

APPLICATION FOR CLEARING PERMIT



**ROAD RESERVE
ADJACENT TO LOT
9501 ROY EARL
DRIVE, COWARAMUP**

MAY 2015

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1 INTRODUCTION

1.1 Applicant

The applicant for this Purpose Clearing Permit is Corrib Developments (herein referred to as Corrib):

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1.2 Background

As a component of a Western Australian Subdivision Approval (WAPC) (**Appendix A**), Corrib is proposing to clear vegetation within a road reserve adjacent to Lot 9501 Roy Earl Drive, Cowaramup (refer to **Figure 1** and **Figure 2**). The vegetation subject to clearing (herein referred to as the impact area) is located along Bussell Highway where it is proposed to install a left turn lane into Roy Earl Drive. The impact area is located in the municipality of the Shire of Augusta-Margaret River, approximately 300 m south of the Cowaramup town centre and approximately 10 km north of Margaret River.

The impact area is comprised of a maximum area of 0.15 ha which only contains overstorey species, with the exception of the occasional *Xanthorrhoea preissii* and *Melaleuca viminea*. The impact area has been subjected to extensive historical anthropogenic activities including clearing, weed invasion and thinning. The proposed impact area is depicted within **Figure 2**. The impact area is zoned 'Highways and Main Roads' pursuant to the Shire of Augusta Margaret River's Town Planning Scheme No. 1.

1.3 Scope and Purpose

This document has been prepared to support an application for a Clearing Permit (Purpose Permit) pursuant to Section 51E of the *Environmental Protection Act 1986* (EP Act). This document provides information regarding the current environmental condition of the impact area, including the predicted impacts of clearing and proposed management actions to mitigate predicted impacts. It also demonstrates compliance with the 10 clearing principles and other relevant legislation and policy.

The purpose of this Clearing Permit Application is to obtain a permit to clear the impact area to enable the installation of a left turn lane into Roy Earl Drive.

1.4 Relevant Legislation and Policy

Western Australian legislation relevant to this Clearing Permit application includes:

- *Bush Fires Act 1954*;
- *Conservation and Land Management Act 1984*;
- *Environmental Protection Act 1986*; and
- *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

In addition to the above, there are several relevant Environmental Protection Authority (EPA) Guidance Statements that outline requirements for terrestrial flora, vegetation and fauna surveys:

- EPA Guidance Statement No. 51 – *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA 2004);
- EPA Guidance Statement No. 56 – *Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia* (EPA 2004); and
- EPA Position Statement No. 3 – *Terrestrial Biological Surveys as an Element of Biodiversity Protection* (EPA 2002).

2 BIOPHYSICAL ENVIRONMENT

During the compilation of this clearing permit application, a range of specific environmental and heritage issues were explored in relation to the impact area. This involved a detailed desktop assessment and a site visit conducted on the 11th May 2015.

2.1 Topography, Landform and Soils

The natural topography of the impact area can be described as flat with the elevation ranging between 133 metres (m) Australian Height Datum (AHD) to 135 m AHD.

Geological classification of the site reported in Cowaramup – Mentelle Western Australia 1: 50,000 Regolith Landform Resource Series (Sheet 1930 III and Part of 1830 II) (Hall, Marnham and Langford 2000) indicated that the site lies within the Cowaramup System.

The Cowaramup System is described as having an upper layer of silty or gravely sand overlaying areas of undivided felsic granite and granulite. The site is located within an area of the Cowaramup System described as having silty gravely sand over mottled sandy clay overlying the Leeuwin Complex, consisting of fresh to weathered undivided felsic granulite to granite an minor mafic granulite and anorthosite (SLIP 2009).

The impact area is located within the Cowaramup Uplands System characterised by sandy gravel, loamy gravel and grey sandy duplex soils. Within the Cowaramup Uplands System, the impact area is located within the following sub-systems:

- Cowaramup Wet Flats Phase - poorly drained flats and slight depressions with pale grey mottled soils (Mungite); and
- Cowaramup Flats Phase - flats with gravelly duplex (Forest Grove) and pale grey mottled (Mungite) soils.

Broad soil types located within the impact area are depicted in **Figure 3**.

2.2 Acid Sulfate Soils

Acid Sulfate Soils (ASS) is the common name given to naturally occurring soil and sediment containing iron sulfides. They have become a potential issue in land development projects on the Swan Coastal Plain when the naturally anaerobic conditions in which they are situated are disturbed and they are exposed to aerobic conditions and subsequently oxidise. When oxidised, ASS produce sulfuric acid, which can result in a range of impacts to the surrounding environment. ASS that has oxidised and resulted in the creation of acidic conditions are termed "Actual ASS" (AASS), and those that have acid generating potential but remain in their naturally anaerobic conditions are termed "Potential ASS" (PASS).

Mapping prepared by the Department for Planning and Infrastructure (DPI) to support the Western Australian Planning Commission's (WAPC's) Planning Bulletin 64: *Acid Sulfate Soils* (WAPC 2007) indicates that a small portion of the impact area is classified as having a "moderate to low risk of ASS, generally occurring at a greater depth than 3 metres" (refer to **Figure 4**).

2.3 Hydrology

2.3.1 Groundwater

Hydrological information was obtained from the registered groundwater bore database supplied by the Department of Water (DoW). Information obtained indicated five bores were located on Lot 9501 and are

used for watering, livestock and domestic irrigation. Groundwater depths ranged from 1.2 m below ground surface (bgs) to 3.4 m bgs within these bores (DoW 2008). The water quality in these bores was reportedly fresh, with total dissolved solids (TDS) ranging from 165 mg/L to 315 mg/L (SLIP 2009).

2.3.2 Surface Water

The impact area does not contain any defined natural surface water channels and is not located within a 'Public Drinking Water Source' area (SLIP 2009).

The impact area is located within the Willyabrup Brook Catchments Area, which in total covers an area of 89.2km². The Willyabrup Brook is located in the proximity to the impact area, and flows to the west, towards the coast. A man-made drain is located approximately 100 m east of the impact area. This drain enters a tributary at Willyabrup Brook to the north of the impact area.

2.4 Wetlands

Wetlands within Western Australia are classified on the basis of landform and water permanence pursuant to the Semeniuk (1995) classification system (refer to **Table 1**).

Table 1. Wetland classifications (Semeniuk 1995).

Water Longevity	Landform				
	Basin	Channel	Flat	Slope	Highland
Permanent Inundation	Lake	River	-	-	-
Seasonal Inundation	Sumpland	Creek	Floodplain	-	-
Intermittent Inundation	Playa	Wadi	Barlkarra	-	-
Seasonal Waterlogging	Dampland	Trough	Palusplain	Paluslope	Palusmont

Areas of wetlands have been mapped previously by Semeniuk (1995) across the entire Swan Coastal Plain. This mapping has been converted into a digital dataset that is maintained by the DPaW and is referred to as the 'Geomorphic Wetland of the Swan Coastal Plain' dataset. This dataset contains information on geomorphic wetland types and assigns management categories that guide the recommended management approach for each wetland area. The wetland management categories and management objectives are listed in **Table 2**.

Table 2. DPaW wetland management categories (Semeniuk 1995).

Category	Description	Management Objectives
Conservation	Wetlands support a high level of ecological attributes and functions.	Highest priority wetlands. Objective is to preserve and protect the existing conservation values of the wetlands through various mechanisms including: <ul style="list-style-type: none"> • Reservation in national parks, crown reserves and State owned land, • Protection under Environmental Protection Policies, and • Wetland covenanting by landowners. No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate.
Resource Enhancement	Wetlands which may have been partially modified but	Priority wetlands. Ultimate objective is to manage, restore and protect towards improving their conservation value.

Category	Description	Management Objectives
	still support substantial ecological attributes and functions	These wetlands have the potential to be restored to Conservation category. This can be achieved by restoring wetland function, structure and biodiversity.
Multiple Use	Wetlands with few remaining attributes and functions	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare.

The *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates that no wetlands are contained within the impact area.

2.5 Vegetation and Flora

The flora and vegetation within the impact area has been subjected to prolonged land degradation processes including land clearing, livestock grazing, weed invasion, altered water regimes and dieback infestation. These processes have significantly impacted the value and function of the native remnant vegetation.

2.5.1 Vegetation

Vegetation Types

The application is located in the Jarrah Forest Bioregion in the Shire of Augusta Margaret River. The extent of native vegetation in these areas is 58.3% and 71.7% respectively (Shepherd *et al.* 2001). There is approximately 40% of native vegetation remaining in the local area and the majority of this is within the Department of Parks and Wildlife (DPaW) managed state forest.

The impact area is mapped as occurring within the Cowaramup complexes, including the following:

- Cowaramup (Cw2) – Woodland of *Eucalyptus marginata* subsp. *marginata* – *Corymbia calophylla* on slopes and low woodland of *Melaleuca pressiana*; and
- Cowaramup (C2) - Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia grandis* on lateritic uplands in perhumid and humid zones.

The mapped vegetation complexes and associations can be used to determine vegetation extent and status on the Swan Coastal Plain (refer to **Table 3**). The EPA recognises vegetation associations that are not well represented in reserves as being 'significant'.

Table 3. Extent of pre-European vegetation remaining the Swan Coastal Plain IBRA region.

