</i>	P2	-	Lax, sprawling shrub, 0.2-0.45 m high. Fl. orange-brown, Aug to Oct. Grey or black peaty sand. Winter-wet flats	Moderate
<i>Pimelea ciliata</i> subsp. <i>longituba</i>	P3	-	Erect shrub, 0.3-1 m high. Fl. pink, Oct to Dec. Grey sand over clay, loam.	Moderate
<i>Pultenaea pinifolia</i>	P3	-	Erect, slender shrub, 1-3 m high. Fl. yellow-orange, Oct to Nov. Loam or Clay. Floodplains, swampy areas	Moderate

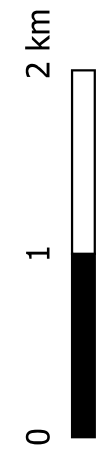
Species Name	Status (WA)	Status (EPBC)	Description and Habitat	Likelihood of occurrence
<i>Stylidium lowrieanum</i>	P3	-	Rosetted perennial, herb, 0.25-0.65 m high, Leaves spreading, oblanceolate to spatulate, 2-5 cm long, 3-12 mm wide, apex subacute, margin crisped, glabrous. Scape glabrous at base, inflorescence axis sparingly glandular. Inflorescence racemose. Fl. white-pink, Oct to Nov. Sand or sandy loam over limestone. Eucalypt or Agonis woodland, forest, scrub.	Moderate
<i>Synaphea decumbens</i>	P3	-	Shrub 35 cm. White grey sand. Fl. yellow, Sep to Oct. Sand over laterite.	Moderate
<i>Tetragia</i> sp. <i>Nannup</i> (P.A. Jurjevich 1133)	P1	-	-	Moderate
<i>Thysanotus isantherus</i>	P4	-	Caespitose perennial, herb (with tuberous roots), to 0.15 m high. Fl. purple, Nov to Dec. Granite.	Moderate
<i>Thysanotus</i> sp. <i>Badgingarra</i> (E.A. Griffin 2511)	P2	-	Perennial, herb (with tuberous roots), ca 0.35 m high. Fl. blue, Dec. Grey sand with lateritic gravel.	Moderate
<i>Xyris maxima</i>	P2	-	Robust, erect, tufted perennial, herb, 0.16-0.6 m high. Fl. yellow, Nov to Dec or Jan. Black peaty sand. Drainage flats.	Moderate



Figure 5: PEC, Threatened and Priority Flora within 2km of the survey area

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]



Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).



4.2 Field survey

4.2.1 Flora

The field survey recorded 145 taxa of vascular plants from 43 families (Appendix E). Nineteen of the 144 taxa are introduced. The most common families were Fabaceae (19 taxa), Myrtaceae (13 taxa) Poaceae (10 taxa) and Proteaceae (10 taxa). The representation of these families is consistent with the flora of the area and the location in the landscape of the survey area.

Threatened species

Caladenia excelsa, a state listed declared rare flora species and federally listed threatened flora species was recorded within the survey area (Figure 6). Two individual plants were confirmed as *C. excelsa* and one identified as potential *C. excelsa* (not confirmed due to unopened flower). These individuals were found in the same location as previous records (Figure 5) within a vegetation community described and mapped as Low open woodland of *Eucalyptus marginata* and *Corymbia calophylla* over shrubland of *Xanthorrhoea preissii* over shrubland of *Hibbertia hypericoides* (Community EmCcXp; Table 4).

Three individuals of *Boronia anceps* (P3) were recorded approximately 1.5 km east of a previously recorded population. All individuals of *B. anceps* recorded in this survey were recorded within vegetation community EmCcXp (Figure 6).

An additional priority species *Banksia sessilis* var. *cordata* (P4) was found scattered at low density through three vegetation communities mapped and described at the western end of the survey area closest to the coast (refer to area defined in Figure 6). The vegetation communities (community codes MIMsMs, DcMsSg and BaAfMf) are described in the following section (Table 4). This species had previously been recorded approximately 1.2m south of the survey area.

No species of other conservation significance (e.g. range extensions) were recorded.

Declared weeds

None of the nineteen introduced flora species are listed as declared pest plants under the *Biosecurity and Agriculture Management Act 2007*.

The introduced species recorded were predominantly weedy grasses and herbs common in agricultural setting. These are considered environmental weeds and potentially require management during any earth works. In particular, *Watsonia meriana* subsp. *bulbillifera* which was recorded at several locations within the survey area. This species has the potential to spread through transfer of bulbs in soil and is a potentially invasive weed species. Weedy grasses and herbs occurred predominantly at the edges of intact native vegetation and were more common at the road intersections and east of caves road.

4.2.2 Vegetation communities

Nine native vegetation units were identified within the survey area (Figure 7a-c). Cleared (predominantly pasture) and areas of planted (combination of exotic and native flora species) vegetation also occurred. Community descriptions (Table 4) are based on the results of relevés surveyed in each, supplemented by opportunistic recording of additional species during targeted searches.

The vegetation communities described for the survey area are consistent with the broader vegetation complex descriptions of Matiske and Havel (1998) identified as occurring within the desktop survey area.

The condition of vegetation was mapped during the field survey and ranged from completely degraded to excellent (Figure 8a-c). Vegetation condition was generally better to the west of Caves Road and comparatively poorer between Caves Road and Bussell Highway. The poorer condition of the native vegetation east of Caves Road is likely due to the impact of historical clearing and adjoining agricultural land use resulting in greater ingress of weed species.

The community DcMsSg (Low closed shrubland of *Dodonaea caratocarpa*, *Melaleuca systema* and *Spyridium globulosum*) was considered to be representative of the priority two ecological community *Low Shrublands on acidic grey-brown sands of the Gracetown soil-landscape system*. The PEC has previously been mapped at this location.

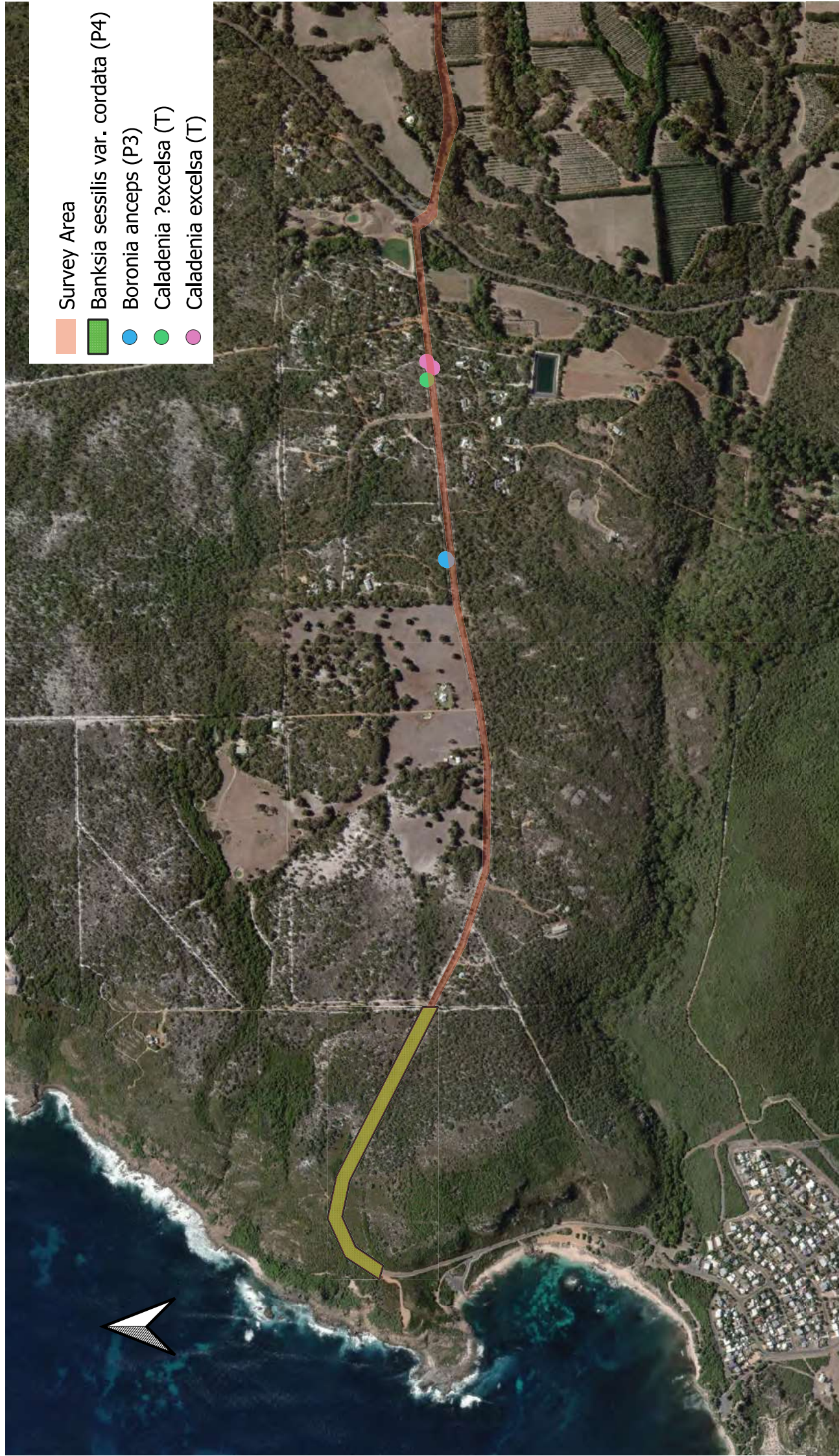


Figure 6: Threatened and Priority Flora within the survey area

Reconnaissance and Targeted Flora and Vegetation Survey

Cowaramup Bay Road

Ref: 202201

Date: 24/11/20 Author: JW



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0 250 500 m







Projection: GDA zone 50



Source: Base map © ESRI and its data suppliers, Landgate (2020).


Table 4: Vegetation communities described for the project area.

