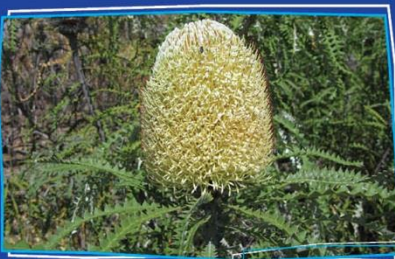




# Vegetation, Flora, Fauna and Environmental Considerations Report

Shire of Esperance 2022-23 Strategic Purpose Permit  
Site C – Rollond Road, SLK 0-15.9



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## **Acknowledgement of country**

The Shire of Esperance acknowledges the Kepa Kurl Wudjari people of the Nyungar nation and Ngadju people who are the traditional custodians of this land and their continuing connection to land, waters and community. We pay our respect to their Elders past, present and emerging and we extend that respect to other Aboriginal Australians today.

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**BAM Act:** Biosecurity and Agriculture Management Act 2007 (WA)  
**BC Act:** Biodiversity Conservation Act 2016 (WA)  
**BOM:** Bureau of Meteorology  
**DBCA:** Department of Biodiversity, Conservation and Attractions  
**EP Act:** Environmental Protection Act 1986 (WA)  
**EPA:** Environmental Protection Authority  
**EPBC Act:** Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)  
**IBRA:** Interim Biogeographical Regionalisation for Australia  
**IUCN:** International Union of Conservation Nature  
**LGA:** Local Government Area  
**NVIS:** National Vegetation Information System  
**PEC:** Priority Ecological Community  
**PF:** Priority Flora (Under BC Act)  
**SOE:** Shire of Esperance  
**SLK:** Straight Line Kilometres (Main Roads WA)  
**TEC:** Threatened Ecological Community  
**TF:** Threatened Flora (Under BC Act)  
**TPFL:** Threatened and Priority Flora Database (DBCA)  
**UCL:** Unallocated Crown Land  
**WAH:** Western Australian Herbarium (PERTH)  
**WAOL:** Western Australian Organism List

## 1 Executive Summary

The Shire of Esperance Environmental Team was commissioned by the Shire of Esperance Asset Management department to undertake a review of the flora, vegetation and fauna values on the proposed Rollond Road, SLK 0-15.9 project in 2022-23 as part of their Strategic Purpose Permit application.

The proposed development involves the clearing of 7.945 ha of native vegetation for the purpose of road widening for public safety.

To complete these works, native vegetation up to 2m from the current road footprint on both sides of the road is required to be cleared, increasing the active road footprint to 17m. This requires clearing of 7.945 ha of native vegetation. To mitigate impact of clearing vegetation, where feasible clearing will not occur to the full permitted width, conserving vegetation.

The proposed works are located 90 km north of Esperance, within the Shire of Esperance managed road reserve of Rollond Road. Specifically, it is starting from Coolgardie-Esperance Highway, at straight line kilometre (SLK) 282.65 (Main Roads, 2022) and heads west 15.9km. A point within the proposed clearing permit area is 6336469.19m N, 371491.35m E (UTM Zone 51 H, GDA94).

The Shire of Esperance's two Environmental Scientists completed the site assessment on Rollond Road, SLK 0-15.9 between the 22<sup>nd</sup> of August to 25<sup>th</sup> August, 2022.

A total of 247 vascular plant taxa from 144 plant genera and 51 plant families were recorded within the 'Rollond Road, SLK 0-15.9' survey area during the 2022 survey. The majority of taxa was recorded within the Proteaceae (18 taxa), Myrtaceae (56 taxa), Fabaceae (37 taxa), and Asteraceae (18 taxa) families (Appendix 1). This total included 219 native species and 28 introduced (weed) species.

8 priority flora species pursuant to the Biodiversity Conservation Act (2016) and as listed by the Department of Biodiversity, Conservation and Attractions (DBCA) were recorded within the 'Rollond Road, SLK 0-15.9' survey area. No plant taxa listed as Threatened pursuant to Schedule 1 of the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 were recorded during the survey within the proposed 'Rollond Road, SLK 0-15.9' survey area.