System	Pre-European (ha)	Current Area (ha)	Remaining Extent (%)
IBRA Bioregion¹ Jarrah Forrest	4,506,655	2,440,940	58.3
Local Government¹ Shire of Augusta – Margaret River	223,634	150,658	71.7
Mattiske Mapping² Cw2	6,652	1,516	23
C2	13,683	4,889	36

1 – Government of Western Australia (2013)

2 – Mattiske Consulting (2002)

The national objectives and targets for biodiversity conservation in Australia have a target to prevent clearance of ecological communities with an extent below 30% of their pre- European extent remaining. There is currently 23% of the Cw2 complex remaining. Although this vegetation complex has been

identified as having a low representation, much of it is protected within large areas of state forest within the local area. Furthermore, based on a recent site visit, vegetation within the impact area is not considered representative of this vegetation complex given the absence of understorey species, lack of species diversity and high degree of weed incursion.

Vegetation Condition

As previously discussed, the impact area has experienced ongoing land degradation processes. During the site visit, a high degree of weed incursion was noted and species diversity was extremely limited (approximately six native species identified). Vegetation is limited to a narrow area (approximately 165m in length and 10m wide) and is generally sporadically comprised of *Corymbia calophylla* with occasional *Allocasuarina fraseriana*, *Agonis flexuosa*, *Melaleuca viminea* and *Xanthorrhoea preissii*. The understorey is completely comprised of introduced grass species. With the exception of approximately ten *Corymbia calophylla* trees, the vegetation is relatively juvenile (approximately 10 years of age) denoting that it is regrowth from previous clearing activities. Given the high degree of weed incursion and low species diversity, the vegetation within the impact area is deemed to be in a 'Degraded' condition (refer to **Plate 1** and **Plate 2**).



Plate 1. Mature *Corymbia calophylla* trees adjacent to the road and an understorey comprised of introduced grass species.



Plate 2. Evidence of historical clearing activities resulting in the sporadic nature of vegetation.

Ecological Communities

Threatened Ecological Communities (TECs) are defined by the DPaW and are assigned to a category of Priority 1 to Priority 5. While they are not afforded direct statutory protection at a State level their significance is acknowledged through other State environmental approval processes (i.e. the Environmental Impact Assessment pursuant to Part IV of the EP Act).

Selected TECs are also afforded statutory protection at a Federal level pursuant to the *Environment Protection and Biodiversity Conservation Act 1998* (EPBC Act). The EPBC Act provides for the protection of TECs that are listed under section 181 of the Act, and are defined as “Critically Endangered”, “Endangered” or “Vulnerable”.

In addition to listing as a TEC, a community may be listed as a Priority Ecological Community (PEC). An ecological community that is under consideration for listing as a TEC, but does not yet meet the survey criteria or has not been adequately defined, is placed on the list of PECs in either Category 1, 2 or 3.

A search was conducted of the DPaW’s database and the EPBC Act Protected Matters Search Tool whereby no TECs or PECs were identified in proximity to the impact area.

A Strategy was developed for the Environmental Protection Authority (EPA) to identify regionally significant natural areas. These areas were identified using the reports and studies listed below:

- System reports – System 1 and System 6 (DEC 1976 1983);
- Areas of Threatened and Poorly Reserved Plant Communities: EPA (1994, derived from Gibson *et al.* 1994);
- Areas of threatened ecological communities: as defined by English and Blyth (1997); and
- The Kemerton Buffer Link (EPA 1999).

This resulted in the identification of several Regional Ecological Linkages which are recognised by DPaW. Pursuant to DPaW’s database search results, the impact area is not located within a Regional Ecological Linkage.

2.5.2 Environmentally Sensitive Areas

Section 51B of the EP Act allows the Minister to declare an Environmentally Sensitive Area (ESA). Once declared, the exemptions to clear native vegetation under the regulations do not apply in these areas.. Current declared ESAs are listed in *the Environmental Protection (Environmentally Sensitive Areas) Notice 2005*.

There are no ESAs located within or in proximity to the impact area.

2.5.3 Flora

A search for known rare and Priority flora within or in proximity to the impact area was undertaken through a review of the following databases:

- DPaW’s Threatened (Declared Rare) Flora database;
- DPaW’s Declared Rare and Priority Flora list;
- Western Australian Herbarium Specimen database for priority species opportunistically collected in the area of interest; and
- EPBC Act Protected Matters database.

A total of four conservation significant flora have been recorded within 10 km of the impact area. This includes three species of Priority flora and one Declared Rare species. The EPBC Act Protected Matters

database search returned 20 results for listed Threatened flora species of which two have potential to occur within the impact area (**Appendix B**).

Table 4. Database search results for significant flora known to occur within a 10km radius of the impact area.

Species	DPaW Status ¹	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence
<i>Acacia flagelliformis</i>	P4	-	Sandy soils. Winter-wet areas.	Unlikely
<i>Caladenia huegelii</i>	T	Endangered	Well-drained, deep sandy soils.	Unlikely
<i>Caladenia harringtoniae</i>	T	Endangered	Sandy loam. Winter-wet flats, margins of lakes, creeklines, granite outcrops.	Unlikely
<i>Centrolepis caespitosa</i>	P4	Endangered	Winter-wet clay pans.	Unlikely
<i>Drakaea micrantha</i>	T	Vulnerable	White-grey sand	Unlikely
<i>Grevillea ripicola</i> (<i>Collie Grevillea</i>)	P4	-	Sandy clay, clay or gravelly loam.	Unlikely
<i>Gastrolobium papilio</i>	T	Endangered	Sand, sandy clay, gravelly sandy soils over laterite. Often swampy areas.	Unlikely
<i>Melaleuca viminalis</i>	P2	-	Heavy waterlogged soils.	Unlikely

¹Refer to **Appendix C** for classification descriptions.

While no rare of Priority flora species were identified within the impact area during the site visit (Accendo 2014), a site specific flora and vegetation survey has not been undertaken. Nonetheless, given that the impact area has experienced ongoing disturbances and is primarily in a Degraded condition (Keighery 1994), it is considered unlikely that the vegetation subject to clearing is necessary for the continued existence of conservation significant flora species.

2.6 Fauna

2.6.1 Fauna of Conservation Significance

A search of the DPaW Threatened Fauna database was undertaken to establish whether species declared as 'Rare or likely to become extinct' (Schedule 1), 'Birds protected under an international agreement' (Schedule 3) and 'Other specially protected fauna' (Schedule 4) as listed under the WC Act have been recorded in proximity to the impact area. Four fauna species listed as Schedule 1 species and two DPaW Priority fauna have been recorded within proximity to the impact area.

The EPBC Act Protected Matters Search Tool also identified several Threatened and Migratory species that could potentially occur within or in proximity to the impact area. This included five species classified as Vulnerable, one Endangered species, and four Migratory bird species. Marine species identified within the search were not assessed given that the impact area is not in proximity to a marine environment.

Table 5 provides a summary of significant fauna species and their likelihood to occur within the impact area.

Table 5. Significant fauna potentially occurring within the impact area as identified by State and Commonwealth database searches.

Species	DPaW Status ¹	EPBC Act Status	Likelihood of Occurrence
<i>Apus pacificus</i> (Forked-tailed Swift)	-	Migratory	Unlikely
<i>Ardea ibis</i> (Cattle Egret)	S3	Migratory	Unlikely
<i>Ardea modesta</i> (Eastern Great Egret)	S3	Migratory	Unlikely
<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed)	S1	Vulnerable	Possible
<i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo)	S1	Vulnerable	Unlikely
<i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo)	S1	Endangered	Possible
<i>Dasyurus geoffroii</i> (Chuditch)	S1	Vulnerable	Unlikely
<i>Haliaeetus leucogaster</i> (White-bellied Sea Eagle)	S3	Migratory	Unlikely
<i>Macropus Irma</i> (Western Brush Wallaby)	P4	-	Unlikely
<i>Merops ornatus</i> (Rainbow Bee-eater)	S3	Migratory	Possible
<i>Phascogale tapoatafa</i> subsp. <i>Tapoatafa</i> (Southern Brush-tailed Phascogale)	S1	-	Unlikely
<i>Pseudocheirus occidentalis</i> (Western Ringtail Possum)	S1	Vulnerable	Unlikely
<i>Tyto novaehollandiae</i> subsp. <i>novaehollandiae</i> (Masked Owl (southern subsp))	P3	-	Unlikely

¹Refer to **Appendix D** for classification descriptions.

Of the listed conservation significance species, three species have potential to occur within the impact area. Based on site observations and a desktop investigation, a detailed assessment to determine the likelihood of the abovementioned species occurring within the impact area is provided below.

***Calyptorhynchus latirostris* (Carnaby's Black Cockatoo) (Endangered)**

Carnaby's Black Cockatoo occurs in the south-west of Western Australia, approximately south-west of a line between the Murchison River (near Kalbarri) and Cape Arid National Park (east of Esperance). This species has been recorded in proximity to the impact area.

Carnaby's Black Cockatoo generally nest in hollows in live or dead trees of Salmon Gum (*E. salmonophloia*), Wandoo (*E. Wandoo*), Tuart (*E. gomphocephala*), Jarrah (*E. marginata*), Flooded Gum (*E. rudis*), York Gum (*E. loxophleba* subsp. *loxophleba*), Powderbark (*E. accedens*), Karri (*E. diversicolor*) and Marri (*Corymbia calophylla*) (SEWPaC 2012). During the recent site visit it was determined that the impact area contains approximately five Marri trees with a depth at breast height (DBH) in excess of 50cm (criteria associated with the Commonwealth's Department of the Environment's description of Black Cockatoo breeding trees (SEWPaC 2012)). Nonetheless, no hollows were identified in any of these trees, indicating that the impact area currently does not provide suitable breeding habitat for Black Cockatoos.