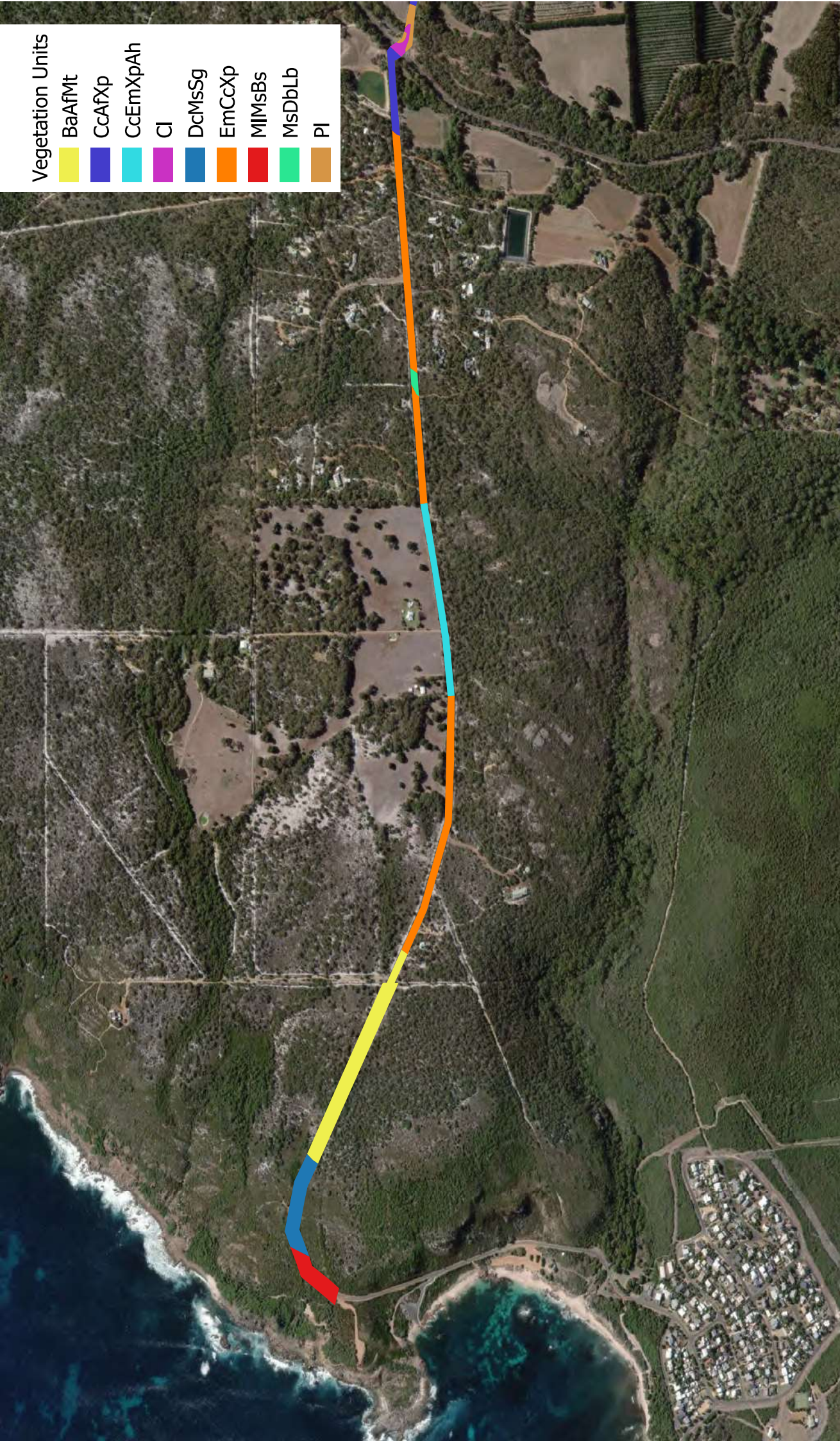
Community Code	Description	Condition	Site reference	Example photo of community
BaAfMt	Woodland of <i>Banksia attenuata</i> , <i>Agonis flexuosa</i> and <i>Eucalypts marginata</i> over sparse shrubland of <i>Melaleuca thymoides</i> over sedgeland of <i>Lyginia barbata</i> and <i>Hypolaena exsulca</i>	Good-Very Good	Site 05	
CcAfXp	Woodland of <i>Corymbia calophylla</i> over open woodland of <i>Agonis flexuosa</i> over shrubland of <i>Xanthorrhoea preissii</i> and <i>Bossiaea ornata</i>	Mostly good to very good. Some areas degraded and completely corridor.	Site 01	

Community Code	Description	Condition	Site reference	Example photo of community
CcEmBI	Woodland of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over open shrubland of <i>Bossiaea linophylla</i> and <i>Xanthorrhoea preissii</i> over shrubland of <i>Hibbertia hypericoides</i>	Degraded to Good	Site 09	
CcEmXpAh	Woodland of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over open shrubland of <i>Xanthorrhoea preissii</i> and <i>Allocasuarina humilis</i>	Completely Degraded (North side of the road) – to Very Good (photo)	Site 03	

Community Code	Description	Condition	Site reference	Example photo of community
CcTp	Woodland of <i>Corymbia calophylla</i> over shrubland of <i>Taxandria parviceps</i> over sedgeland of <i>Mesomelaena tetragona</i> and <i>Cyathochaeta avenacea</i>	Completely Degraded to Very Good	Site 08	
DcMssg	Closed shrubland of <i>Dodonaea caratocarpa</i> , <i>Melaleuca systena</i> and <i>Spyridium globulosum</i>	Very Good	Site 06	

Community Code	Description	Condition	Site reference	Example photo of community
EmCcXp	Woodland of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over open shrubland of <i>Xanthorrhoea preissii</i> over shrubland of <i>Hibbertia hypericoides</i>	Mostly Good-Excellent. Small degraded area	Site 02	
MIMsBs	Sparse shrubland of <i>Melaleuca lanceolata</i> over closed shrubland of <i>Melaleuca systema</i> , <i>Melaleuca</i> sp. and <i>Bankisa sessilis</i> var. <i>cordata</i> (P4).	Very Good	Site 07	

Community Code	Description	Condition	Site reference	Example photo of community
MsDb1b	Closed shrubland of <i>Melaleuca</i> sp. (MB10) over sedgeland of <i>Dasypogon bromeliifolius</i> , <i>Lyginia barbata</i> and <i>Hypolaena exsulca</i>	Very Good	Site 04	
PI	Planted	NA	Site 10	NA
CI	Cleared or parkland cleared	NA	NA	NA



Vegetation Units

BaAFMt	Yellow
CcAFXp	Purple
CcEmXpAh	Cyan
CI	Pink
DcMsSg	Blue
EmCcXp	Orange
MIMsBs	Red
MsDbLb	Green
PI	Brown

Figure 7a: Vegetation Units of the Survey Area (West)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]



Projection: GDA zone 50

Source: Base map © ESRI and its data suppliers, Landgate (2020).



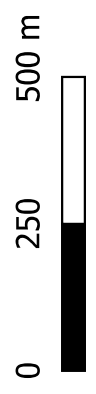
Vegetation Units

- CcAfXp
- CcEmBI
- CI
- PI

Figure 7b: Vegetation Units of the Survey Area (middle)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]



Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).





Vegetation Units

- CcEmBI
- CcTp
- CI
- PI

Figure 7c: Vegetation Units of the Survey Area (East)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

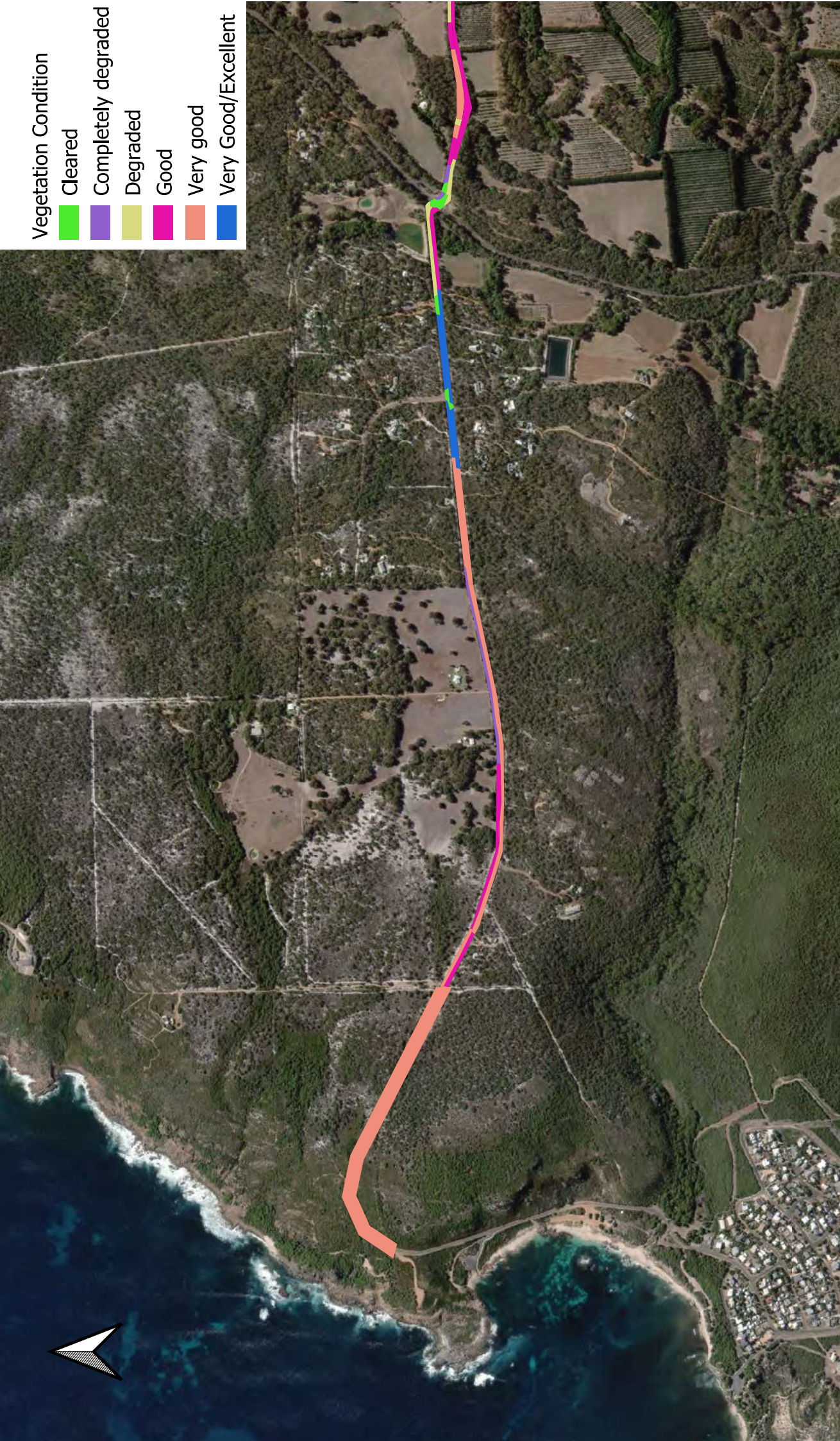
Ref: 202201
 Date: 24/11/20 Author: XXXXXXXXXX

0 250 500 m



Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).





Vegetation Condition

■	Cleared
■	Completely degraded
■	Degraded
■	Good
■	Very good
■	Very Good/Excellent

Figure 8a: Vegetation Condition of the Survey Area (West)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]

0 250 500 m

Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).





Vegetation Condition

- Cleared
- Completely degraded
- Degraded
- Good
- Very good

Figure 8b: Vegetation Condition of the Survey Area (middle)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]

0 250 500 m



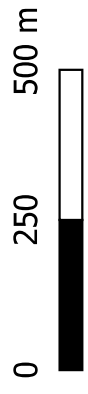
Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).





Vegetation Condition

- Cleared
- Completely degraded
- Degraded
- Good
- Very good



Projection: GDA zone 50
 Source: Base map © ESRI and its data suppliers, Landgate (2020).

Figure 8c: Vegetation Condition of the Survey Area (East)

Reconnaissance and Targeted Flora and Vegetation Survey
 Cowaramup Bay Road

Ref: 202201
 Date: 24/11/20 Author: [Redacted]



5 Discussion and Recommendations

The survey of Cowaramup Bay Road from Bussell Highway to the coast at Gracetown identified nine native vegetation communities. Native vegetation within the survey area west of Caves Road is mostly in very good to excellent condition. This area adjoins some areas of national park and other areas with intact native vegetation. The condition of the roadside vegetation between Caves Road and Bussell Highway was generally poorer, predominantly mapped as degraded or completely degraded with small patches of native vegetation in good condition. Adjoining land use for agricultural purposes and historical disturbance is likely to have contributed to the introduction of weeds into this area.