**Table 1:** Summary of Priority flora species recorded in 'Site C – Rollond Road, SLK 0-15.9' project area.

Taxon	Conservation Code	Total Locations	Total Plants	Plants to be cleared
<i>Conostephium uncinatum</i>	P2	1	17	0
<i>Halgania</i> sp. <i>Peak Eleanora</i>	P2	3	298	84
<i>Acacia bartlei</i>	P3	1	1	1
<i>Acacia glaucissima</i>	P3	2	20	14
<i>Conostephium marchantiorum</i>	P3	1	32	0
<i>Goodenia laevis</i> ssp. <i>laevis</i>	P3	3	702	637
<i>Pityrodia chrysocalyx</i>	P3	2	424	2
<i>Eucalyptus dolichorhyncha</i>	P4	2	142	49

There was one vegetation unit that may match the state listed Priority Ecological Community (PEC) "Swamp Yate (*Eucalyptus occidentalis*) woodland in seasonally-inundated basins". No other TECs or PECs were located within 'Site C - Rollond Road, SLK 0-15.9'.

The project area contains suitable foraging habitat for the EPBC listed Carnaby's cockatoo (*Calyptorhynchus latirostris*). Approximately 0.32 ha of high quality native foraging habitat. The Chuditch, Grey Falcon, Malleefowl and Western Rosella all had records listed nearby the project area and had potentially suitable habitat within the project area. No other threatened fauna species under either the BC Act or EPBC Act are likely to be impacted upon by this proposal.

Should the development of 'Rollond Road, SLK 0-15.9' go ahead the following recommendations are made as a means of minimizing the impacts of infrastructure activities on the flora, vegetation and fauna values in the area:

- Minimise clearing to minimum amount required
- Avoid larger habitat trees wherever possible;
- Maintain existing drainage systems, spoon drains and ensuring tracks and other infrastructure areas do not disrupt or divert historic water flow patterns;
- Minimise soil disturbance during clearing and practice standard vehicle hygiene to ensure introduced (exotic) species do not become established within the 'Rollond Road, SLK 0-15.9' survey area;
- Minimize all threatening processes to native vegetation.

These have been addressed in the attached Weed and Dieback plan and provided these measures are implemented, there should be no impediments to the widening of 'Rollond Road, SLK 0-15.9'.