Carnaby's Black Cockatoo forages in native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as Banksia spp. (including Dryandra spp.), Hakea spp. and Grevillea spp. (SEWPaC 2012). The impact area does not contain any proteaceous plant species which are preferred foraging habitat for this species of Black Cockatoo.

In consideration of the following factors, the proposed vegetation clearing is very unlikely to impact the long-term persistence of this species:

- Vegetation condition is in a Degraded condition;
- Vegetation subject to clearing does not provide preferential foraging habitat;
- No evidence of Carnaby's Black Cockatoo foraging within the clearing footprint was identified;

- While five trees with a DBH in excess of 50 cm were identified, none contain hollows, denoting that currently, the impact area does not provide suitable breeding habitat;
- The clearing footprint associated with potential habitat for this species is extremely limited and is unlikely to provide an important foraging resource; and
- Located approximately 5 km east of the impact area is an area in excess of 3,000 ha of State Forest that provides suitable breeding and foraging habitat for the species.

Based on the above information, this species is very unlikely to rely on the impact area for its persistence and therefore no significant impacts to the species are anticipated.

***Merops ornatus* (Rainbow Bee-eater) (Migratory)**

The Rainbow Bee-eater occurs in the better watered parts of Western Australia, between the Kimberley and south-west, preferring lightly wooded, sandy country near water (Johnstone and Storr 1998). This is a widespread aerial species that does visit disturbed sites. While it may infrequently visit the impact area, the species will move away from disturbances. Furthermore, the impact area does not provide habitat critical to the survival of this species.

***Calyptorhynchus banksia naso* (Forest Red-tailed Black Cockatoo) (Vulnerable)**

The Forest Red-tailed Black Cockatoo occurs in the south-west of Western Australia, approximately south-west of a line between Gingin and the Green Range (near Wellstead, east of Albany). The range of this sub-species is closely associated with the distribution of Marri (*Corymbia calophylla*); its favoured nesting and foraging tree species. This species typically breeds in tree hollows with a depth of 1 – 5 m primarily in Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*) and Karri (*Eucalyptus diversicolor*).

During the recent site visit (Accendo 2014), potential breeding habitat for this species was identified within the impact area (five trees with a DBH in excess of 50 cm). Nonetheless, no hollows were identified in any of these trees, indicating that the impact area currently does not provide suitable breeding habitat for Black Cockatoos.

The Forest Red-tailed Black Cockatoo predominately forages on seeds of Marri and Jarrah. It has also been recorded foraging on *Eucalyptus caesia*, *E. erythrocorys*, River Red Gum (*E. camaldulensis*), Flooded Gum (*E. grandis*), Allocasuarina cones, fruits of snottygobble (*Persoonia longifolia*) and Mountain Marri (*Corymbia haematoxylon*) (SEWPaC 2012).

During the site visit, no evidence of foraging was observed. This is likely to be attributed to the following factors:

- The Degraded condition of the vegetation;
- The extremely limited foraging resource (majority of the trees are juveniles); and
- The availability of substantial areas of high quality foraging habitat within 5 km of the impact area.

In consideration of the limited availability of foraging habitat within the impact area, this species is very unlikely to rely on the impact area for its persistence and therefore no significant impacts to the species are anticipated.

2.7 Aboriginal Heritage

All Aboriginal sites in Western Australia are provided protection under the *Aboriginal Heritage Act 1972* in which it is an offence for anyone to excavate, damage, destroy, conceal or in any way alter an Aboriginal site without the Minister's permission.

An online search for relevant Aboriginal heritage information was undertaken using the Department of Aboriginal Affairs (DAA) Aboriginal Inquiry System that incorporates both the heritage site register and the heritage survey database (DAA 2014). The Aboriginal Heritage Site Register is maintained pursuant to Section 38 of the *Aboriginal Heritage Act 1972* and contains information on over 22,000 listed Aboriginal sites throughout Western Australia.

Results of the DAA database search revealed that no Aboriginal heritage sites are present within the impact area. Nonetheless, it is important to note that Aboriginal heritage sites may still exist in or adjacent to the subject site that are not yet known to DAA, or may not yet been listed on the Aboriginal Heritage Register.

3 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

Any clearing of native vegetation requires a permit in accordance with Part V of the EP Act, except where an exception applies under Schedule 6 of the Act or is prescribed by regulation in the *Environmental Protection (Clearing Native Vegetation) Regulations 2004*.

The clearing of native vegetation (approximately 0.15 ha) to install a left turn lane into Roy Earl Drive will require an approved clearing permit. Clearing applications are assessed against the Ten Clearing Principles outlined in Schedule 5 of the EP Act. These principles aim to ensure that all potential impacts resulting from the removal of native vegetation can be assessed in an integrated manner.

An examination of the Ten Clearing Principles applied against a desktop investigation, review of previous assessments and results from a recent site visit is provided below. This project is considered unlikely to result in a variance against any of the Ten Clearing Principles.

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

The clearing footprint is approximately 0.15 ha in size and comprised of vegetation in a Degraded condition. Vegetation is limited to a narrow area (approximately 165m in length and 10m wide) and is generally sporadically comprised of *Corymbia calophylla* with occasional *Allocasuarina fraseriana*, *Agonis flexuosa*, *Melaleuca viminea* and *Xanthorrhoea preissii*. The understorey is completely comprised of introduced grass species. With the exception of approximately ten *Corymbia calophylla* trees, the vegetation is relatively juvenile (approximately 10 years of age) denoting that it is regrowth from previous clearing activities.

The Degraded vegetation within the impact area can be attributed to historical clearing activities and a high degree of weed incursion. This has resulted in the absence of understorey species, limited species diversity and poor vegetation condition.

Based on a recent site visit, it was evident that vegetation cannot be categorised into a specific complex or association given the very low species diversity and overall 'Degraded' condition.

A search was conducted of the DPaW's database and no PECs are known to occur within proximity to the impact area. Furthermore, a search for known rare and Priority flora within or in proximity to the impact area was undertaken through a review of available databases. A total of seven conservation significant flora have been recorded within 10 km of the impact area. None are considered likely to occur within the impact area given the historical clearing activities, absence of native understorey species and 'Degraded' condition of the area.

While no rare or Priority flora species were identified within the impact area during the site visit (Accendo 2014), a site specific flora and vegetation survey has not been undertaken. Nonetheless, given that the impact area has experienced ongoing disturbances and is primarily in a Degraded condition, it is considered unlikely that the vegetation subject to clearing is necessary for the continued existence of conservation significant flora species.

A search of the DPaW Priority fauna database identified one Priority 4 and one Priority 3 species' within the general locality. Based on an assessment of their habitat requirements and the characteristics of the impact area it was determined that vegetation within the clearing footprint does not provide habitat

critical to the survival of these species and therefore the proposed clearing is unlikely to impact on the persistence of these species.

The impact area is not associated with a Regional Ecological Linkage or an ESA.

In consideration of the above information, the native vegetation within the impact area does not comprise a high level of biological diversity. Therefore, the proposal is not considered to be at variance to this Principle.

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

A search of the DPaW Threatened Fauna database identified six fauna species listed as Schedule 1 species and four Schedule 3 species that have been recorded within proximity to the impact area.

The EPBC Act Protected Matters Search Tool also identified several Threatened and Migratory species that could potentially occur within or in proximity to the impact area. This included four species classified as Vulnerable, one Endangered species, and five Migratory bird species.

Of the listed conservation significance species, three species have potential to occur within the impact area including *Calyptorhynchus latirostris* (Carnaby's Black Cockatoo - Endangered), *Calyptorhynchus banksia naso* (Forest Red-tailed Black Cockatoo - Vulnerable) (collectively termed 'Black Cockatoos') and *Merops ornatus* (Rainbow Bee-eater - Migratory).

Based on site observations and a desktop investigation, a detailed assessment to determine the likelihood of the abovementioned species occurring within the impact area was undertaken and resulted in the following:

- Black Cockatoos - the proposed vegetation clearing is very unlikely to impact on the long-term persistence of this species based on the following:
 - Vegetation condition is generally in a 'Degraded' condition with extremely limited foraging potential;
 - Vegetation subject to clearing lacks species diversity and therefore the availability of potential foraging species is limited;
 - No evidence of Black Cockatoo foraging within the clearing footprint was identified;
 - The clearing footprint does contain approximately five trees with a DBH in excess of 50cm however, none of these trees contain hollows and therefore, currently, the impact area does not provide breeding habitat for these species;
 - The clearing footprint associated with potential habitat for this species is extremely limited (approximately 0.15 ha) and is unlikely to provide an important foraging resource;
 - Located approximately 5 km east of the impact area is in excess of 3,000 ha of State Forest that provides suitable breeding and foraging habitat for the species;
- Rainbow Bee-eater - this is a widespread aerial species that does visit disturbed sites. While it may infrequently visit the impact area, the species will move away from disturbances. Furthermore, the impact area does not provide habitat critical to the survival of this species.

In consideration of the above, the native vegetation within the impact area does not provide critical habitat for native fauna of conservation significance. Therefore, the proposal is not considered to be at variance to this Principle.

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

A search for known rare flora within or in proximity to the impact area was undertaken through a review of the DPaW's Threatened (Declared Rare) Flora database and the EPBC Act Protected Matters database.

A total of four conservation significant flora have been recorded within 10 km of the impact area. The EPBC Act Protected Matters database search returned three results for listed Threatened flora species.

While no rare flora species were identified within the impact area during the site visit (Accendo 2014), a flora and vegetation survey has not been undertaken. Nonetheless, given that the impact area has experienced ongoing anthropogenic disturbances (including historical clearing) and is in a 'Degraded' condition, it is considered unlikely that the vegetation subject to clearing is necessary for the continued existence of conservation significant flora species. The proposal is not considered to be at variance to this Principle.