Vegetation community DsMsSg was considered to be representative of the *Low Shrublands on acidic grey-brown sands of the Gracetown soil-landscape system* PEC (P2). This is consistent with DBCA mapping of the community in the same location (DBCA 2020). The Gracetown low shrublands community is distinct floristically from the Banksia woodland upslope and the tall shrublands on limestone sands nearby (Smith 2005).

The vegetation communities described and mapped within the survey area were broadly consistent with the vegetation complexes present within the survey area. Six of the seven vegetation complexes occurring within the survey area have greater than 30% of the pre-European extent intact and are well represented in intact native vegetation outside of the survey area. The Cowaramup Cw2 complex has 16.24% of its pre-European extent remaining (Government of Western Australia 2019). Approximately 3.77ha of this complex occurs within the survey area (east of Caves Road) of which less than 1ha is native vegetation (remaining areas planted or cleared) with only 0.45ha native vegetation in good condition (remaining vegetation degraded or completely degraded).

The survey relocated a previously recorded population of the threatened species *Caladenia excelsa* within the survey area. Two individuals were confirmed as *C. excelsa* and one identified as potential *C. excelsa* (not confirmed due to unopened flower). *C. excelsa* is listed as Endangered under the state BC Act and the federal EPBC Act. Under the EPBC Act “A person must not take an action that has, will have, or is likely to have, a significant impact on a listed threatened species, without approval from the Minister”. Therefore, any clearing in proximity to the recorded population should be carefully managed to avoid potential impacts on the species.

The conservation advice for *C. excelsa* identifies weed invasion, grazing (by kangaroos), prescribed burning (undertaken between April to early November when the orchid is most vulnerable) and accidental damage from firebreak and other infrastructure maintenance as key threats for this species (DEWHA, 2008).

Three individuals of priority flora species *Boronia anceps* (P3) were within the survey area. The desktop survey identified this species as previously recorded within or in close proximity to the survey area. The plants recorded in this survey appear to represent an additional population or potential extension of the previously recorded population. Investigation of information available on the previously recorded population indicate it was recorded approximately 1.5 km to the west of the individuals recorded during this survey. *Boronia anceps* is known from additional populations in the Augusta Margaret River and Nannup Local Government Areas (LGA's) (Florabase 1998).

An additional priority species, *Banksia sessilis* var. *cordata* (P4) was found scattered at low density throughout the three vegetation communities at the western end of the survey area. The desktop survey identified this species as moderate likelihood to occur with the nearest known recording approximately 1.2km south. *Banksia sessilis* is generally restricted to coastal areas associated within

limestone outcropping but has a fairly wide distribution in the southwest of Australia occurring in the Albany, Augusta Margaret River, Busselton, Denmark, Manjimup, Nannup LGAs.

No additional conservation significant flora species were recorded. The timing of the initial survey was considered appropriate to coincide with the flowering period of the majority of threatened flora species potentially occurring within the survey area.

In conclusion:

- Three plants of the threatened species *Caladenia excelsa* occur within the survey area. Impacts to this species should be avoided (or additional approvals sought if this is not possible). The following recommendations will assist in protecting these individuals and surrounding habitat:
 - Prior to any on ground works the location of the populations of *Caladenia excelsa* should be clearly demarcated with an adequate buffer (at least 15m) either side of the population.
 - Works crews should be informed of the location and the requirement to avoid disturbance within the demarcated area.
 - Weed control measures should be developed in consultation with DBCA. DEWHA (2008) identifies the need to control weeds that potentially threaten the species and also that weed control measures need to ensure there is no adverse impact on the species (e.g. through inappropriate use of chemicals). However, no additional advice is provided in DEWHA (2008) on appropriate weed control measures.
- Should impacts to *Caladenia excelsa* be unavoidable then advice on additional environmental approvals should be sought.
- Three plants of the priority species *Boronia anceps* (P3) occur on the north side of Cowaramup Bay Road within survey area. Impacts to this species should be avoided where possible. The conservation status of this species should be checked prior to any clearing. The location of the population should be demarcated prior to construction to avoid potential accidental impacts.
- The priority species *Banksia sessilis* var. *cordata* (P4) is scattered in the vegetation within the survey area on the south and north sides of Cowaramup Bay Road within the survey area. Any works will need to consider population of *Banksia sessilis* var. *cordata* and impacts to this species should be avoided where possible. The conservation status of this species should be checked prior to any clearing. The location of the population should be demarcated prior to construction to avoid potential accidental impacts.
- The state listed Priority 2 community ***Low Shrublands on acidic grey-brown sands of the Gracetown soil-landscape system (Priority 2)*** was identified as occurring within the road reserve (Corresponding vegetation unit DsMsSg). Impacts to this community should be minimised. Should impacts to this community be proposed then advice on additional environmental approvals should be sought and the conservation status of this community should be checked prior to any clearing.
- Given the very good to excellent condition of native vegetation present within the survey area west of caves road, and the occurrence of threatened and priority flora species, disturbance to remnant vegetation identified during the survey should be minimised where possible. Suitable management measures should be developed to minimise potential

indirect impacts to adjoining areas of intact native vegetation in this area (i.e. adjoining National Park).

- Disturbance to vegetation communities east of Caves Road identified during the survey should also be minimised due to their regional conservation significance. In particular impacts to community CcAfXp and CcEmBl (particularly where in Good condition) should be minimised as they occur within the Cowaramup Cw2 vegetation complex (16.24% remaining)
- No weeds of national environmental significance were found during the survey. Several environmental weeds including *Watsonia meriana* subsp. *bulbillifera*, were recorded and should be managed appropriately during any proposed clearing and earthworks to avoid further spread and introduction of weeds.
- Environmental weeds should be managed appropriately during the construction phase to avoid further spread.

6 References

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Appendix A: Categories and definitions for threatened and priority ecological communities

State Threatened and Priority Ecological Community Categories

Category	Description
Threatened	
Presumed totally Destroyed (PD)	An ecological community that has been adequately searched for but for which no representative occurrences have been located.
Critically Endangered (CR)	An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future.
Endangered (EN)	An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future.
Vulnerable (VU)	An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium (within approximately 50 years) to long-term future.
Priority	
Priority 1 (P1) – Poorly known	Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100 ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist.
Priority 2 (P2) – Poorly known	Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200 ha). At least some occurrences are not believed to be under immediate threat (within approximately 10 years) of destruction or degradation.
Priority 3 (P3) – Poorly known	Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years), or; made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range
Priority 4 (P4) – Adequately known	Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
Priority 5 (P5) – Conservation dependent	Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

EPBC Act conservation categories for threatened ecological communities

Category	Description
Critically Endangered (CR)	An ecological community that is facing an extremely high risk of extinction in the wild in the immediate future (indicative timeframe being the next 10 years)
Endangered (EN)	An ecological community that is not critically endangered but is facing a very high risk of extinction in the wild in the near future (indicative timeframe being the next 20 years).
Vulnerable (VU)	an ecological community is not critically endangered or endangered, but is facing a high risk of extinction in the wild in the medium-term future (indicative timeframe being the next 50 years).

Appendix B: Categories and definitions for threatened and priority flora species

CONSERVATION CODES FOR WESTERN AUSTRALIAN FLORA

<p>T: Threatened Flora - Specially protected under the BC Act, listed under Schedules 1, 2 and 3 of the Wildlife Conservation (Rare Flora) Notice 2018 (which may also be referred to as Declared Rare Flora). Taxa 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. The assessment of the conservation status of these species is based on their national extent. Ranking: CR · Schedule 1 - taxa that are extant and considered likely to become extinct or rare, as critically endangered flora, and therefore in need of special protection. EN · Schedule 2 - taxa that are extant and considered likely to become extinct or rare, as endangered flora, and therefore in need of special protection. VU · Schedule 3 - taxa that are extant and considered likely to become extinct or rare, as vulnerable flora, and therefore in need of special protection.</p>
<p>EX: Presumed extinct Flora - Specially protected under the BC Act, listed under Schedule 4 of the Wildlife Conservation (Rare Flora) Notice (which may also be referred to as Declared Rare Flora). Taxa which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such. Threatened flora are ranked according to their level of threat using IUCN Red List categories and criteria. EX · Schedule 4 - taxa that are presumed to be extinct in the wild and therefore in need of special protection.</p>
<p>Priority Flora</p> <p>Taxa that may be threatened or near threatened, but are data deficient or have not yet been adequately surveyed to be listed under the Wildlife Conservation (Rare Flora) Notice, are added to the Priority Flora List 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. Taxa that are adequately known and are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These taxa require regular monitoring.</p>
<p>1: Priority One: Poorly-known species</p> <p>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 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.</p>
<p>2: Priority Two: Poorly-known species</p> <p>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, 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.</p>
<p>3: Priority Three: Poorly-known species</p> <p>Species that are known from several locations, and the species do 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.</p>
<p>4: Priority Four: Rare, Near Threatened and other species in need of monitoring</p>

- (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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

EPBC Act conservation categories (follow IUCN Red List categories)

Category	Description
Extinct (EX)	A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual.
Extinct in the wild (EW)	A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual.
Critically Endangered (CR)	A taxon is Critically Endangered when the best available evidence indicates that it is considered to be (according to specified criteria) facing an extremely high risk of extinction in the wild.
Endangered (EN)	A taxon is Endangered when it is considered (according to specified criteria) to be facing a very high risk of extinction in the wild.
Vulnerable (VU)	A taxon is Vulnerable when the best available evidence indicates that it is considered (according to specified criteria) to be facing a high risk of extinction in the wild.
Conservation dependent (CD)	A taxon is conservation dependent if, at a particular time, it is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered.