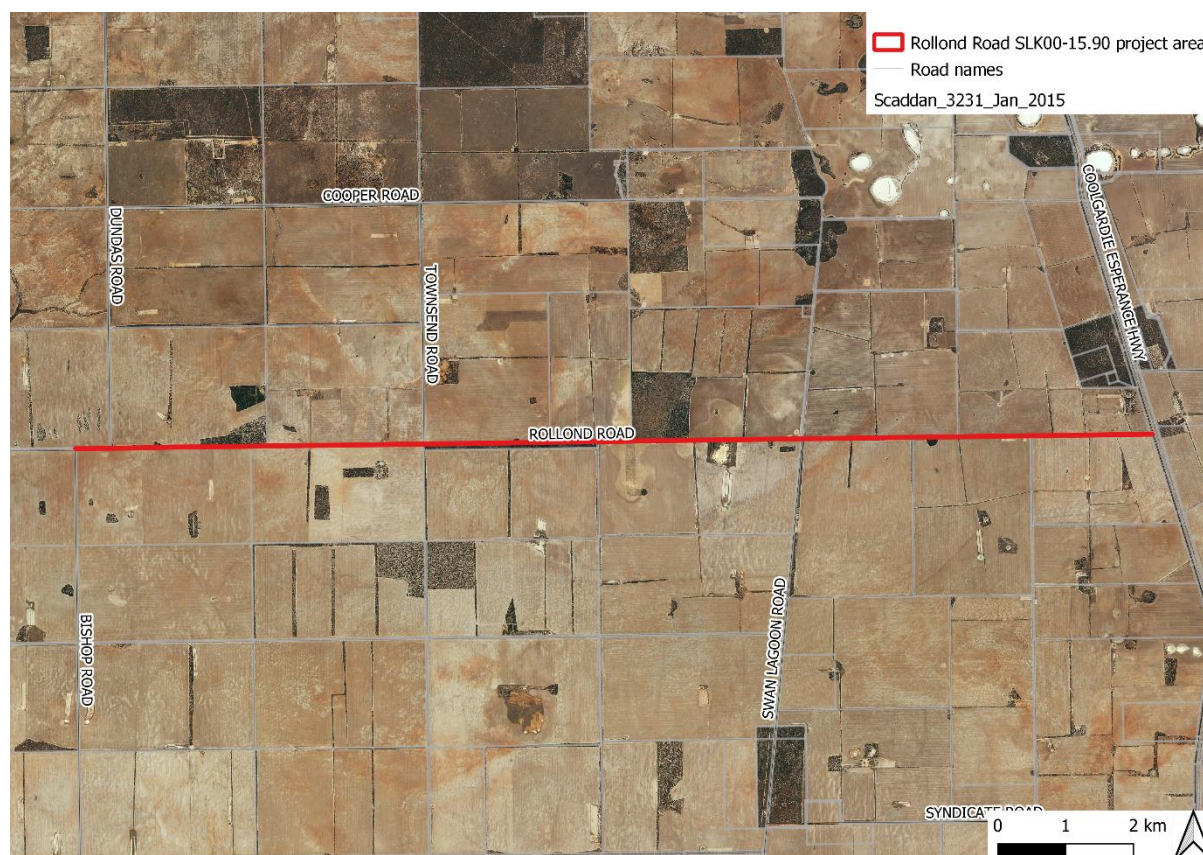
## 1 Introduction

The Shire of Esperance endeavors to maintain a high level of road safety, being proactive in identifying high risk road designs and progressively upgrading them. The Shire of Esperance manages the largest road network of any local government in Western Australia, encompassing a total of 4,593 km of road. The Shire of Esperance is submitting 'Rollond Road, SLK 0-15.9' project as Site C under the '2022-23 Strategic Purpose Permit' (Figure 1), for the purpose of road widening for public safety.

### 1.1 Location and Scope of Project

The proposed works are located ~7.7km north of the Grass Patch townsite, within the Shire of Esperance managed road reserve of Rollond Road. Specifically, it is starting from Coolgardie-Esperance Highway, at straight line kilometre (SLK) 282.65 (Main Roads, 2022) and heads west 15.9km. A point within the proposed clearing permit area is 372377m N, 6330479m E (UTM Zone 51 H, GDA94).

Rollond Road is particularly narrow resulting in safety issues during high traffic periods such as harvest season. Rollond Road requires widening to maintain the safety of road users during harvest and peak use. To complete these works, native vegetation up to 2m from the current road footprint on both sides of the road is required to be cleared, increasing the active road footprint to 17m. To mitigate impact of clearing vegetation, where feasible clearing will not occur to the full permitted width, conserving vegetation.



**Figure 1.** Location of 'Site C – Rollond Road, SLK 0-15.9'.

## 1.2 Environmental Legislation and Guidelines

The Commonwealth (federal) legislation relevant to this survey is the:

- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The following Western Australian (state) legislation relevant to this survey include the:

- Biodiversity Conservation Act 2016 (BC Act);
- Biodiversity Conservation Act 2016 Biodiversity Conservation (Listing of Native Species) (Flora) Order 2022
- Biodiversity Conservation Act 2016 Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022
- Biosecurity and Agriculture Management Act 2007 (BAM Act);
- Environmental Protection Act 1986 (EP Act);

Western Australian guidelines relevant to this survey are the:

- Environmental Factor Guideline: Flora and Vegetation (Environmental Protection Authority [EPA] 2016);
- Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016);
- A guide to the assessment of applications to clear native vegetation, Under Part V Division 2 of the Environmental Protection Act 1986 (DWER, 2014)
- Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA, 2020)