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

A search was undertaken of the DPaW's TEC database and the EPBC Act Protected Matters database within proximity to the impact area, whereby no known occurrences were recorded.

Based on the database search results and lack of vegetation structure and species diversity within the impact area, the occurrence of the TECs is considered very unlikely. The proposal is not at variance to this Principle.

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

Within the local area (5 km radius) clearing of approximately 0.15 ha will constitute approximately less than 0.01 % of the total remaining remnant vegetation (which is approximately 5,900 ha). Furthermore, significant tracts of State Forest are located approximately 10 km east of the impact area which provide in excess of 5,000 ha of vegetation.

The impact area has been mapped as containing the Matiske (2002) vegetation complexes C2 and Cw2. As indicated within **Table 3**, the Cw2 vegetation complex retains less than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation (EPA 2000). Notwithstanding this, the vegetation within the impact area does not reflect the characteristics associated with this vegetation complex given the absence of critical species and habitat types. On this basis, the vegetation within the impact area is not considered representative of the Cw2 vegetation complex.

In consideration of the above, the proposed clearing is not considered at variance to this Principle.

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

The impact area does not contain any defined natural surface water channels and is not located within a 'Public Drinking Water Source' area (SLIP 2009). The closest surface water features to the impact area is an artificial drain located approximately 100 m east.

The *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates that the impact area does not contain any wetlands.

Based on the above, no vegetation associated with a watercourse or wetland will be impacted by the proposed clearing activities. The proposal is not at variance to this Principle.

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

The impact area is located within the Cowaramup System is described as having an upper layer of silty or gravely sand overlaying areas of undivided felsic granite and granulite. The site is located within an area of the Cowaramup System described as having silty gravely sand over mottled sandy clay overlying the Leeuwin Complex.

Within the Cowaramup Uplands System, the impact area is located within the following sub-systems:

- Cowaramup Wet Flats Phase - poorly drained flats and slight depressions with pale grey mottled soils (Mungite); and
- Cowaramup Flats Phase - flats with gravely duplex (Forest Grove) and pale grey mottled (Mungite) soils.

Subject to the Department of Agriculture and Food's desktop land capability assessment (Barnesby and Proulx-Nixon 2000), the abovementioned sub-phases have a very low waterlogging, salinity, water and wind erosion risk. Furthermore, following installation of the left slip lane, the adjoining road reserve will be stabilised to prevent any potential impacts associated with erosion and/or sedimentation.

Based on the above, the proposed clearing is not at variance to this principle.

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

The impact area is surrounded by the Bussell Highway, paddocks and residential properties. There are no conservation reserves within proximity to the impact area. Furthermore, the impact area does not provide an ecological linkage to any nearby reserves or conservation areas.

Based on the above, the proposed clearing is not at variance to this principle.

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

The impact area is located within the Busselton - Capel proclaimed groundwater area. Groundwater salinity varies from 1,000 – 3,000 mg/L (SLIP 2009). The impact area does not contain any defined natural surface water channels and is not located within a 'Public Drinking Water Source' area (SLIP 2009). The closest surface water features to the impact area is an artificial drain located approximately 100 m east of the impact area.

Given the condition of the vegetation under application and the distance to the nearest watercourse, it is considered unlikely that the proposed clearing will reduce the quality of surface or groundwater and therefore the proposal is not at variance to this principle.

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

Given the topography and soil type (loamy soils) within the impact area, it is considered unlikely that the proposed clearing will increase the incidence of flooding. Furthermore, the proposed road works will ensure that the adjacent road reserve is a safe and stable landform that will not be subject to flooding or erosion.

4 ENVIRONMENTAL MANAGEMENT MEASURES

In order to mitigate potential impacts associated with the proposed clearing activities, the following site specific management activities will be implemented.

4.1 Vegetation and Flora Management

The management objectives for vegetation and flora are:

- Restrict vegetation clearing to a practical minimum;
- Prevent unauthorised clearing of native vegetation outside of the clearing footprint; and
- Minimise disturbance to remaining vegetation to retain health and integrity.

Management actions to minimise disturbance to vegetation include:

- Plan clearing such that it does not result in the creation of isolated remnants of native vegetation that have no ecological corridors to allow fauna movement to adjacent areas;
- Peg/flag areas to be cleared to avoid any unnecessary disturbance to adjacent vegetation not approved to be disturbed;
- Create strategic firebreaks where necessary;
- Restrict vehicle movement to designated access tracks, to prevent vegetation damage and erosion.

4.2 Fauna Management

The following environmental aspects of the proposed clearing activities have been identified as requiring management to ensure protection of fauna values:

- Vegetation/habitat clearing;
- Vehicle movements;
- Human activity; and
- Noise emissions and vibration.

The proposed management actions to mitigate potential impacts to fauna include:

- Prior to felling, inspect trees to identify the presence of any fauna species. Where identified, gently shake the tree to encourage movement and wait until the species disperses;
- Restrict all vehicle use to designated roads and access tracks;
- Enforce compliance with onsite speed limits at all times.

4.3 Weed and Pathogen Management

The proposed management actions to mitigate potential impacts associated with weeds and pathogens include:

- All earthmoving and ground engaging equipment will be inspected and cleaned of vegetation, mud and soil prior to entry and exit of the impact area.

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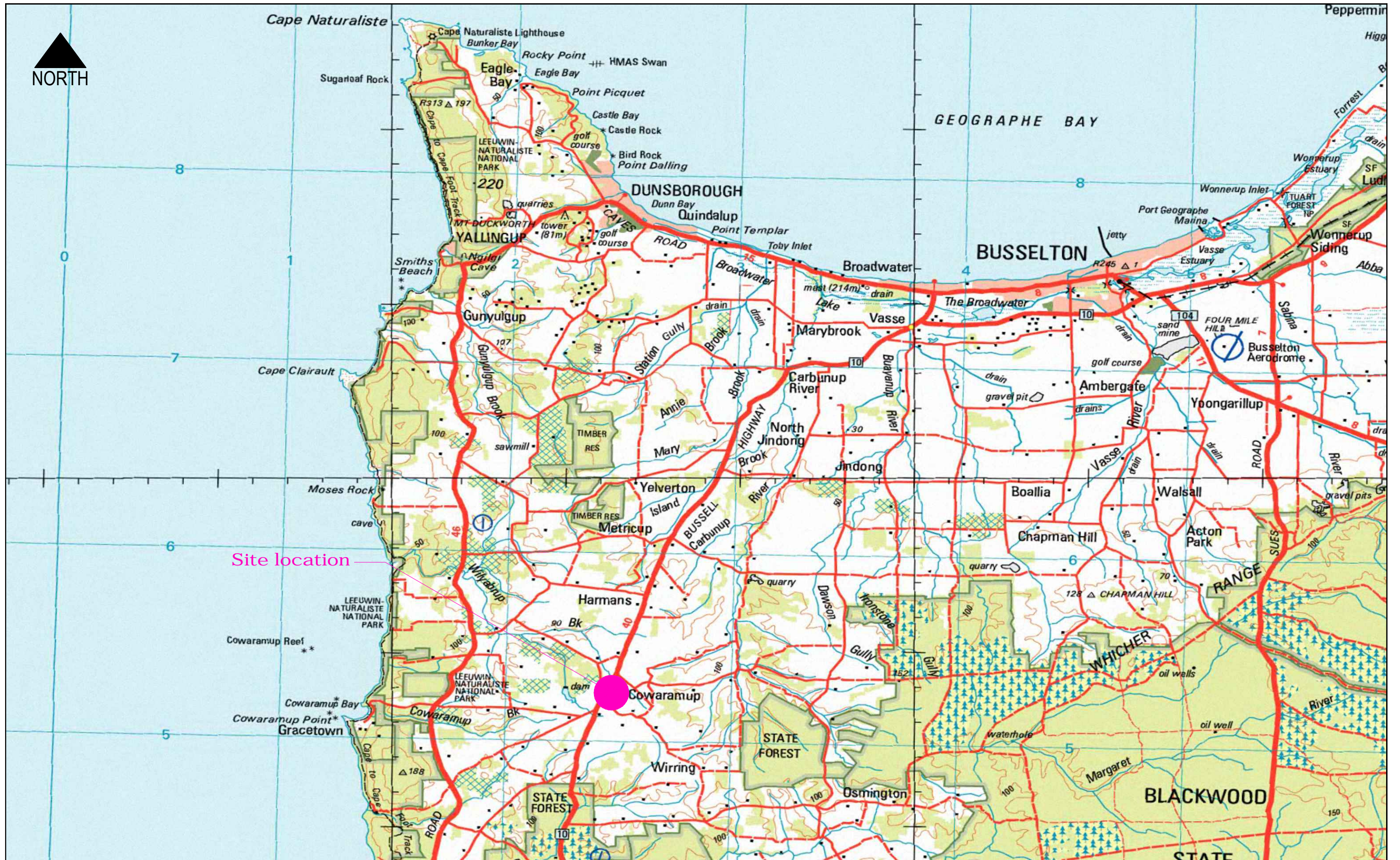
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FIGURES



PROJECT Lot 9501 Roy Earl Drive, Cowaramup
 DRAWING TITLE FIGURE 1 - Regional Location
 CLIENT Corrib Investments Pty Ltd

Scale
DIAGRAMATIC



PO Box 5178
 West Busseton
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 Mobile 0418 950 852