Appendix C: EPBC Protected Matters database search results



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: 25/11/20 12:31:02

[Summary](#)

[Details](#)

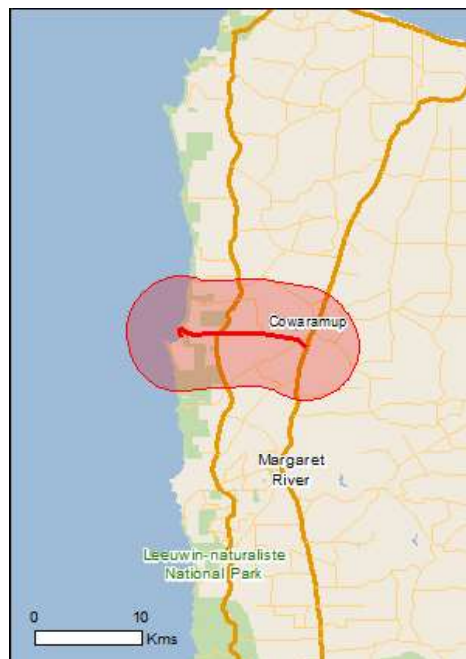
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

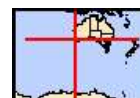
[Acknowledgements](#)



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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:	52
Listed Migratory Species:	44

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:	67
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	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:	6
Regional Forest Agreements:	1
Invasive Species:	23
Nationally Important Wetlands:	None
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
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
Calyptorhynchus baudinii Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Breeding known to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	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 Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	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
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within

Name	Status	Type of Presence area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, 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
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	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
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to 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
Crustaceans		
Cherax tenuimanus Hairy Marron, Margaret River Hairy Marron, Margaret River Marron [78931]	Critically Endangered	Species or species habitat may occur within area
Fish		
Nannatherina balstoni Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat may occur within area
Mammals		

Name	Status	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat known to occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat may occur within area
Other		
Westralunio carteri Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
Plants		
Banksia nivea subsp. uliginosa Swamp Honeypot [82766]	Endangered	Species or species habitat may occur within area
Banksia squarrosa subsp. argillacea Whicher Range Dryandra [82769]	Vulnerable	Species or species habitat may occur within area
Caladenia excelsa Giant Spider-orchid [56717]	Endangered	Species or species habitat likely to occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat may occur within area
Calectasia cyanea Blue Tinsel Lily [7669]	Critically Endangered	Species or species habitat may occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
Gastrolobium papilio Butterfly-leaved Gastrolobium [78415]	Endangered	Species or species habitat may 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	Breeding likely to occur within area

Name	Status	Type of Presence
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 White Shark, 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
Ardeenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		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 Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	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
Hydroprogne caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
Macronectes giganteus Southern Giant-Petrel, 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
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may

Name	Threatened	Type of Presence
Thalassarche cauta Shy Albatross [89224]	Endangered	occur within area Foraging, feeding or related behaviour likely to 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		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Breeding known to occur within area
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
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, 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	Breeding likely to occur within area
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	Congregation or aggregation known to occur within area

Name	Threatened	Type of Presence
Nator 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		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely 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
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Birds

Name	Threatened	Type of Presence
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
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 likely 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 may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may 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 Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	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 likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Macronectes giganteus Southern Giant-Petrel, 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
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	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
Pterodroma mollis Soft-plumaged Petrel [1036]	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
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
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to 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

Name	Threatened	Type of Presence
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely 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
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		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
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		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

Name	Threatened	Type of Presence
<i>Solegnathus lettiensis</i> Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
<i>Stigmatopora argus</i> Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
<i>Stigmatopora nigra</i> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
<i>Urocampus carinirostris</i> Hairy Pipefish [66282]		Species or species habitat may occur within area
<i>Vanacampus margaritifer</i> Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
<i>Vanacampus phillipi</i> Port Phillip Pipefish [66284]		Species or species habitat may occur within area
<i>Vanacampus poecilolaemus</i> Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area

Mammals

<i>Arctocephalus forsteri</i> Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
<i>Neophoca cinerea</i> Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area

Reptiles

<i>Caretta caretta</i> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<i>Chelonia mydas</i> Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
<i>Dermochelys coriacea</i> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<i>Natator depressus</i> Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area

Whales and other Cetaceans

Name	Status	Type of Presence
[Resource Information]		
Mammals		
<i>Balaenoptera acutorostrata</i> Minke Whale [33]		Species or species habitat may occur within area
<i>Balaenoptera edeni</i> Bryde's Whale [35]		Species or species habitat may occur within area
<i>Balaenoptera musculus</i> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<i>Caperea marginata</i> Pygmy Right Whale [39]		Species or species habitat may occur within area

Name	Status	Type of Presence
Delphinus delphis Common Dolphin, 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	Congregation or aggregation 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
Bramley	WA
Leeuwin-Naturaliste	WA
NTWA Bushland covenant (0065A)	WA
NTWA Bushland covenant (0065B)	WA
NTWA Bushland covenant (0152)	WA
NTWA Bushland covenant (0168)	WA

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
South West WA RFA	Western Australia

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 Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		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
Feral deer Feral deer species in Australia [85733]		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 rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within

Name	Status	Type of Presence area
<p>Lycium ferocissimum African Boxthorn, Boxthorn [19235]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]</p>		<p>Species or species habitat may occur within area</p>
<p>Rubus fruticosus aggregate Blackberry, European Blackberry [68406]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]</p>		<p>Species or species habitat likely to occur within area</p>

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.

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

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



Acknowledgements

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

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

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

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

Appendix D: DBCA Naturemap database search results

NatureMap Species Report

Created By Guest user on 20/10/2020

Current Names Only Yes
Core Datasets Only Yes
Method 'By Line'
Vertices
Group By



Conservation Status	Species	Records
Non-conservation taxon	720	2087
Other specially protected fauna	2	15
Presumed extinct	1	1
Priority 1	1	1
Priority 2	2	2
Priority 3	14	23
Priority 4	8	42
Protected under international agreement	3	13
Rare or likely to become extinct	16	124
TOTAL	767	2308

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
Rare or likely to become extinct				
1.	41326 <i>Ardenna carneipes</i> (Flesh-footed Shearwater, Fleishy-footed Shearwater)		T	
2.	34110 <i>Austroassiminea lethra</i> (Cape Leeuwin Freshwater Snail)		T	
3.	13619 <i>Caladenia excelsa</i>		T	
4.	24731 <i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
5.	24733 <i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
6.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
7.	48400 <i>Calyptorhynchus</i> sp. (white-tailed black cockatoo)		T	
8.	25335 <i>Caretta caretta</i> (Loggerhead Turtle)		T	
9.	25575 <i>Charadrius leschenaultii</i> (Greater Sand Plover)		T	
10.	24166 <i>Pseudocheirus occidentalis</i> (Western Ringtail Possum, ngwayir)		T	
11.	24388 <i>Psophodes nigrogularis</i> subsp. <i>nigrogularis</i> (Western Whipbird (western heath))		T	
12.	24145 <i>Setonix brachyurus</i> (Quokka)		T	
13.	34135 <i>Thalassarche cauta</i> (Shy Albatross)		T	
14.	34007 <i>Thalassarche chlororhynchos</i> (Atlantic Yellow-nosed Albatross)		T	
15.	44607 <i>Thalassarche melanophris</i> (Black-browed Albatross)		T	
16.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
Presumed extinct				
17.	24439 <i>Dasyornis broadbenti</i> subsp. <i>litoralis</i> (Rufous Bristlebird, Rufous Bristlebird (SW WA))		X	
Protected under international agreement				
18.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
19.	48591 <i>Pandion cristatus</i> (Osprey, Eastern Osprey)		IA	
20.	48597 <i>Thalasseus bergii</i> (Crested Tern)		IA	
Other specially protected fauna				
21.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
22.	48070 <i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> (South-western Brush-tailed Phascogale, Wambenger)		S	
Priority 1				
23.	33282 <i>Tetraria</i> sp. <i>Nannup</i> (P.A. Jurjevich 1133)		P1	
Priority 2				
24.	17702 <i>Leptomeria furtiva</i>		P2	
25.	17481 <i>Xyris maxima</i>		P2	