International Agreements relevant to this survey are the:

- Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment 1974 (Japan-Australia Migratory Bird Agreement – JAMBA)
- Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment 1986 (China-Australia Migratory Bird Agreement – CAMBA)
- Agreement between the Government of Australia and the Government of the Republic of Korea on the Protection of Migratory Birds 2007 (Republic of Korea-Australia Migratory Bird Agreement – ROKAMBA)
- Convention on Wetlands of International Importance 1971 (Ramsar Convention)

## 2 OBJECTIVES

The objective of this survey was to undertake a flora, fauna and vegetation assessment of the 'Rollond Road, SLK 0-15.9' survey area including:

- Undertake a desktop study of the flora, fauna and vegetation of the 'Rollond Road, SLK 0-15.9' survey area, with an emphasis on threatened and priority flora, threatened and priority ecological communities (TECs and PECs) and Threatened and Priority fauna;
- Review the historical literature of the 'Rollond Road, SLK 0-15.9' survey area;

- Undertake a detailed survey of the 'Rollond Road, SLK 0-15.9' survey area, and collect and identify the vascular plant species present;
- Review the conservation status of the vascular plant species recorded by reference to current literature and listings by the Department of Biodiversity, Conservation and Attractions (DBCA) and plant collections held at the Western Australian State Herbarium (WAH), and listed by the Department of Climate Change, Energy, the Environment and Water under the EPBC Act;
- Define and map the vegetation communities in the 'Rollond Road, SLK 0-15.9' survey area;
- Define and map the location of any threatened and priority flora located within the 'Rollond Road, SLK 0-15.9' survey area;
- Define any management issues related to flora, fauna and vegetation values;
- Provide recommendations on the local and regional significance of the vegetation communities; and
- Prepare a report summarising the findings.

### 3 METHODS

#### 3.1 Desktop Assessment

A desktop assessment with a 20km buffer zone was conducted using DBCA datasets sourced under agreement for:

- WA Herbarium data (WAH) (DBCA, 2022d)
- Threatened and Priority Flora Database (TPFL) (DBCA, 2022c)
- DBCA's Esperance District Threatened Flora spatial dataset (DBCA, 2022a)
- Threatened and Priority Ecological Communities (DBCA, 2021)
- Threatened, specially protected and priority fauna (DBCA, 2022e)
- Black cockatoo roost and breeding sites (DBCA, 2022f)

In addition, the EPBC Act Protected Matters Search Tool, was also checked to identify the possible occurrence of threatened and priority flora, fauna and threatened and priority ecological communities within the 'Rollond Road, SLK 0-15.9' area. Search parameters were 'by polygon' and a 20 km buffer was applied to the search area; standard used in this IBRA subregion.

In addition, historical documentation and state datasets including:

- Vegetation mapping of the region, principally that of Beard (1976)
- 2020 Vegetation Extent by State-wide Pre-European mapping statistics
- Soil landscape mapping (DAFWA)
- Dieback Information Data Management System (DIDMS) (Gaia Resources)
- Shire of Esperance Weed Mapping Data
- Existing site digital orthophotos (Scaddan 2015)
- Atlas of Living Australia database
- Hydrographic Catchments (DWER)
- Crown Reserves (Landgate)



### 3.2 Field Survey

The site was initially inspected on 13<sup>st</sup> July 2022, by Julie Waters and Katherine Walkerden the SOE's Environmental Coordinator and Environmental Officer. A general assessment of possible ecological impacts included historical clearing, impact of fire regimes, regeneration from disturbance, waterlogging, senescence, weeds, erosion, sedimentation, invasive fauna, *Phytophthora* Dieback, and illegal dumping of rubbish. Populations of *Eucalyptus dolichorhyncha* and *Halgania* sp. Peak Eleanora were also observed and collected during this inspection.

A detailed field assessment of the flora and vegetation of the 'Rollond Road, SLK 0-15.9' survey area was undertaken by Shire of Esperance botanists between the 22<sup>nd</sup> and 31<sup>st</sup> of August 2022 in accordance with methods outlined in Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016). All botanists held valid collection licences to collect flora for scientific purposes, issued under the BC Act.