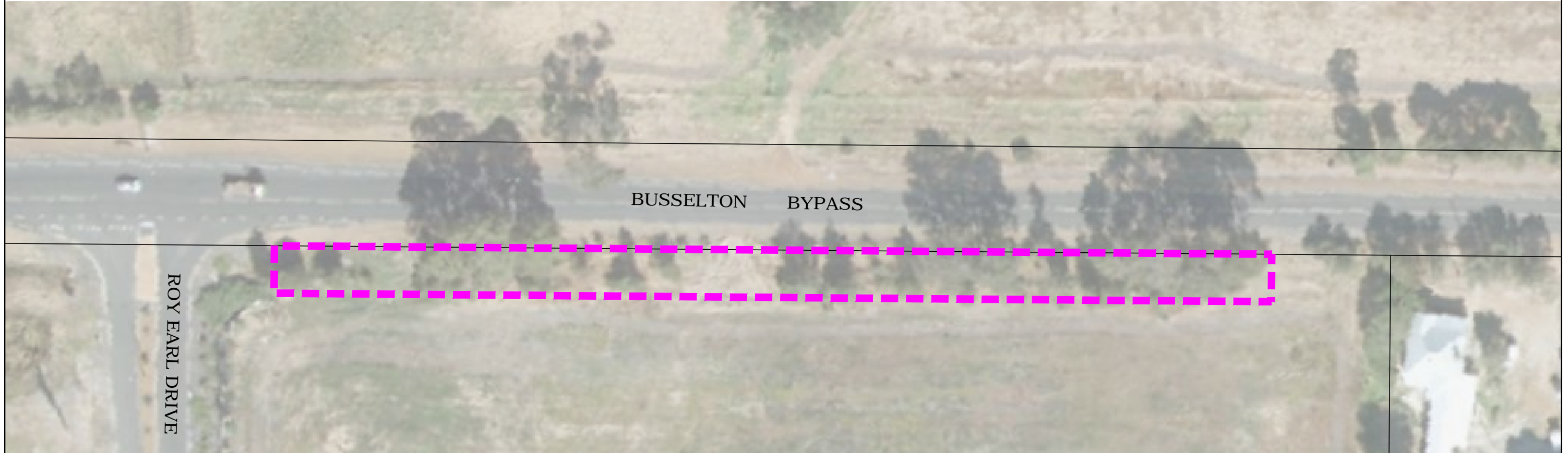
Project Number	Drawing Number	Revision	Original
1506	FIG 1	A	A3
Designed KMT	Checked	Date	12-05-15
Drawn DTF	Approved	Sheet	1 of 1
Local Authority	Shire of Augusta / Margaret River		

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Legend

 Site Boundary



PROJECT Lot 9501 Roy Earl Drive, Cowaramup

DRAWING TITLE FIGURE 2 - Extent of the Impact Area

CLIENT Corrib Investments Pty Ltd

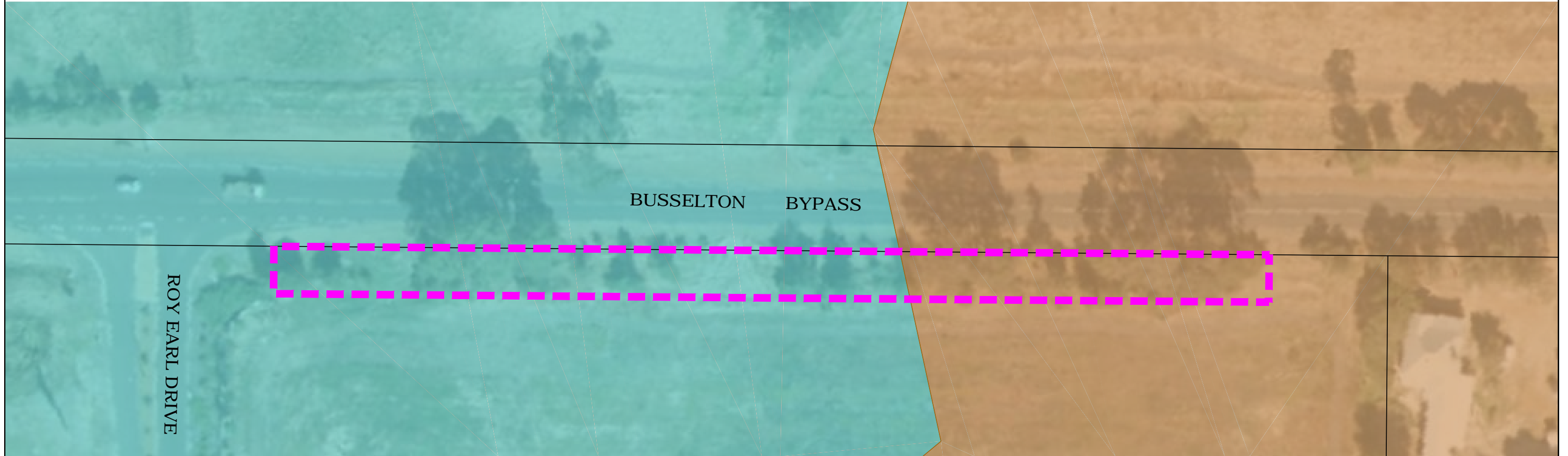
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Project Number	Drawing Number	Revision	Original
1506	FIG 2	A	A3
Designed KMT	Checked	Date 12-05-15	
Drawn DTF	Approved	Sheet 1 of 1	
Local Authority	Shire of Augusta / Margaret River		

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Legend

-  Site Boundary
-  Cowaramup Flats Phase :
Flats (0-2% gradient) with gravelly duplex (Forest Grove) and pale grey mottled (Mungite) soils.
-  Cowaramup Wet Flats Phase :
Poorly drained flats and slight depressions with pale grey mottled (Mungite)

PROJECT Lot 9501 Roy Earl Drive, Cowaramup

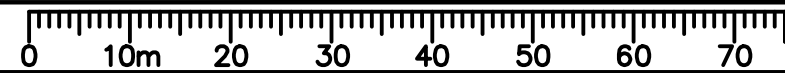
DRAWING TITLE FIGURE 3 - Soil Mapping

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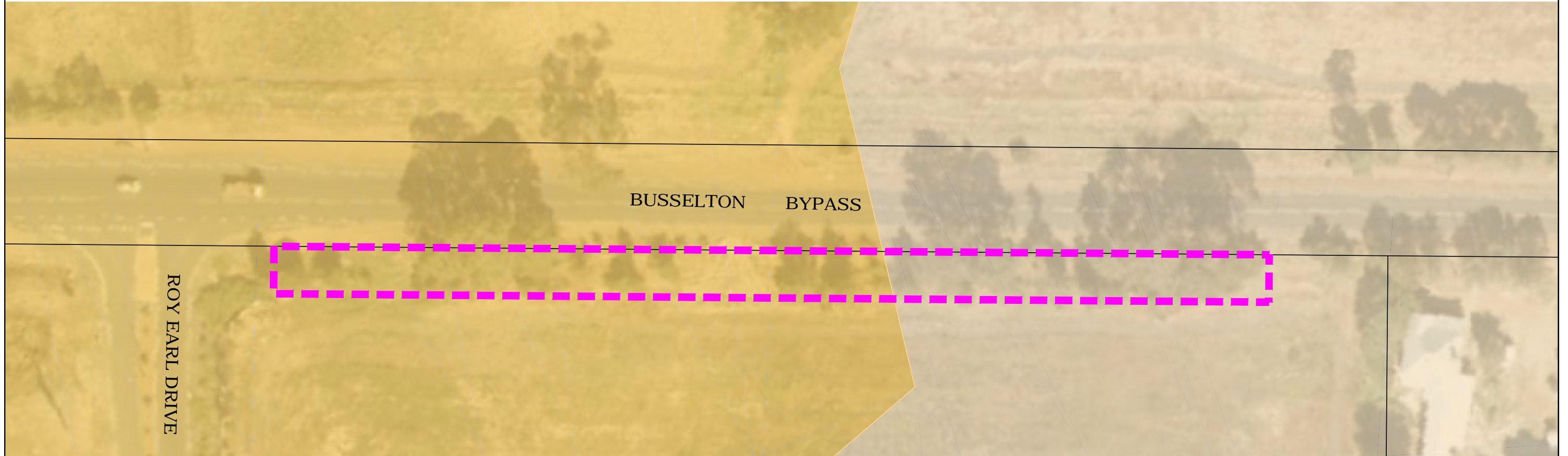
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Project Number	Drawing Number	Revision	Original
1506	FIG 3	A	A3
Designed KMT	Checked	Date 12-05-15	
Drawn DTF	Approved	Sheet 1 of 1	
Local Authority	Shire of Augusta /Margaret River		




Legend

 Site Boundary

Acid Sulfate Soil Mapping

 Moderate to low risk of ASS occurring within 3m of natural soil surface.