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Priority 3				
26.	3386 <i>Acacia inops</i>		P3	
27.	16313 <i>Boronia anceps</i>		P3	
28.	17804 <i>Boronia tetragona</i>		P3	
29.	13852 <i>Caladenia abbreviata</i>		P3	
30.	19338 <i>Chamaescilla gibsonii</i>		P3	
31.	7446 <i>Dampiera heteroptera</i>		P3	
32.	14011 <i>Grevillea brachystylis</i> subsp. <i>brachystylis</i>		P3	
33.	12219 <i>Grevillea bronwenae</i>		P3	
34.	18436 <i>Grevillea manglesioides</i> subsp. <i>ferricola</i>		P3	
35.	45084 <i>Lasiopetalum laxiflorum</i>		P3	
36.	12077 <i>Pimelea ciliata</i> subsp. <i>longituba</i>		P3	
37.	4179 <i>Pultenaea pinifolia</i>		P3	
38.	12590 <i>Stylidium lowrieianum</i> (Lowrie's Triggerplant)		P3	
39.	16937 <i>Synaphea decumbens</i>		P3	
Priority 4				
40.	32078 <i>Banksia sessilis</i> var. <i>cordata</i>		P4	
41.	3096 <i>Drosera fimbriata</i> (Manypeaks Sundew)		P4	
42.	24189 <i>Falsistrellus mackenziei</i> (Western False Pipistrelle, Western Falsistrelle)		P4	
43.	24215 <i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4	
44.	48588 <i>Isodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
45.	48022 <i>Notamacropus irma</i> (Western Brush Wallaby)		P4	
46.	48135 <i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)		P4	
47.	1336 <i>Thysanotus isantherus</i>		P4	
Non-conservation taxon				
48.	15429 <i>Acacia alata</i> var. <i>alata</i>			
49.	11731 <i>Acacia browniana</i> var. <i>browniana</i>			
50.	3282 <i>Acacia cyclops</i> (Coastal Wattle)			
51.	3307 <i>Acacia divergens</i>			
52.	3347 <i>Acacia gilbertii</i>			
53.	3374 <i>Acacia huegelii</i>			
54.	3410 <i>Acacia lateriticola</i>			
55.	3424 <i>Acacia littorea</i>			
56.	3448 <i>Acacia mooreana</i>			
57.	3502 <i>Acacia pulchella</i> (Prickly Moses)			
58.	15481 <i>Acacia pulchella</i> var. <i>glaberrima</i>			
59.	15483 <i>Acacia pulchella</i> var. <i>pulchella</i>			
60.	3525 <i>Acacia rostellifera</i> (Summer-scented Wattle)			
61.	<i>Acacia</i> sp.			
62.	3567 <i>Acacia subracemosa</i>			
63.	3591 <i>Acacia urophylla</i>			
64.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
65.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
66.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
67.	1208 <i>Acanthocarpus preissii</i>			
68.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
69.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
70.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
71.	26443 <i>Acrocarpia robusta</i>			
72.	6203 <i>Actinotus glomeratus</i>			
73.	7818 <i>Actites megalocarpus</i> (Dune Thistle)			
74.	28281 <i>Adenanthos</i> sp. <i>Whicher Range</i> (G.J. Keighery 9736)			
75.	<i>Aetapcus maculatus</i>			
76.	5316 <i>Agonis flexuosa</i> (Peppermint, Wonil)			
77.	17202 <i>Agonis flexuosa</i> var. <i>flexuosa</i>			
78.	23474 <i>Agrostocrinum hirsutum</i>			
79.	<i>Akamptogonus novarae</i>			
80.	<i>Alabes brevis</i>			
81.	1732 <i>Allocasuarina humilis</i> (Dwarf Sheoak)			
82.	1734 <i>Allocasuarina microstachya</i>			
83.	1739 <i>Allocasuarina thuyoides</i> (Horned Sheoak)			
84.	<i>Allothreua maculata</i>			
85.	38756 <i>Amanita umbrinella</i>			
86.	1489 <i>Amaryllis belladonna</i> (Belladonna Lily)	Y		
87.	4585 <i>Amperea ericoides</i>			
88.	13101 <i>Amperea simulans</i>			
89.	126 <i>Amphibolis antarctica</i> (Sea Nymph)			
90.	194 <i>Amphipogon amphipogonoides</i>			
91.	197 <i>Amphipogon debilis</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
92.	200 <i>Amphipogon turbinatus</i>			
93.	26458 <i>Amphiroa anceps</i>			
94.	<i>Aname mainae</i>			
95.	<i>Aname tepperi</i>			
96.	1058 <i>Anarthria gracilis</i>			
97.	1062 <i>Anarthria prolifera</i>			
98.	1063 <i>Anarthria scabra</i>			
99.	24312 <i>Anas gracilis</i> (Grey Teal)			
100.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
101.	6312 <i>Andersonia involucrata</i>			
102.	6317 <i>Andersonia micrantha</i>			
103.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
104.	1407 <i>Anigozanthos flavidus</i> (Tall Kangaroo Paw)			
105.	1411 <i>Anigozanthos manglesii</i> (Mangles Kangaroo Paw, Kurulbrang)			
106.	1416 <i>Anigozanthos viridis</i> (Green Kangaroo Paw, Kurulbardang)			
107.	11566 <i>Anigozanthos viridis</i> subsp. <i>viridis</i>			
108.	24088 <i>Antechinus flavipes</i> subsp. <i>leucogaster</i> (Yellow-footed Antechinus, Mardo)			
109.	6949 <i>Anthocercis littorea</i> (Yellow Tailflower)			
110.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
111.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
112.	202 <i>Anthoxanthum odoratum</i> (Sweet Vernal Grass)	Y		
113.	3686 <i>Aotus cordifolia</i>			
114.	3688 <i>Aotus gracillima</i>			
115.	3689 <i>Aotus intermedia</i>			
116.	1117 <i>Aphelia cyperoides</i>			
117.	<i>Araneus cyphoxis</i>			
118.	<i>Araneus eburnus</i>			
119.	7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold)	Y		
120.	46393 <i>Arctotheca calendula</i> x <i>populifolia</i>	Y		
121.	26484 <i>Areschougia ligulata</i>			
122.	<i>Arkys walckenaeri</i>			
123.	24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)			
124.	<i>Artonia cingulipes</i>			
125.	<i>Artonia flavimana</i>			
126.	<i>Artonia linnaei</i>			
127.	<i>Artonia taeniifera</i>			
128.	<i>Asadipus kunderang</i>			
129.	64 <i>Asplenium trichomanes</i> (Maidenhair Spleenwort)			
130.	20350 <i>Astartea affinis</i> (West-coast Astartea)			
131.	20249 <i>Astartea leptophylla</i> (River-bank Astartea)			
132.	45213 <i>Astartea pulchella</i>			
133.	7851 <i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
134.	4401 <i>Asterolasia squamuligera</i>			
135.	6323 <i>Astroloma ciliatum</i> (Candle Cranberry)			
136.	6334 <i>Astroloma pallidum</i> (Kick Bush)			
137.	2463 <i>Atriplex isatidea</i> (Coast Saltbush)			
138.	<i>Austracantha minax</i>			
139.	17237 <i>Austrostipa elegantissima</i>			
140.	17240 <i>Austrostipa flavescens</i>			
141.	20013 <i>Axonopus fissifolius</i>	Y		
142.	<i>Baiami tegenarioides</i>			
143.	<i>Baiami volucripes</i>			
144.	<i>Ballarra longipalpus</i>			
145.	1800 <i>Banksia attenuata</i> (Slender Banksia, Piara)			
146.	32576 <i>Banksia dallanneyi</i> (Couch Honeypot)			
147.	49039 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i>			Y
148.	32580 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>dallanneyi</i>			
149.	32577 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>melicula</i>			
150.	1822 <i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
151.	<i>Barnardius zonarius</i>			
152.	739 <i>Baumea acuta</i> (Pale Twig-rush)			
153.	743 <i>Baumea juncea</i> (Bare Twigrush)			
154.	744 <i>Baumea laxa</i>			
155.	747 <i>Baumea rubiginosa</i>			
156.	5392 <i>Beaufortia sparsa</i> (Swamp Bottlebrush)			
157.	4601 <i>Beyeria viscosa</i> (Pinkwood)			
158.	25798 <i>Billardiera fusiformis</i> (Australian Bluebell)			
159.	3165 <i>Billardiera variifolia</i>			
160.	24319 <i>Biziura lobata</i> (Musk Duck)			
161.	<i>Boletus</i> sp.			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
162.	4403 <i>Boronia alata</i> (Winged Boronia)			
163.	17653 <i>Boronia crenulata</i> subsp. <i>pubescens</i>			
164.	4414 <i>Boronia cymosa</i> (Granite Boronia)			
165.	4417 <i>Boronia dichotoma</i>			
166.	4429 <i>Boronia molloyae</i> (Tall Boronia)			
167.	4442 <i>Boronia stricta</i>			
168.	1267 <i>Borya constricta</i>			
169.	14396 <i>Bossiaea aquifolium</i> subsp. <i>aquifolium</i>			
170.	3708 <i>Bossiaea disticha</i>			
171.	3713 <i>Bossiaea linophylla</i>			
172.	3714 <i>Bossiaea ornata</i> (Broad Leaved Brown Pea)			
173.	3718 <i>Bossiaea rufa</i>			
174.	7878 <i>Brachyscome iberidifolia</i>			
175.	244 <i>Briza maxima</i> (Blowfly Grass)	Y		
176.	250 <i>Bromus hordeaceus</i> (Soft Brome)	Y		
177.	1385 <i>Burchardia multiflora</i> (Dwarf Burchardia)			
178.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
179.	25598 <i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
180.	15328 <i>Caladenia applanata</i> subsp. <i>applanata</i>			
181.	15332 <i>Caladenia attingens</i> subsp. <i>atingens</i>			
182.	15341 <i>Caladenia citrina</i>			
183.	1590 <i>Caladenia ferruginea</i> (Rusty Spider Orchid)			
184.	1597 <i>Caladenia infundibularis</i>			
185.	1599 <i>Caladenia latifolia</i> (Pink Fairy Orchid)			
186.	1603 <i>Caladenia longiclavata</i> (Clubbed Spider Orchid)			
187.	15503 <i>Caladenia paludosa</i>			
188.	10830 <i>Caladenia rhomboidiformis</i>			
189.	18040 <i>Caladenia thincicola</i>			
190.	19865 <i>Caladenia x erminea</i>			
191.	45758 <i>Calectasia demarzii</i> (Demarz's Tinsel Lily)			
192.	10861 <i>Callistachys lanceolata</i> (Wonnich)			
193.	26533 <i>Callophycus costatus</i>			
194.	26534 <i>Callophycus dorsifer</i>			
195.	26536 <i>Callophycus oppositifolius</i>			
196.	5429 <i>Calothamnus sanguineus</i> (Silky-leaved Blood flower, Pindak)			
197.	<i>Calymmachemes angulatus</i>			
198.	5439 <i>Calytrix angulata</i> (Yellow Starflower)			
199.	5458 <i>Calytrix flavescens</i> (Summer Starflower)			
200.	2951 <i>Cassytha flava</i> (Dodder Laurel)			
201.	2957 <i>Cassytha racemosa</i> (Dodder Laurel)			
202.	11242 <i>Cassytha racemosa</i> forma <i>pilosa</i>			
203.	26555 <i>Caulerpa brownii</i>			
204.	26556 <i>Caulerpa cactoides</i>			
205.	27380 <i>Caulerpa flexilis</i> var. <i>muelleri</i>			
206.	26586 <i>Caulocystis uvifera</i>			
207.	6542 <i>Centaurium tenuiflorum</i>	Y		
208.	6214 <i>Centella asiatica</i>			
209.	1128 <i>Centrolepis fascicularis</i>			
210.	1133 <i>Centrolepis pilosa</i>			
211.	<i>Cercophonius sulcatus</i>			
212.	24186 <i>Chalinolobus gouldii</i> (Gould's Wattled Bat)			
213.	24187 <i>Chalinolobus morio</i> (Chocolate Wattled Bat)			
214.	1280 <i>Chamaescilla corymbosa</i> (Blue Squill)			
215.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
216.	26622 <i>Chauviniella coriifolia</i>			
217.	31 <i>Cheilanthes austrotenuifolia</i>			
218.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
219.	33939 <i>Cherax cainii</i> (Marron)			
220.	<i>Cherax destructor</i>			
221.	762 <i>Chonizandra cymbaria</i> (Heron Bristle Rush)			
222.	3754 <i>Chonizema diversifolium</i>			
223.	12765 <i>Chonizema nanum</i>			
224.	3760 <i>Chonizema reticulatum</i> (Showy Flame Pea)			
225.	3761 <i>Chonizema rhombeum</i>			
226.	14586 <i>Chonizema spathulatum</i>			
227.	<i>Chroicocephalus novaehollandiae</i>			
228.	26650 <i>Cladophora coelothrix</i>			
229.	26663 <i>Cladurus elatus</i>			
230.	26665 <i>Claviconium ovatum</i>			
231.	26672 <i>Codium galeatum</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
232.	26675	<i>Codium laminarioides</i>		
233.	25675	<i>Colluricincla harmonica</i> (Grey Shrike-thrush)		
234.	24399	<i>Columba livia</i> (Domestic Pigeon)	Y	
235.	4550	<i>Comesperma calymega</i> (Blue-spike Milkwort)		
236.	4551	<i>Comesperma ciliatum</i>		
237.	4552	<i>Comesperma confertum</i>		
238.	4564	<i>Comesperma virgatum</i> (Milkwort)		
239.	1863	<i>Conospermum capitatum</i>		
240.	16853	<i>Conospermum capitatum</i> subsp. <i>glabratum</i>		
241.	1418	<i>Conostylis aculeata</i> (Prickly Conostylis)		
242.	11826	<i>Conostylis aculeata</i> subsp. <i>aculeata</i>		
243.	12118	<i>Conostylis aculeata</i> subsp. <i>gracilis</i>		
244.	1438	<i>Conostylis laxiflora</i>		
245.	1454	<i>Conostylis setigera</i> (Bristly Cottonhead)		
246.	25568	<i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)		
247.		<i>Cormocephalus aurantipes</i>		
248.		<i>Cormocephalus hartmeyerii</i>		
249.	25592	<i>Corvus coronoides</i> (Australian Raven)		
250.	17104	<i>Corymbia calophylla</i> (Marr)		
251.	7945	<i>Cotula coronopifolia</i> (Waterbuttons)	Y	
252.	7947	<i>Cotula turbinata</i> (Funnel Weed)	Y	
253.	25595	<i>Cracticus tibicen</i> (Australian Magpie)		
254.	25596	<i>Cracticus torquatus</i> (Grey Butcherbird)		
255.	13354	<i>Craspedia variabilis</i>		
256.	25398	<i>Crinia georgiana</i> (Quacking Frog)		
257.	25399	<i>Crinia glauerti</i> (Clicking Frog)		
258.	25401	<i>Crinia pseudinsignifera</i> (Bleating Froglet)		
259.		<i>Crustulina bicrucata</i>		
260.	13484	<i>Cryptandra arbutiflora</i> var. <i>tubulosa</i>		
261.	4809	<i>Cryptandra pungens</i>		
262.	26709	<i>Cryptonemia undulata</i>		
263.	26712	<i>Curdiea obesa</i>		
264.	768	<i>Cyathochaeta avenacea</i>		
265.	769	<i>Cyathochaeta clandestina</i>		
266.	26717	<i>Cystophora brownii</i>		
267.	26718	<i>Cystophora expansa</i>		
268.	26720	<i>Cystophora grevillei</i>		
269.	26722	<i>Cystophora monilifera</i>		
270.	26723	<i>Cystophora moniliformis</i>		
271.	26724	<i>Cystophora pectinata</i>		
272.	26726	<i>Cystophora racemosa</i>		
273.		<i>Cystophora retroflexa</i>		
274.	26729	<i>Cystophora subfarcinata</i>		
275.	30901	<i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y	
276.	7444	<i>Dampiera hederacea</i> (Karri Dampiera)		
277.	7454	<i>Dampiera linearis</i> (Common Dampiera)		
278.	5508	<i>Darwinia citriodora</i> (Lemon-scented Darwinia)		
279.	26753	<i>Dasyphila preissii</i>		
280.	1218	<i>Dasyogon bromeliifolius</i> (Pineapple Bush)		
281.	1219	<i>Dasyogon hookeri</i> (Pineapple Bush)		
282.	6218	<i>Daucus glochidiatus</i> (Australian Carrot)		
283.	3791	<i>Daviesia alternifolia</i>		
284.	19747	<i>Daviesia decurrens</i> subsp. <i>decurrens</i>		
285.	3807	<i>Daviesia divaricata</i> (Marno)		
286.	18560	<i>Daviesia divaricata</i> subsp. <i>divaricata</i>		
287.	3815	<i>Daviesia horrida</i> (Prickly Bitter-pea)		
288.	3817	<i>Daviesia inflata</i>		
289.	26757	<i>Delisea pulchra</i>		
290.	17663	<i>Desmocladius asper</i>		
291.	17691	<i>Desmocladius fasciculatus</i>		
292.	16595	<i>Desmocladius flexuosus</i>		
293.	299	<i>Deyeuxia quadriseta</i> (Reed Bentgrass)		
294.	16326	<i>Dianella brevicaulis</i>		
295.	6616	<i>Dichondra repens</i> (Kidney Weed)		
296.	26762	<i>Dictyomenia sonderi</i>		
297.	35216	<i>Dictyota paniculata</i>		
298.	20367	<i>Dillwynia laxiflora</i>		
299.	4454	<i>Diplolaena dampieri</i> (Southern Diplolaena)		
300.	26791	<i>Distromium flabellatum</i>		
301.	1635	<i>Diuris longifolia</i> (Common Donkey Orchid)		