The methodology for assessing threatened and priority flora consisted of traversing by foot the entire 'Rollond Road, SLK 0-15.9' survey area. The road was used as a continuous transect. Vegetation up to 5 meters from the edge of the existing road's back-slope was assessed to accurately cover the 2m width proposed clearing permit area. All species were recorded, and botanists collected all but the very common, well known species.

For PF or TF species identified in the desktop survey as possible to occur, scans of pressed specimens from either the WAH or local Esperance District Herbarium were taken into the field. Suitable associated habitat for TF or PF identified in the desktop study were particularly focused on, and extensively searched. If suspected or known conservation significant flora species were encountered, a specimen was collected for subsequent identification with GPS coordinates and plant numbers recorded for the population. During the survey, a field herbarium for 'Rollond Road, SLK 0-15.9' was also constructed.

All species unknown in the field were collected, pressed and dress in accordance with WAH instructions, and later identified by SOE's three Botanists, using keys, WA Herbarium's Florabase, literature and Esperance District Herbarium. Any species that were unable to be identified were submitted to the WAH for identification. Nomenclature of the species recorded is in accordance with the WAH.

The site was revisited on the 2<sup>nd</sup> of December 2022 to collect specimens of priority flora (*Halgania* sp. Peak Eleanora, and *Pityrodia chrysocalyx*) which were sterile during the initial survey, a fruiting specimen of the anomalous *Acacia* aff. *merrallii* was also collected during the visit. A follow up survey was conducted on the 13<sup>th</sup> of January 2023 by Katherine Walkerden to specifically target the counting of Priority three *Acacia glaucissima*.

The vegetation communities of 'Site C – Rollond Road, SLK 0-15.9' was assessed for the presence a TEC or PEC (DBCA 2018, 2021) comparing that to descriptions in approved conservation advice for these communities.

Specifically, the site was assessed for the Environmental Protection and Biodiversity Conservation Act 1999 listed 'Proteaceae Dominated Kwongan Shrublands of the Southeast Coastal Floristic Province

of Western Australia (Kwongkan)' TEC. The presence of Kwongkan was identified using diagnostic characteristics defined in the 'Approved Conservation Advice for Kwongkan (Commonwealth of Australia, 2014)' as;

2a) Characterised by Proteaceae species having 30% or greater cover of Proteaceae species across all layers where these shrubs occur (crowns measured as if they are opaque).

And/or

2b) Two or more diagnostic Proteaceae species are present that are likely to form a significant vegetative component when regenerated.

PEC's do not have published approved conservation advice. Comparison of the vegetation community occurred using 'Priority Ecological Communities for Western Australia, Version 33 (DBCA 2022)' definitions.

As 'Site C – Rollond Road, SLK 0-15.9' is a long linear site, quadrant-based data was not used to determine if the site meets the TEC definitions, this was due to the inability to site an appropriately sized quadrant (As per Table 1, Technical Guidance – Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016) within the narrow road verge area.

Only a basic fauna survey was conducted as per EPA (2020) guidelines. Observations of fauna presence, such as call sounds, footprints and scats were noted, and the area assessed for suitability of habitat within 'Site C – Rollond Road, SLK 0-15.9' for fauna species identified in the desktop survey. Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) feeding, roosting and nesting habitat was also assessed using EPBC Act referral guidelines (2022).

### 3.3 Survey Timing

According to Table 3 in the Technical Guidance – Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016), the primary survey timing for the South-west and Interzone Botanical Province is Spring (September-November). As all surveys at 'Rollond Road, SLK 0-15.9' were conducted in late August, it falls within this period. The surveys were timed, where possible, to align with peak flowering periods of conservation significant flora with the potential to occur in the 'Rollond Road, SLK 0-15.9' survey area.

The 2022 spring rainfall was above average, and hence spring flowering continued for an extended period in 2022.