 No known risk of ASS occurring within 3m of natural soil surface. (or deeper)

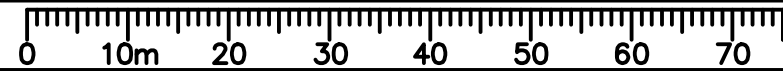
PROJECT Lot 9501 Roy Earl Drive, Cowaramup

DRAWING TITLE FIGURE 4 - Acid Sulfate Soil Mapping

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Scale

1:1500



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Project Number	Drawing Number	Revision	Original
1506	FIG 4	A	A3
Designed KMT	Checked	Date 12-05-15	
Drawn DTF	Approved	Sheet 1 of 1	
Local Authority	Shire of Augusta / Margaret River		

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APPENDIX A – Subdivision Approval

Your Ref :
Enquiries : Jacob Clements (Ph 97910577)

Halsall & Associates
P.O. Box 29
MARGARET RIVER WA 6285

Approval Subject To Condition(s) Freehold (Green Title) Subdivision

Application No : 146989

Planning and Development Act 2005

Applicant	:	Halsall & Associates P.O. Box 29 MARGARET RIVER WA 6285
Owner	:	Ian Earl P.O. Box 393 COWARAMUP WA 6284, Neil Earl P.O. Box 393 COWARAMUP WA 6284, Allan Earl P.O. Box 393 COWARAMUP WA 6284
Application Receipt	:	6 November 2012

Lot Number	:	
Diagram / Plan	:	62557
Location	:	
C/T Volume/Folio	:	2736/33
Street Address	:	Lot 9501 Roy Earl Drive, Cowaramup
Local Government	:	Shire of Augusta-Margaret River

The Western Australian Planning Commission has considered the application referred to and is prepared to endorse a deposited plan in accordance with the plan date-stamped **05 November 2012** once the condition(s) set out have been fulfilled.

This decision is valid for **four years** from the date of this advice, which includes the lodgement of the deposited plan within this period.

The deposited plan for this approval and all required written advice confirming that the requirement(s) outlined in the condition(s) have been fulfilled must be submitted by **04 February 2017** or this approval no longer will remain valid.

Reconsideration - 28 days

Under section 151(1) of the *Planning and Development Act 2005*, the applicant/owner may, within 28 days from the date of this decision, make a written request to the WAPC to

reconsider any condition(s) imposed in its decision. One of the matters to which the WAPC will have regard in reconsideration of its decision is whether there is compelling evidence by way of additional information or justification from the applicant/owner to warrant a reconsideration of the decision. A request for reconsideration is to be submitted to the WAPC on a Form 3A with appropriate fees. An application for reconsideration may be submitted to the WAPC prior to submission of an application for review. Form 3A and a schedule of fees are available on the WAPC website: <http://www.planning.wa.gov.au>

Right to apply for a review - 28 days

Should the applicant/owner be aggrieved by this decision, there is a right to apply for a review under Part 14 of the *Planning and Development Act 2005*. The application for review must be submitted in accordance with part 2 of the *State Administrative Tribunal Rules 2004* and should be lodged within 28 days of the date of this decision to: the State Administrative Tribunal, 12 St Georges Terrace, Perth, WA 6000. It is recommended that you contact the tribunal for further details: telephone 9219 3111 or go to its website: <http://www.sat.justice.wa.gov.au>

Deposited plan

The deposited plan is to be submitted to the Western Australian Land Information Authority (Landgate) for certification. Once certified, Landgate will forward it to the WAPC. In addition, the applicant/owner is responsible for submission of a Form 1C with appropriate fees to the WAPC requesting endorsement of the deposited plan. A copy of the deposited plan with confirmation of submission to Landgate is to be submitted with all required written advice confirming compliance with any condition(s) from the nominated agency/authority or Local Government. Form 1C and a schedule of fees are available on the WAPC website: <http://www.planning.wa.gov.au>

Condition(s)

The WAPC is prepared to endorse a deposited plan in accordance with the plan submitted once the condition(s) set out have been fulfilled.

The condition(s) of this approval are to be fulfilled to the satisfaction of the WAPC.

The condition(s) must be fulfilled before submission of a copy of the deposited plan for endorsement.

The agency/authority or Local Government noted in brackets at the end of the condition(s) identify the body responsible for providing written advice confirming that the WAPC's requirement(s) outlined in the condition(s) have been fulfilled. The written advice of the agency/authority or Local Government is to be obtained by the applicant/owner. When the written advice of each identified agency/authority or Local Government has been obtained, it should be submitted to the WAPC with a Form 1C and appropriate fees and a copy of the deposited plan.

If there is no agency/authority or Local Government noted in brackets at the end of the condition(s), a written request for confirmation that the requirement(s) outlined in the condition(s) have been fulfilled should be submitted to the WAPC, prior to lodgement of the deposited plan for endorsement.

Prior to the commencement of any subdivision works or the implementation of any condition(s) in any other way, the applicant/owner is to liaise with the nominated agency/authority or Local Government on the requirement(s) it considers necessary to fulfil the condition(s).

The applicant/owner is to make reasonable enquiry to the nominated agency/authority or Local Government to obtain confirmation that the requirement(s) of the condition(s) have been fulfilled. This may include the provision of supplementary information. In the event that the nominated agency/authority or Local Government will not provide its written confirmation following reasonable enquiry, the applicant/owner then may approach the WAPC for confirmation that the condition(s) have been fulfilled.

In approaching the WAPC, the applicant/owner is to provide all necessary information, including proof of reasonable enquiry to the nominated agency/authority or Local Government.

The condition(s) of this approval, with accompanying advice, are:

CONDITION(S):

1. Arrangements being made with the Water Corporation so that provision of a suitable water supply service will be available to the lots shown on the approved plan of subdivision. (Water Corporation)
2. Arrangements being made with the Water Corporation so that provision of a sewerage service will be available to the lots shown on the approved plan of subdivision. (Water Corporation)
3. Arrangements being made to the satisfaction of the Western Australian Planning Commission and to the specification of Western Power for the provision of an underground electricity supply to the lot(s) shown on the approved plan of subdivision. (Western Power)
4. The transfer of land for the purpose of electricity supply infrastructure to be shown on the diagram or plan of survey (deposited plan) as a reserve and vested in the Crown under Section 152 of the *Planning and Development Act 2005*, such land to be ceded free of cost and without payment of compensation. (Western Power)
5. The landowner/applicant is to prepare, have approved by the Department of Fire and Emergency Services, and implement a detailed plan demonstrating the location and capacity of fire emergency infrastructure to the satisfaction of the Western Australian Planning Commission. (Department of Fire and Emergency Services)
6. Proposed Lots 246-247, 248-252, and 253-256 being shown on the deposited plan as three single lots. (Local Government)
7. The subdivider is to prepare and implement a Landscaping Plan to the satisfaction of the Shire of Augusta Margaret River. (Local Government)

8. Uniform fencing being constructed along the boundaries of all of the proposed lots abutting the reserves shown on the subdivision plan. (Local Government)
9. Detailed Area Plan(s) being prepared and approved for proposed Lots 246-256 and 314-318 shown on the plan dated 5 Nov 2012 (attached) that address orientation of buildings, vehicle access, bin storage and relevant streetscape issues (among other things) to the satisfaction of the Western Australian Planning Commission. (Local Government)
10. The subdivider is to prepare and implement a Dust Management Plan to the satisfaction of the Shire of Augusta - Margaret River. (Local Government)
11. The subdivider is to prepare and make suitable arrangements for the implementation of a compliance strategy to ensure future residential development is provided with rainwater tanks to the satisfaction of the Shire of Augusta - Margaret River. (Local Government)
12. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, to ensure that those lots not fronting an existing road are provided with frontage to a constructed road(s) connected by a constructed road(s) to the local road system and such road(s) are constructed and drained at the landowner/applicant's cost.

As an alternative, and subject to the agreement of the Local Government the Western Australian Planning Commission (WAPC) is prepared to accept the landowner/applicant paying to the Local Government the cost of such road works as estimated by the Local Government and the Local Government providing formal assurance to the WAPC confirming that the works will be completed within a reasonable period as agreed by the WAPC. (Local Government)

13. Street corners within the subdivision are to be truncated to the satisfaction of the Shire of Augusta - Margaret River. (Local Government)
14. Satisfactory arrangements being made with the Local Government for the cost of upgrading and/or construction of Roy Earl Drive. (Local Government)
15. The proposed battle-axe access way(s) being constructed and drained at the landowner/applicant's cost to the specifications of the Local Government. (Local Government)
16. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, for the provision of shared paths through and connecting to the application area to the satisfaction of the Western Australian Planning Commission. The approved shared paths are to be constructed by the landowner/applicant. (Local Government)
17. The land being filled, stabilised, drained and/or graded as required to ensure that:
 - a) lots can accommodate their intended development; and

- b) finished ground levels at the boundaries of the lot(s) the subject of this approval match or otherwise coordinate with the existing and/or proposed finished ground levels of the land abutting; and
 - c) stormwater is contained on-site, or appropriately treated and connected to the local drainage system. (Local Government)
18. Prior to the commencement of subdivisional works, the landowner/applicant is to provide a pre-works geotechnical report certifying that the land is physically capable of development or advising how the land is to be remediated and compacted to ensure it is capable of development; and in the event that remediation works are required, the landowner/applicant is to provide a post geotechnical report certifying that all subdivisional works have been carried out in accordance with the pre-works geotechnical report. (Local Government).
19. Suitable arrangements being made for connection of the land to the comprehensive district drainage system at the landowner/applicant's cost. (Local Government)
20. In accordance with the plan dated 5 Nov 2012 (attached), and as established by survey, recreation reserves being shown on the diagram or plan of survey (deposited plan) as a 'Reserve for Recreation' and vested in the Crown under Section 152 of the Planning and Development Act 2005, such land to be ceded free of cost and without any payment of compensation by the Crown. (Western Australian Planning Commission)
21. In accordance with the plan dated 5 Nov 2012 (attached), and as established by survey, the recreation and drainage reserve being shown on the diagram or plan of survey (deposited plan) as a 'Reserve for Recreation and Drainage', and vested in the Crown under Section 152 of the Planning and Development Act 2005, such land to be ceded free of cost and without any payment of compensation by the Crown. (Western Australian Planning Commission)
22. Proposed Lot 313 marked 'Buffer & Car Parking' in accordance with the plan dated 5 Nov 2012 (attached); as established by survey, being shown on the diagram or plan of survey (deposited plan) as a 'Reserve for Parking' and vested in the Crown under Section 152 of the *Planning and Development Act 2005*, such land to be ceded free of cost and without any payment of compensation by the Crown. (Western Australian Planning Commission)
23. The subdivider is to prepare and make suitable arrangements for the implementation of a Community Infrastructure Needs Plan to the satisfaction of the Shire of Augusta - Margaret River. (Local Government)
24. The subdivider is to prepare and implement a Soil Stabilisation, Sedimentation and Erosion Control Plan prior to subdivision works commencing. (Local Government)
25. The subdivider is to prepare and implement a Drainage and Nutrient Management Plan to the satisfaction of the Department of Water and the Local Government. (Local Government)