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
302.	4757 <i>Dodonaea ceratocarpa</i>			
303.	1640 <i>Drakaea glyptodon</i> (King-in-his-carriage)			
304.	11156 <i>Drakaea livida</i>			
305.	3094 <i>Drosera dichrosepala</i> (Rusty Sundew)			
306.	3109 <i>Drosera menziesii</i> (Pink Rainbow)			
307.	3118 <i>Drosera pallida</i> (Pale Rainbow)			
308.	3123 <i>Drosera platystigma</i> (Black-eyed Sundew)			
309.	3124 <i>Drosera pulchella</i> (Pretty Sundew)			
310.	13385 <i>Drosera stelliflora</i>			
311.	33480 <i>Dysphania pumilio</i> (Clammy Goosefoot)			
312.	25096 <i>Egernia kingii</i> (King's Skink)			
313.	<i>Egretta novaehollandiae</i>			
314.	<i>Emertonella maga</i>			
315.	1067 <i>Empodisma gracillimum</i>			
316.	26811 <i>Endosiphonia spinulosa</i>			
317.	<i>Eodelena lapidicola</i>			
318.	24652 <i>Eopsaltria georgiana</i> (White-breasted Robin)			
319.	15412 <i>Eriochilus dilatatus</i> subsp. <i>multiflorus</i>			
320.	15414 <i>Eriochilus helonomos</i>			
321.	5605 <i>Eucalyptus cornuta</i> (Yate, Yeid)			
322.	5625 <i>Eucalyptus diversicolor</i> (Karri)			
323.	5708 <i>Eucalyptus marginata</i> (Jarrah, Djara)			
324.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
325.	5709 <i>Eucalyptus megacarpa</i> (Bullich, Pulidj)			
326.	5739 <i>Eucalyptus patens</i> (Swan River Blackbutt, Dwuda)			
327.	19088 <i>Euchiton collinus</i>			
328.	3876 <i>Eutaxia epacridoides</i>			
329.	20214 <i>Eutaxia myrtifolia</i>			
330.	3879 <i>Eutaxia parvifolia</i>			
331.	25621 <i>Falco bengora</i> (Brown Falcon)			
332.	25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
333.	8850 <i>Fallopia convolvulus</i>	Y		
334.	20216 <i>Ficinia nodosa</i> (Knotted Club Rush)			
335.	907 <i>Gahnia trifida</i> (Coast Saw-sedge)			
336.	3891 <i>Gastrolobium bilobum</i> (Heart Leaf Poison)			
337.	19733 <i>Gastrolobium retusum</i>			
338.	4341 <i>Geranium solanderi</i> (Native Geranium)			
339.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
340.	17043 <i>Glyceria declinata</i>	Y		
341.	3948 <i>Gompholobium capitatum</i>			
342.	3951 <i>Gompholobium marginatum</i>			
343.	3954 <i>Gompholobium polymorphum</i>			
344.	3955 <i>Gompholobium preissii</i>			
345.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
346.	16746 <i>Gonocarpus benthamii</i> subsp. <i>benthamii</i>			
347.	29362 <i>Goodenia coerulea</i>			
348.	26872 <i>Gracilaria preissiana</i>			
349.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
350.	14282 <i>Grotiola pubescens</i>			
351.	1967 <i>Grevillea brachystylis</i> (Short-styled Grevillea)			
352.	25627 <i>Haematopus fuliginosus</i> (Sooty Oystercatcher)			
353.	24487 <i>Haematopus longirostris</i> (Pied Oystercatcher)			
354.	1465 <i>Haemodorum discolor</i>			
355.	1468 <i>Haemodorum laxum</i>			
356.	2137 <i>Hakea ceratophylla</i> (Horned Leaf Hakea)			
357.	2170 <i>Hakea lasianthoides</i>			
358.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
359.	2191 <i>Hakea oleifolia</i> (Dungyn)			
360.	2197 <i>Hakea prostrata</i> (Harsh Hakea)			
361.	2203 <i>Hakea ruscifolia</i> (Candle Hakea)			
362.	2214 <i>Hakea trifurcata</i> (Two-leaf Hakea)			
363.	24295 <i>Haliastur spheurnus</i> (Whistling Kite)			
364.	26900 <i>Haloplegma preissii</i>			
365.	6169 <i>Haloragis acutangula</i>			
366.	6171 <i>Haloragis digyna</i>			
367.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
368.	<i>Helcogramma decurrens</i>			
369.	6855 <i>Hemigenia humilis</i>			
370.	6865 <i>Hemigenia podalyrina</i>			
371.	6866 <i>Hemigenia pritzelii</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
372.	26925 <i>Heterocladia caudata</i>			
373.	<i>Heteroclinus</i> sp.			
374.	5114 <i>Hibbertia commutata</i>			
375.	5117 <i>Hibbertia cuneiformis</i> (Cutleaf Hibbertia)			
376.	5118 <i>Hibbertia cunninghamii</i>			
377.	20051 <i>Hibbertia diamesogenos</i>			
378.	5126 <i>Hibbertia furfuracea</i>			
379.	5132 <i>Hibbertia grossulariifolia</i>			
380.	45534 <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>			
381.	5137 <i>Hibbertia inconspicua</i>			
382.	19687 <i>Hibbertia notibractea</i>			
383.	5159 <i>Hibbertia pulchra</i>			
384.	5161 <i>Hibbertia quadricolor</i>			
385.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
386.	5169 <i>Hibbertia serrata</i> (Serrate Leaved Guinea Flower)			
387.	<i>Hibbertia</i> sp.			
388.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
389.	<i>Histiophryne cryptacanthus</i>			
390.	1294 <i>Hodgsoniola junciformis</i>			
391.	445 <i>Holcus setiger</i> (Annual Fog)	Y		
392.	5816 <i>Homalospermum firmum</i>			
393.	3964 <i>Hovea chorizemifolia</i> (Holly-leaved Hovea)			
394.	3965 <i>Hovea elliptica</i> (Tree Hovea)			
395.	3967 <i>Hovea stricta</i>			
396.	5218 <i>Hybanthus debilissimus</i>			
397.	6226 <i>Hydrocotyle callicarpa</i> (Small Pennywort)			
398.	6240 <i>Hydrocotyle scutellifera</i>			
399.	43384 <i>Hydrophis platurus</i> (Yellow-bellied Seasnake)			
400.	452 <i>Hypparrhenia hirta</i> (Tambookie Grass)	Y		
401.	5182 <i>Hypericum perforatum</i> (St John's Wort)	Y		
402.	26971 <i>Hypnea ramentacea</i>			
403.	5817 <i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
404.	5825 <i>Hypocalymma robustum</i> (Swan River Myrtle)			
405.	9352 <i>Hypochaeris radicata</i> (Flat Weed, Cats-ear)	Y		
406.	1070 <i>Hypolaena exsulca</i>			
407.	1531 <i>Iris germanica</i> (Flag Iris)	Y		
408.	912 <i>Isolepis cyperoides</i>			
409.	10831 <i>Isolepis prolifera</i> (Budding Club-rush)	Y		
410.	<i>Isopeda leishmanni</i>			
411.	2237 <i>Isopogon sphaerocephalus</i> (Drumstick Isopogon)			
412.	7396 <i>Isotoma hypocrateriformis</i> (Woodbridge Poison)			
413.	1532 <i>Ixia maculata</i> (Yellow Ixia)	Y		
414.	8092 <i>Ixiolaena viscosa</i> (Sticky Ixiolaena)			
415.	<i>Ixodes australiensis</i>			
416.	4017 <i>Jacksonia horrida</i>			
417.	26985 <i>Jania micrarthrodia</i>			
418.	48292 <i>Jania rosea</i>			
419.	1295 <i>Johnsonia acaulis</i>			
420.	1297 <i>Johnsonia lupulina</i> (Hooded Lily)			
421.	8328 <i>Juncus amabilis</i>			
422.	1179 <i>Juncus caespiticius</i> (Grassy Rush)			
423.	1180 <i>Juncus capitatus</i> (Capitate Rush)	Y		
424.	11922 <i>Juncus kraussii</i> subsp. <i>australiensis</i>			
425.	1186 <i>Juncus microcephalus</i>	Y		
426.	1189 <i>Juncus pauciflorus</i> (Loose Flower Rush)			
427.	1195 <i>Juncus subsecundus</i> (Finger Rush)			
428.	<i>Karaops ellenaee</i>			
429.	4036 <i>Kennedia carinata</i>			
430.	4037 <i>Kennedia coccinea</i> (Coral Vine)			
431.	26995 <i>Kuetzingia canaliculata</i>			
432.	15674 <i>Kunzea ciliata</i>			
433.	5835 <i>Kunzea micrantha</i>			
434.	5841 <i>Kunzea recurva</i>			
435.	3669 <i>Labichea punctata</i> (Lance-leaved Cassia)			
436.	18585 <i>Lagenophora huegelii</i>			
437.	48345 <i>Lasiopetalum occidentale</i>			
438.	<i>Latrodoctus hasseltii</i>			
439.	26999 <i>Laurencia clavata</i>			
440.	27000 <i>Laurencia elata</i>			
441.	27001 <i>Laurencia filiformis</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
442.	6879 <i>Lavandula stoechas</i> (Italian Lavender)	Y		
443.	11464 <i>Laxmannia sessiliflora</i> subsp. <i>australis</i>			
444.	7568 <i>Lechenaultia biloba</i> (Blue Leschenaultia)			
445.	7572 <i>Lechenaultia expansa</i>			
446.	7574 <i>Lechenaultia floribunda</i> (Free-flowering Leschenaultia)			
447.	27013 <i>Lenormandia spectabilis</i>			
448.	8099 <i>Leontodon saxatilis</i> (Hairy Hawkbit)	Y		
449.	<i>Lepidoblennius marmoratus</i>			
450.	925 <i>Lepidosperma angustatum</i>			
451.	42741 <i>Lepidosperma apricola</i>			
452.	929 <i>Lepidosperma carphoides</i> (Black Rapier Sedge)			
453.	937 <i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
454.	940 <i>Lepidosperma pubisquameum</i>			
455.	20398 <i>Lepidosperma</i> sp. <i>Blackwood</i> (R. Davis 7696)			
456.	29150 <i>Lepidosperma</i> sp. <i>Margaret River</i> (B.J. Lepschi 1841)			
457.	1080 <i>Leptocarpus scarious</i>			
458.	46377 <i>Leptocarpus scoparius</i>			
459.	46379 <i>Leptocarpus thysananthus</i>			
460.	2355 <i>Leptomeria squarrulosa</i>			
461.	16449 <i>Leucophyta brownii</i>			
462.	6358 <i>Leucopogon assimilis</i>			
463.	6360 <i>Leucopogon australis</i> (Spiked Beard-heath)			
464.	6367 <i>Leucopogon capitellatus</i>			
465.	6368 <i>Leucopogon carinatus</i>			
466.	6375 <i>Leucopogon cordatus</i>			
467.	6396 <i>Leucopogon glabellus</i>			
468.	6425 <i>Leucopogon oxycedrus</i>			
469.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
470.	6436 <i>Leucopogon propinquus</i>			
471.	6439 <i>Leucopogon pulchellus</i> (Beard-heath)			
472.	6451 <i>Leucopogon tenuis</i>			
473.	6454 <i>Leucopogon verticillatus</i> (Tassel Flower)			
474.	27018 <i>Leveillea jungermannioides</i>			
475.	7676 <i>Levenhookia pusilla</i> (Midget Stylewort)			
476.	49103 <i>Levenhookia</i> sp. <i>Whicher Range</i> (J.A. Wege 2090)			
477.	7677 <i>Levenhookia stipitata</i> (Common Stylewort)			
478.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
479.	41416 <i>Liopholis pulchra</i> subsp. <i>pulchra</i> (South-western Rock Skink, Spectacled Rock Skink)			
480.	36180 <i>Liparophyllum latifolium</i>			
481.	<i>Lissocampus runa</i>			
482.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
483.	9289 <i>Lobelia anceps</i> (Angled Lobelia)			
484.	7402 <i>Lobelia gibbosa</i> (Tall Lobelia)			
485.	27043 <i>Lobophora variegata</i>			
486.	6515 <i>Logania vaginalis</i> (White Spray)			
487.	1222 <i>Lomandra brittanii</i>			
488.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
489.	1229 <i>Lomandra integra</i>			
490.	1234 <i>Lomandra nigricans</i>			
491.	1238 <i>Lomandra pauciflora</i>			
492.	8564 <i>Lotus subbiflorus</i>	Y		
493.	1092 <i>Loxocarya cinerea</i>			
494.	15835 <i>Loxocarya striata</i>			
495.	1198 <i>Luzula meridionalis</i> (Field Woodrush)			
496.	<i>Lycosa gilberta</i>			
497.	1097 <i>Lyginia barbata</i>			
498.	18049 <i>Lyginia imberbis</i>			
499.	1656 <i>Lyperanthus serratus</i> (Rattle Beak Orchid)			
500.	36375 <i>Lysimachia arvensis</i> (Pimpernel)	Y		
501.	36373 <i>Lysimachia minima</i>	Y		
502.	34736 <i>Lysinema pentapetalum</i>			
503.	5281 <i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
504.	85 <i>Macrozamia riedlei</i> (<i>Zamia</i> , <i>Djiridji</i>)			
505.	25650 <i>Malurus elegans</i> (Red-winged Fairy-wren)			
506.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
507.	17637 <i>Marianthus candidus</i> (White Marianthus)			
508.	17630 <i>Marianthus tenuis</i>			
509.	13273 <i>Melaleuca incana</i> subsp. <i>incana</i>			
510.	5952 <i>Melaleuca preissiana</i> (Moonah)			
511.	18598 <i>Melaleuca systena</i>			