### 3.4 Vegetation Descriptions

Vegetation community was assessed during the field survey. Broad vegetation types defined by structure and composition were recorded and described using the National Vegetation Information System (NVIS) (ESCAVI 2003) classification system.

Condition of vegetation was assessed using Table 2 of the Technical Guidance – Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016) categories, as 'Excellent', 'Very Good', 'Good', 'Degraded' or 'Completely Degraded'. This illustrates how healthy vegetation is, determined by vegetation structure, weed cover, presence of dieback, historical clearing, grazing and other signs of disturbance.

Additionally, possible environmentally sensitive areas, such as wetlands or granite, were noted. Overall, an assessment of environmental impacts to Department of Water and Environmental Regulation's (DWER) biodiversity values were inspected and valued.

### 3.5 Survey Limitations

A general assessment was made of the survey against a range of factors that may have limited the outcomes and conclusions of this report (Table 2). Based on this assessment, the present survey has not been subject to constraints which would affect the thoroughness of the survey, and the conclusions which have been formed.

**Table 2:** Potential limitations affecting the conclusions made in this report

Potential Survey Limitation	Impact on Current Survey
Availability of contextual information at a regional and local scale	<b>Not a limitation:</b> Reference resources such as Beard's mapping, together with online flora and vegetation information, have provided an appropriate level of information for the current survey. The vegetation of the Esperance shire has previously been mapped by Beard (1976).
Resources (i.e. were there adequate resources to complete the survey to the required standard).	<b>Not a constraint:</b> Adequate resources were made available by Shire of Esperance to complete the surveys.
Competency/experience of team carrying out survey; experience in the bioregion surveyed	<b>Not a limitation:</b> Botanists had extensive experience working within the Shire of Esperance and wider areas. Two of the botanists have consistently worked within this bioregion for more than 15 years. Botanists were familiar with flora in the area. Any unknown or potential threatened or priority flora species were collected and identified, utilising resources available at the Western Australian Herbarium and consultation with expert taxonomists.
Proportion of flora collected and identification issues	<b>Potential limitation:</b> While many plants were in flower during the survey, a proportion of plants encountered during the survey were sterile and may impact the chance of identification of some specimens to species level. Orchid species may not emerge each year if conditions are not favourable. Although these may affect the completeness of the species list, it is not expected to have a significant effect on mapping reliability, nor on the identification of threatened and priority species in the area as the majority were perennial species. Surveys were only undertaken in one year
Effort and extent of survey	<b>Potential limitation:</b> The survey area was thoroughly covered. The threatened and priority flora search undertaken by botanists by means of foot-traverse along the edge of the road and into roadside vegetation ensured thorough coverage of the survey area. Flora that was unknown or resembled threatened or priority flora were collected, the location and habitat noted, and the number of plants estimated.
Mapping reliability	<b>Not a constraint.</b> Handheld GPS units were used for the survey, which for a majority of field conditions have an accuracy level of $\pm 5$ m.
Survey timing, rainfall, season of survey	<b>Not a limitation:</b> The EPA (2016a) recommends that flora and vegetation surveys in the South – West Botanical Province be

	conducted in Spring (September-November). All surveys have been conducted in late August which falls within this period. Rainfall in 2022 was above average, and continued well into December.
Disturbances (fire/flood/clearing)	<b>Not a limitation:</b> The 'Rollond Road, SLK 0-15.9' survey area exhibits minimal levels of disturbance, mainly from historic clearing.

## 4 DESKTOP ASSESSMENT RESULTS

### 4.1 Climate

The Salmon Gums climate is described as a semi-arid (Dry) Warm Mediterranean climate (BoM 2022). The area receives an average annual rainfall of 355 mm. The Shire of Esperance received an unusually high level of rainfall in 2022 resulting in an extended flowering period.

### 4.2 Catchment

'Site C – Rollond Road, SLK 0-15.9' is present within the Lort River catchment area and the Bandy Creek Catchment area. It is located approximately 74km from the coast.