26. The subdivider is to prepare and implement a Traffic Management Plan for any works within the road reserve. (Local Government)
27. Pursuant to Section 150 of the *Planning and Development Act 2005* and Division 3 of the *Planning and Development Regulations 2009* a covenant preventing vehicular access onto Wurring Road being lodged on the certificate(s) of title of the proposed Lots 264-276 at the full expense of the landowner/applicant. The covenant is to prevent access, to the benefit of the Local Government, in accordance with the plan dated 5 Nov 2012 (attached) and the covenant is to specify:

"No vehicular access is permitted from Wurring Road." (Local Government)
28. Measures being taken to ensure the identification and protection of any vegetation on the site worthy of retention that is not impacted by subdivisional works, prior to commencement of subdivisional works. (Local Government).
29. Satisfactory arrangements being made with Main Roads WA for the partial cost of upgrading and/or construction of the intersection of Roy Earl Drive and Bussell Highway.
(Main Roads WA)
30. The subdivider is to prepare and implement an acoustic report for the adequate mitigation of traffic noise from Bussell Highway to proposed residential development to the satisfaction of the Department of Environment and Conservation, the Local Government and Main Roads WA. (Main Roads WA)
31. Pursuant to Section 150 of the *Planning and Development Act 2005* and Division 3 of the *Planning and Development Regulations 2009* a covenant preventing vehicular access onto Bussell Highway being lodged on the certificate(s) of title of the proposed Lots 315-316 at the full expense of the landowner/applicant. The covenant is to prevent access, to the benefit of the Main Roads WA, in accordance with the plan dated 5 Nov 2012 (attached) and the covenant is to specify:

"No vehicular access is permitted from Bussell Highway." (Main Roads WA)

ADVICE:

- i. In regard to Conditions 1 and 2, the landowner/applicant shall make arrangements with the Water Corporation for the provision of the necessary services. On receipt of a request from the landowner/applicant, a Land Development Agreement under Section 67 of the *Water Agencies (Powers) Act 1984* will be prepared by the Water Corporation to document the specific requirements for the proposed subdivision.
- ii. In regard to Condition 3, Western Power provides only one underground point of electricity supply per freehold lot.
- iii. Approval is required from the Shire for any subdivision works to commence, including earthworks, roads, paths, drainage, landscaping/rehabilitation and soil stabilisation measures.

- iv. The Local Government advises that as constructed details and drawings of all new constructed infrastructure (roads, drainage and pathways) shall be submitted to the Shire in an approved format following the completion of subdivisional works.



Neil Thomson
Secretary
Western Australian Planning Commission
4 February 2013

R10 LOT YIELD			
Size	No.	%	Average
1001m ² - 1050m ²	11	84.62%	1002m ² 82.70%
1101m ² - 1150m ²	1	7.69%	1149m ² 8.62%
1151m ² - 1200m ²	1	7.69%	1156m ² 8.67%
Total Number of Lots 13			

Minimum Lot Size 1002m² Average Lot Size 1025m²
 Maximum Lot Size 1156m² Total Lot Area 13327m²

R15 LOT YIELD			
Size	No.	%	Average
600m ² - 650m ²	1	2.33%	637m ² 2.06%
651m ² - 700m ²	7	16.28%	672m ² 15.24%
701m ² - 750m ²	27	62.79%	714m ² 62.48%
751m ² - 800m ²	7	16.28%	777m ² 17.63%
801m ² - 850m ²	1	2.33%	800m ² 2.59%
Total Number of Lots 43			

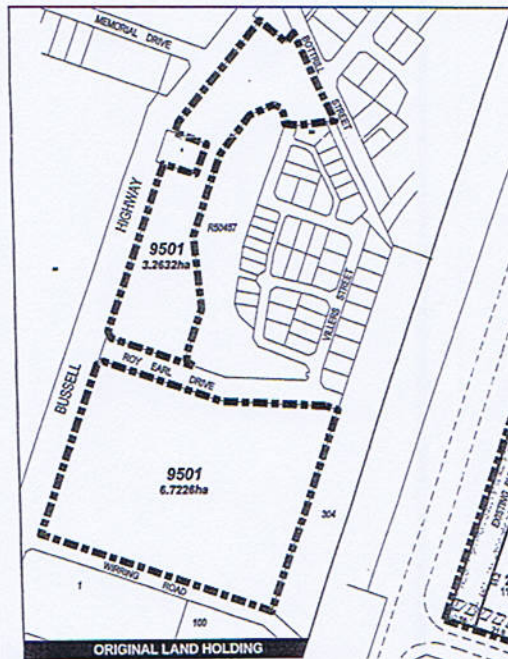
Minimum Lot Size 637m² Average Lot Size 718m²
 Maximum Lot Size 800m² Total Lot Area 30888m²

R30 LOT YIELD			
Size	No.	%	Average
351m ² - 400m ²	3	27.27%	384m ² 20.37%
401m ² - 450m ²	2	18.18%	425m ² 15.05%
451m ² - 500m ²	2	18.18%	488m ² 17.26%
501m ² - 550m ²	1	9.09%	534m ² 9.44%
601m ² - 650m ²	2	18.18%	620m ² 21.95%
751m ² +	1	9.09%	900m ² 15.92%
Total Number of Lots 11			

Minimum Lot Size 384m² Average Lot Size 514m²
 Maximum Lot Size 900m² Total Lot Area 6654m²

COMMERCIAL LOTS			
Size	No.	%	Average
1500m ² - 2000m ²	1	16.67%	1591m ² 7.90%
2001m ² - 2500m ²	1	16.67%	2369m ² 11.77%
3001m ² - 3500m ²	2	33.33%	3242m ² 32.22%
3501m ² - 4000m ²	1	16.67%	3501m ² 17.39%
6001m ² +	1	16.67%	6181m ² 30.71%
Total Number of Lots 6			

Minimum Lot Size 1591m² Average Lot Size 3354m²
 Maximum Lot Size 6181m² Total Lot Area 20127m²



LEGEND

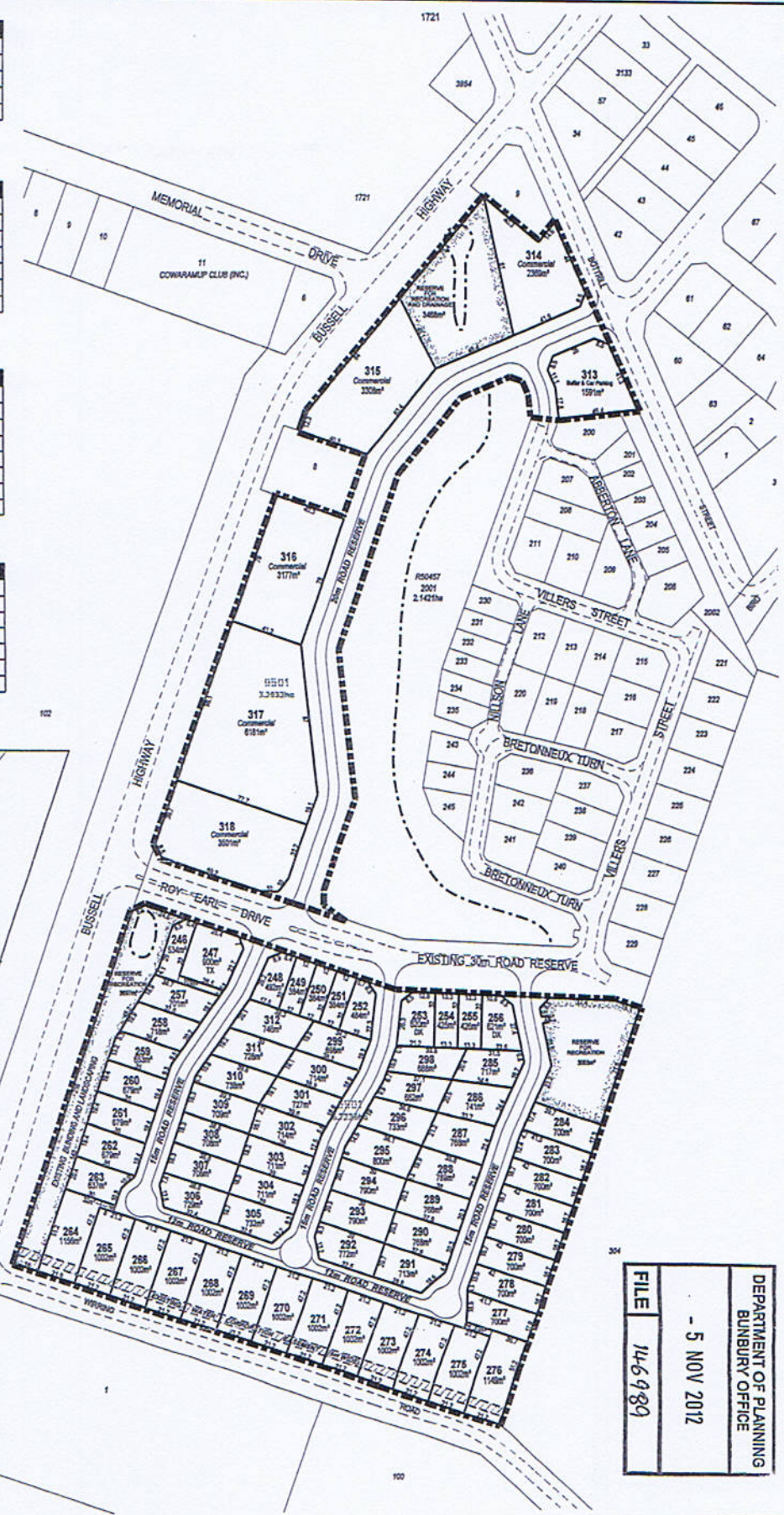
- APPLICATION BOUNDARY
- PROPOSED BOUNDARY
- POS
- EXISTING VEGETATION
- EXISTING SOAK / DRAINAGE LINE
- EXISTING CARRIAGEWAY
- PROPOSED CARRIAGEWAY

This concept has been prepared for the purpose of meeting client specifications. The drawing does not constitute an invitation, agreement or contract for any part thereof of any kind whatsoever.