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512.	5980 <i>Melaleuca thymoides</i>			
513.	4085 <i>Melilotus indicus</i>	Y		
514.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
515.	953 <i>Mesomelaena graciliceps</i>			
516.	27069 <i>Metagoniolithon stelliferum</i>			
517.	27070 <i>Metamastophora flabellata</i>			
518.	<i>Microcarbo melanoleucos</i>			
519.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
520.	4090 <i>Mirbelia dilatata</i> (Holly-leaved Mirbelia)			
521.	37440 <i>Monopsis debilis</i> var. <i>depressa</i>	Y		
522.	25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)			
523.	25191 <i>Morethia lineocellata</i>			
524.	48008 <i>Morus serrator</i> (Australasian Gannet)			
525.	2412 <i>Muehlenbeckia adpressa</i> (Climbing Lignum)			
526.	7291 <i>Myoporum insulare</i> (Blueberry Tree, boobialla)			
527.	12778 <i>Myosotis discolor</i>	Y		
528.	27090 <i>Myriodesma quercifolium</i>			
529.	27091 <i>Myriodesma serrulatum</i>			
530.	<i>Neopataecus waterhousii</i>			
531.	492 <i>Neurachne alopecuroidea</i> (Foxtail Mulga Grass)			
532.	4366 <i>Nitraria billardierei</i> (Nitre Bush)			
533.	27103 <i>Nizyenia conferta</i>			
534.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
535.	2401 <i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
536.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
537.	2365 <i>Olax benthamiana</i>			
538.	8127 <i>Olearia axillaris</i> (Coastal Daisybush)			
539.	7346 <i>Opercularia echinocephala</i> (Bristly Headed Stink Weed)			
540.	7348 <i>Opercularia hispidula</i> (Hispid Stinkweed)			
541.	18255 <i>Opercularia vaginata</i> (Dog Weed)			
542.	<i>Oplegnathus woodwardi</i>			
543.	46316 <i>Orianthera serpyllifolia</i> subsp. <i>angustifolia</i>			
544.	4114 <i>Ornithopus pinnatus</i> (Slender Serradella)	Y		
545.	7122 <i>Orobanche minor</i> (Lesser Broomrape)	Y		
546.	11749 <i>Orthrosanthus laxus</i> var. <i>laxus</i> (Morning Iris)			
547.	27107 <i>Osmundaria prolifera</i>			
548.	4358 <i>Oxalis purpurea</i> (Largeflower Wood Sorrel)	Y		
549.	<i>Oxyopes gracilipes</i>			
550.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
551.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
552.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
553.	1546 <i>Patersonia juncea</i> (Rush Leaved Patersonia)			
554.	1548 <i>Patersonia limbata</i>			
555.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
556.	30472 <i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
557.	11550 <i>Patersonia umbrosa</i> var. <i>xanthina</i> (Yellow Flags)			
558.	4343 <i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
559.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
560.	6245 <i>Pentapeltis peltigera</i>			
561.	11020 <i>Persicaria hydropiper</i>			
562.	2262 <i>Persoonia elliptica</i> (Spreading Snottygobble)			
563.	2267 <i>Persoonia longifolia</i> (Snottygobble)			
564.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
565.	48066 <i>Petroica boodang</i> (Scarlet Robin)			
566.	2293 <i>Petrophile diversifolia</i>			
567.	2299 <i>Petrophile linearis</i> (Pixie Mops)			
568.	2309 <i>Petrophile serruriae</i>			
569.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
570.	25699 <i>Phalacrocorax varius</i> (Pied Cormorant)			
571.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
572.	25587 <i>Phaps elegans</i> (Brush Bronzewing)			
573.	18529 <i>Philothea spicata</i> (Pepper and Salt)			
574.	1478 <i>Phlebotocarya ciliata</i>			
575.	<i>Pholcus phalangioides</i>			
576.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
577.	4675 <i>Phyllanthus calycinus</i> (False Boronia)			
578.	<i>Phytophthora cinnamomi</i>			
579.	5231 <i>Pimelea angustifolia</i> (Narrow-leaved Pimelea)			
580.	5232 <i>Pimelea argentea</i> (Silvery Leaved Pimelea)			
581.	5243 <i>Pimelea ferruginea</i>			

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582.	5249 <i>Pimelea hispida</i> (Bristly Pimelea)			
583.	18117 <i>Pimelea rosea</i> subsp. <i>rosea</i>			
584.	5264 <i>Pimelea spectabilis</i> (Bunjong)			
585.	12041 <i>Pimelea suaveolens</i> subsp. <i>suaveolens</i>			
586.	5269 <i>Pimelea sylvestris</i>			
587.	<i>Pinkfloydia harveii</i>			
588.	48975 <i>Pisolithus microcarpus</i>			
589.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
590.	11160 <i>Platysace haplosciadia</i>			
591.	6259 <i>Platysace tenuissima</i>			
592.	6262 <i>Platysace xerophila</i>			
593.	27151 <i>Platythalia angustifolia</i>			
594.	27152 <i>Platythalia quercifolia</i>			
595.	27155 <i>Plocamium cartilagineum</i>			
596.	27156 <i>Plocamium mertensii</i>			
597.	27157 <i>Plocamium preissianum</i>			
598.	578 <i>Poa porphyroclados</i>			
599.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
600.	86 <i>Podocarpus drouynianus</i> (Wild Plum, Kula)			
601.	8182 <i>Podotheca angustifolia</i> (Sticky Longheads)			
602.	2905 <i>Polycarpon tetraphyllum</i> (Fourleaf Allseed)	Y		
603.	27163 <i>Polycyrea nigrescens</i>			
604.	25722 <i>Polytelis anthopeplus</i> (Regent Parrot)			
605.	4690 <i>Poranthera huegelii</i>			
606.	125 <i>Posidonia sinuosa</i>			
607.	1672 <i>Prasophyllum fimbria</i> (Fringed Leek Orchid)			
608.	1680 <i>Prasophyllum parvifolium</i> (Autumn Leek Orchid)			
609.	<i>Pseudolabrus</i> sp.			
610.	25259 <i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
611.	27196 <i>Pterocladia rectangularis</i>			
612.	44527 <i>Pterostylis erubescens</i>			
613.	1693 <i>Pterostylis recurva</i> (Jug Orchid)			
614.	18655 <i>Pterostylis</i> sp. <i>crinkled leaf</i> (G.J. Keighery 13426)			
615.	10998 <i>Pterostylis turfosa</i> (Bird Orchid)			
616.	1698 <i>Pterostylis vittata</i> (Banded Greenhood)			
617.	27200 <i>Pterothamnion nodiferum</i>			Y
618.	2718 <i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)			
619.	2742 <i>Ptilotus manglesii</i> (Pom Poms, Mulamula)			
620.	4181 <i>Pultenaea reticulata</i>			
621.	<i>Purpureicephalus spurius</i>			
622.	24245 <i>Rattus rattus</i> (Black Rat)	Y		
623.	45915 <i>Restiosporium meneyae</i>			
624.	18547 <i>Rhadinothamnus anceps</i>			
625.	2578 <i>Rhagodia baccata</i> (Berry Saltbush)			
626.	11341 <i>Rhagodia baccata</i> subsp. <i>baccata</i>			
627.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
628.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
629.	13300 <i>Rhodanthe citrina</i>			
630.	4695 <i>Ricinocarpos glaucus</i>			
631.	2429 <i>Rumex acetosella</i> (Sorrel)	Y		
632.	40431 <i>Rytidosperma acerosum</i>			
633.	6485 <i>Samolus valerandi</i> (Water Pimpernel)	Y		
634.	2356 <i>Santalum acuminatum</i> (Quandong, Warnga)			
635.	27239 <i>Sargassum fallax</i>			
636.	27249 <i>Sargassum linearifolium</i>			
637.	27260 <i>Sargassum tristichum</i>			
638.	27264 <i>Scaberna agardhii</i>			
639.	7595 <i>Scaevola anchusifolia</i>			
640.	7602 <i>Scaevola calliptera</i>			
641.	7606 <i>Scaevola crassifolia</i> (Thick-leaved Fan-flower)			
642.	7613 <i>Scaevola glandulifera</i> (Viscid Hand-flower)			
643.	7624 <i>Scaevola microphylla</i> (Small-leaved Scaevola)			
644.	7626 <i>Scaevola nitida</i> (Shining Fanflower)			
645.	984 <i>Schoenus curvifolius</i>			
646.	1005 <i>Schoenus obtusifolius</i>			
647.	1020 <i>Schoenus sublateralis</i>			
648.	<i>Scolopendra laeta</i>			
649.	6 <i>Selaginella gracillima</i> (Tiny Clubmoss)			
650.	8203 <i>Senecio diaschides</i>			
651.	8204 <i>Senecio elegans</i> (Purple Groundsel)	Y		

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
652.	20161 <i>Senecio pinnatifolius</i>			
653.	25534 <i>Sericornis frontalis</i> (White-browed Scrubwren)			
654.	<i>Servaea spinibarbis</i>			
655.	7362 <i>Sherardia arvensis</i> (Field Madder)	Y		
656.	8225 <i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
657.	10920 <i>Soliva sessilis</i> (Jo-jo, Onehunga Weed)	Y		
658.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
659.	1558 <i>Sparaxis bulbifera</i>	Y		
660.	4207 <i>Sphaerolobium medium</i>			
661.	4209 <i>Sphaerolobium racemulosum</i>			
662.	4211 <i>Sphaerolobium vimineum</i> (Leafless Globe Pea)			
663.	31952 <i>Sphenotoma gracilis</i> (Swamp Paper-heath)			
664.	31951 <i>Sphenotoma parviflora</i>			
665.	<i>Spinicrus minimus</i>			
666.	<i>Spinicrus porongorupensis</i>			
667.	27310 <i>Spyridia filamentosa</i>			
668.	4828 <i>Spyridium globulosum</i> (Basket Bush)			
669.	20537 <i>Stachystemon virgatus</i>			
670.	24645 <i>Stagonopleura oculata</i> (Red-eared Firetail)			
671.	3080 <i>Stenopetalum robustum</i>			
672.	25655 <i>Stipiturus malachurus</i> (Southern Emu-wren)			
673.	24554 <i>Stipiturus malachurus</i> subsp. <i>westernensis</i> (Southern Emu-wren)			
674.	7684 <i>Stylidium amoenum</i> (Lovely Triggerplant)			
675.	30278 <i>Stylidium androsaceum</i>			
676.	39880 <i>Stylidium angustifolium</i> subsp. <i>glaucofolium</i>			
677.	7694 <i>Stylidium bulbiferum</i> (Circus Triggerplant)			
678.	7713 <i>Stylidium dichotomum</i> (Pins-and-needles)			
679.	7718 <i>Stylidium diversifolium</i> (Touch-me-not)			
680.	7719 <i>Stylidium ecome</i> (Foot Triggerplant)			
681.	19251 <i>Stylidium eriopodium</i>			
682.	7733 <i>Stylidium glaucum</i> (Grey Triggerplant)			
683.	25801 <i>Stylidium hesperium</i>			
684.	25829 <i>Stylidium neurophyllum</i> (Coastal Plain Triggerplant)			
685.	25851 <i>Stylidium nymphaeum</i>			
686.	7774 <i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
687.	7785 <i>Stylidium repens</i> (Matted Triggerplant)			
688.	7787 <i>Stylidium rhynchocarpum</i> (Black-beaked Triggerplant)			
689.	1260 <i>Stypandra glauca</i> (Blind Grass)			
690.	2323 <i>Synaphea gracillima</i>			
691.	2324 <i>Synaphea petiolaris</i> (Synaphea)			
692.	32437 <i>Syntrichia antarctica</i>			
693.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
694.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
695.	15827 <i>Taraxis grossa</i>			
696.	20114 <i>Taxandria fragrans</i>			
697.	20135 <i>Taxandria linearifolia</i>			
698.	20133 <i>Taxandria parviceps</i>			
699.	4256 <i>Templetonia retusa</i> (Cockies Tongues)			
700.	2820 <i>Tetragonia decumbens</i> (Sea Spinach)	Y		
701.	2823 <i>Tetragonia implexicoma</i> (Bower Spinach)			
702.	1036 <i>Tetralia octandra</i>			
703.	35579 <i>Tetralia</i> sp. Jarrah Forest (R. Davis 7391)			
704.	667 <i>Tetrarrhena laevis</i> (Forest Ricegrass)			
705.	4544 <i>Tetralthea setigera</i>			
706.	1707 <i>Thelymitra flexuosa</i> (Twisted Sun Orchid)			
707.	1708 <i>Thelymitra fuscolutea</i> (Chestnut Sun Orchid)			
708.	11143 <i>Thelymitra graminea</i>			
709.	18248 <i>Thelymitra granitora</i>			
710.	11053 <i>Thelymitra macrophylla</i>			
711.	1710 <i>Thelymitra mucida</i> (Plum Orchid)			
712.	20731 <i>Thelymitra vulgaris</i>			
713.	673 <i>Themeda triandra</i>			
714.	5077 <i>Thomasia cognata</i>			
715.	5080 <i>Thomasia foliosa</i>			
716.	5087 <i>Thomasia macrocarpa</i> (Large Fruited Thomasia)			
717.	5091 <i>Thomasia paniculata</i>			
718.	5097 <i>Thomasia rhynchocarpa</i>			
719.	5105 <i>Thomasia triphylla</i>			
720.	2644 <i>Threlkeldia diffusa</i> (Coast Bonefruit)			
721.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
722.	6065 <i>Thryptomene saxicola</i> (Rock Thryptomene)			
723.	1328 <i>Thysanotus dichotomus</i> (Branching Fringe Lily)			
724.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
725.	<i>Thysanotus</i> sp.			
726.	1354 <i>Thysanotus tenellus</i>			
727.	1358 <i>Thysanotus triandrus</i>			
728.	8248 <i>Tolpis barbata</i> (Yellow Hawkweed)	Y		
729.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
730.	4548 <i>Tremandra stelligera</i>			
731.	1485 <i>Tribonanthes violacea</i> (Violet Tiurndin)			
732.	8251 <i>Trichocline spathulata</i> (Native Gerbera)			
733.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
734.	25521 <i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
735.	24158 <i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
736.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
737.	17541 <i>Trifolium incarnatum</i> var. <i>incarnatum</i>	Y		
738.	4302 <i>Trifolium ligusticum</i> (Ligurian Clover)	Y		
739.	35016 <i>Trihaloragis hexandra</i> subsp. <i>integrifolia</i>			
740.	11665 <i>Trymalium ledifolium</i> var. <i>ledifolium</i>			
741.	13479 <i>Trymalium ledifolium</i> var. <i>rosmarinifolium</i>			
742.	33438 <i>Trymalium odoratissimum</i> subsp. <i>trifidum</i>			
743.	27345 <i>Turbinaria gracilis</i>			
744.	<i>Urodacus novaehollandiae</i>			
745.	38388 <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		
746.	8257 <i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
747.	<i>Venator immansueta</i>			
748.	7109 <i>Veronica calycina</i> (Cup Speedwell)			
749.	7110 <i>Veronica distans</i>			
750.	6110 <i>Verticordia plumosa</i> (Plumed Featherflower)			
751.	15618 <i>Verticordia plumosa</i> var. <i>plumosa</i>			
752.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			
753.	27360 <i>Vidalia spiralis</i>			
754.	4325 <i>Viminaria juncea</i> (Swishbush, Koweda)			
755.	7384 <i>Wahlenbergia capensis</i> (Cape Bluebell)	Y		
756.	18118 <i>Watsonia meriana</i> var. <i>meriana</i>	Y		
757.	1394 <i>Wurmbea dioica</i> (Early Nancy)			
758.	14545 <i>Xanthorrhoea brunonis</i> subsp. <i>semibarbata</i>			
759.	1253 <i>Xanthorrhoea gracilis</i> (Graceful Grass Tree, Mimidi)			
760.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
761.	6284 <i>Xanthosia candida</i>			
762.	6289 <i>Xanthosia huegelii</i>			
763.	19330 <i>Xanthosia tasmanica</i>			
764.	44861 <i>Xerochrysum macranthum</i>			
765.	1145 <i>Xyris gracillima</i>			
766.	1146 <i>Xyris inaequalis</i>			
767.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

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 E: Species list site matrix

Family	Species	Introduced	Cons Status	1	2	3	4	5	6	7	8	9	10	11
Anarthriaceae	<i>Anarthria prolifera</i>				+		+		+		+			
	<i>Lyginia barbata</i>				+		+	+						
Apiaceae	<i>Daucus glochidiatus</i>				+			+						
	<i>Xanthosia candida</i>								+					
Asparagaceae	<i>Asparagus asparagoides</i>	*		+										
	<i>Lomandra nigricans</i>						+							
	<i>Lomandra purpurea</i>					+						+		
	<i>Lomandra</i> sp.			+					+					
	<i>Thysanotus manglesianus</i>				+	+		+						
	<i>Thysanotus tenellus</i>				+		+							
	<i>Thysanotus tenellus</i>						+							
Asteraceae	<i>Arctotheca calendula</i>	*					+							
	<i>Olearia axillaris</i>									+				
	<i>Ursinia anthemoides</i>	*			+		+	+						
	<i>Hypochoeris glabra</i>	*				+	+	+				+		
Brassicaceae	<i>Raphanus raphanistrum</i>	*				+								
Casuarinaceae	<i>Allocasuarina humilis</i>				+	+								
Colchicaceae	<i>Burchardia congesta</i>				+		+	+	+					+
	<i>Burchardia multiflora</i>						+							+
Cyperaceae	<i>Baumea vaginalis</i>			+										
	<i>Lepidosperma squamatum</i>				+	+			+	+				+
	<i>Lepidosperma tenue</i>											+		
	<i>Mesomelaena tetragona</i>								+			+		
	<i>Tetraria capillaris</i>											+		