Although care has been taken on the compilation of this document by Halsall & Associates, all parties associated with the proposed property development disclaim any responsibility for any errors or omissions. The right is reserved to change the plan at any time.

Liability is expressly disclaimed by Halsall & Associates for any loss or damage which may be sustained by any person acting on any visual impression gained from this drawing.

All areas and dimensions shown on this drawing are subject to final survey.



DEPARTMENT OF PLANNING
 BUNBURY OFFICE
 - 5 NOV 2012
 FILE 146989

HALSALL & ASSOCIATES
 Town Planning Consultants

Title: PROPOSED PLAN OF SUBDIVISION
 COWARAMUP COUNTRY - BUSSELL HIGHWAY, COWARAMUP

Figure: 1 Scale: 1:2,500 Revision No: A Drawn: BDL
 Date: October 2012 Designer: M. Halsall Job No: - E Reference: HA SEPT12

APPENDIX B – EPBC Act 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: 11/05/15 10:54:29

[Summary](#)

[Details](#)

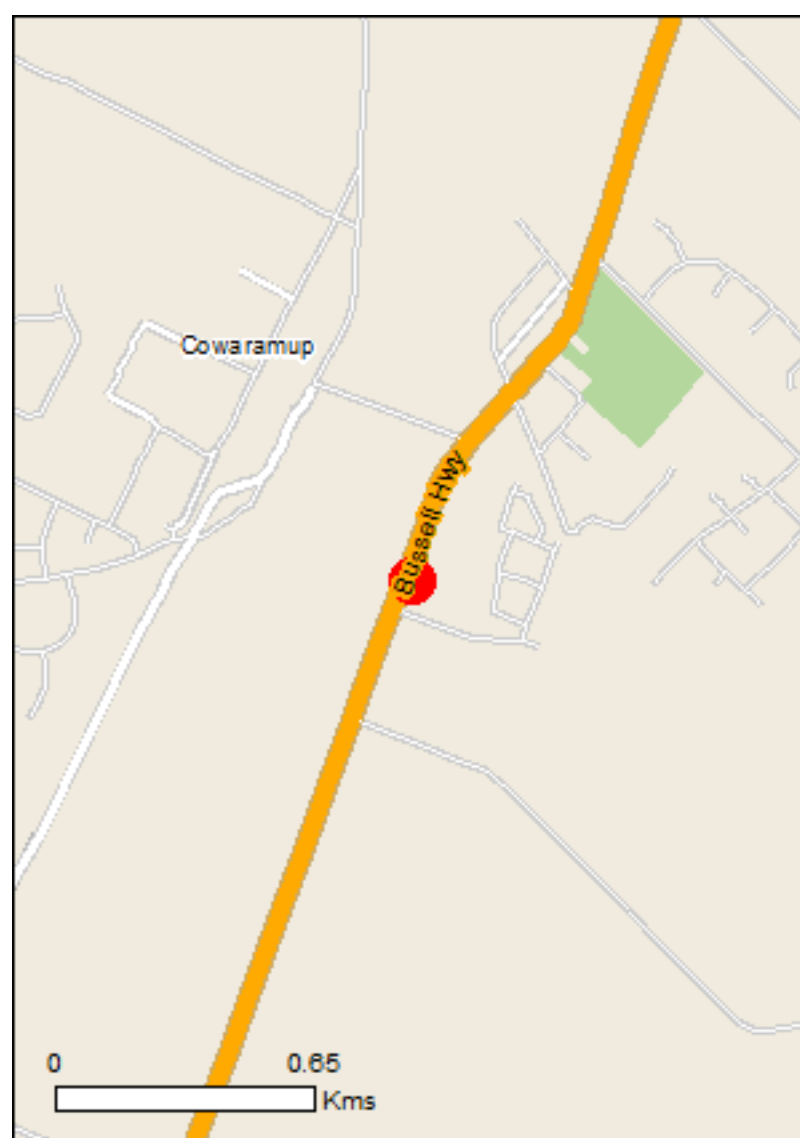
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

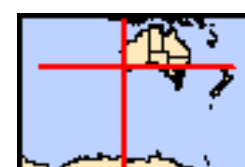
[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 0.0Km



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:	9
Listed Migratory Species:	6

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/index.html>

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:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	6
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	1
Invasive Species:	20
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		
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat may occur within area
Calyptorhynchus baudinii Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Breeding known to occur within area
Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Breeding likely to occur within area
Mammals		
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir [25911]	Vulnerable	Species or species habitat may occur within area
Plants		
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
Centrolepis caespitosa [6393]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat may occur within area
Gastrolobium papilio Butterfly-leaved Gastrolobium [78415]	Endangered	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
Migratory Terrestrial Species		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Migratory Wetlands Species		
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
Pandion cristatus Eastern Osprey [82411]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [\[Resource Information \]](#)

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

Name	Threatened	Type of Presence
Birds		
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
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Extra Information

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
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Birds

Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
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Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
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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
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Mammals

Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
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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
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Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
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Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
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Sus scrofa Pig [6]		Species or species habitat likely to occur within area
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Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
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Plants

Name	Status	Type of Presence
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-33.85479 115.10031

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:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- Other groups and individuals

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

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

APPENDIX C – Conservation Codes for Flora

Conservation Codes for Western Australian Flora

T: Threatened Flora (Declared Rare Flora — Extant)

Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such (Schedule 1 of the Wildlife Conservation (Rare Flora) Notice under the Wildlife Conservation Act 1950).

Threatened Flora (Schedule 1) are further ranked by the Department according to their level of threat using IUCN Red List criteria:

- CR: Critically Endangered – considered to be facing an extremely high risk of extinction in the wild
- EN: Endangered – considered to be facing a very high risk of extinction in the wild
- VU: Vulnerable – considered to be facing a high risk of extinction in the wild.

X: Presumed Extinct Flora (Declared Rare Flora — Extinct)

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 (Schedule 2 of the Wildlife Conservation (Rare Flora) Notice under the Wildlife Conservation Act 1950).

Taxa that have not yet been adequately surveyed to be listed under Schedule 1 or 2 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 or fauna. Taxa that are adequately known, 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 species require regular monitoring. Conservation Dependent species are placed in Priority 5.

1: Priority One: Poorly-known taxa

Taxa that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

2: Priority Two: Poorly-known taxa

Taxa that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

3: Priority Three: Poorly-known taxa

Taxa that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Taxa may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

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

1. **Rare.** Taxa 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 taxa are usually represented on conservation lands.
2. **Near Threatened.** Taxa that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
3. Taxa that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

5: Priority Five: Conservation Dependent taxa

Taxa that are not threatened but are subject to a specific conservation program, the cessation of which would result in the taxon becoming threatened within five years.

APPENDIX D – Conservation Codes for Fauna

EPBC Act (1999) Threatened Fauna Categories

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

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

Western Australian Wildlife Conservation Act (1950) Threatened Fauna Categories

Category	Code	Description
Schedule 1	S1	<p>Fauna which is rare or likely to become extinct</p> <p>Threatened fauna (Schedule 1) are further ranked by the DEC according to their level of threat using IUCN Red List criteria:</p> <p>CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.</p> <p>EN: Endangered - considered to be facing a very high risk of extinction in the wild.</p> <p>VU: Vulnerable - considered to be facing a high risk of extinction in the wild.</p>
Schedule 2	S2	Fauna which is presumed extinct
Schedule 3	S3	Birds which are subject to an agreement between the governments of Australia and Japan (JAMBA) relating to the protection of migratory birds and birds in danger of extinction
Schedule 4	S4	Fauna that is otherwise in need of special protection

Western Australian DEC Priority Fauna Categories

Category	Code	Description
Priority 1	P1	Taxa that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes..
Priority 2	P2	Taxa that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
Priority 3	P3	Taxa that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Taxa may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
Priority 4	P4	<p>(a) Rare. Taxa 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 taxa are usually represented on conservation lands.</p> <p>(b) Near Threatened. Taxa that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.</p> <p>(c) Taxa that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.</p>
Priority 5	P5	Taxa that are not threatened but are subject to a specific conservation program, the cessation of which would result in the taxa becoming threatened within five years.

IUCN Red List Threatened Species Categories

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

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

<http://www.iucnredlist.org/technical-documents/categories-and-criteria/2001-categories-criteria>