### 4.3 Geology, Soils and Topography

Three geological units were identified within 'Site C – Rollond Road, SLK 0-15.9', by Schoknecht et al. (2004). It is described as:

- Tertiary marine sediments with aeolian carbonate rich deposits in places.
- Quaternary aeolian sand deposits over Tertiary marine sediments.
- Thin Tertiary sediments with additions of calcareous aeolian material over weathered bedrock.

Within the area, there has been three soil types recorded. These are described as:

- Alkaline grey shallow sandy duplex soils with associated pale deep sands and minor deep sandy duplexes, ironstone gravel soils.
- Alkaline grey shallow sandy duplex soils with associated pale deep sands and alkaline grey deep sandy duplex soils.
- Alkaline grey shallow sandy duplex soils and calcareous loamy earths with minor non-cracking clays and bare rock.

During the field survey, topography was observed to be dominated by gently undulating plains. Using Schnoknecht et al. (2004), the project topography is mapped at a fine scale, traversing three topographic areas. These include:

- Level to gently undulating plain with areas of gilgai microrelief. Drainage is generally poorly developed and usually internal.
- Gently undulating plain with occasional subdued sand sheets and dunes. Drainage in internal to occasional small swamps.
- Very gently inclined scarp with external drainage via a well-developed network of incipient streams.

## 4.4 Regional Vegetation

The site is located within the Eastern Mallee (MaL01) Interim Biogeographic Regionalisation of Australia (Thackway & Cresswell 1995) subregion. The MaL01 is described as “the south-eastern of Yilgarn Craton is gently undulating, with partially occluded drainage. Mainly Mallee over Myrtaceous-Proteaceous heaths on duplex (sand over clay) soils. Melaleuca shrublands characterize alluvia, and Halosarcia low shrublands occur on saline alluvium. A mosaic of mixed Eucalypt woodlands and Mallee occur on calcareous earth plans, and sandplains overlying the Eocene Limestone strata in the East. Semi-arid (dry) and warm Mediterranean”.

Beard (1973) mapped two vegetation associations (VA) within the ‘Site C – Rollond Road, SLK 0-15.9’ (Table 3). The area was mapped as containing Salmon Gums 486 and Ridley 519 vegetation associations. Salmon Gums 486 has moderate levels of vegetation remaining with 37% of vegetation within the Eastern Mallee subregion remaining, Ridley 519 has high levels of vegetation remaining with 86% of its vegetation remaining within the Eastern Mallee subregion.

**Table 3.** Vegetation associations mapped by Beard (1973) within the ‘Site C – Rollond Road, SLK 0-15.9’, and statistics on pre-European remaining areas.

Vegetation Association		
Name	Salmon Gums_486	Ridley_519
Description	Woodland / Mallee	Eucalypt shrubland <i>Eucalyptus eremophila</i> , <i>E. redunca</i> , <i>E. spp.</i>
Vegetation to be cleared (ha)	7.33	0.64
Pre-European extent	58.69	61.71
Pre-European extent in IBRA region MaL01 (%)	37.38	86.75
Pre-European extent in LGA (%)	39.38	88.86
Current extent conserved in IUCN area (%)	6.70	16.88

## 4.5 Surrounding Land Use

The area directly included in the clearing permit application ‘Site C – Rollond Road, SLK 0-15.9’ is currently intact and vegetated 20 m and 100m wide road reserve, managed by the Shire of Esperance. The current road footprint occupies 15 m. The surrounding land use is agricultural cropping land.

The site was 0.6km south of Reserve 29680 (Red Lake Townsite Nature Reserve) this was the closest conservation reserve to the project area. No other conservation vested reserves were within 5km of the site.

## 4.6 Potential Threatened and Priority Flora

3 threatened flora (TF) and 34 priority flora (PF) were recorded within a 20 km radius of the proposed impact site (Appendix 3). Of these, no TF species and 22 PF species had suitable known associated habitat that corresponded with vegetation communities and soil type of 'Site C – Rollond Road, SLK 0-15.9' project. No confirmed records of priority flora were directly located within the clearing permit area.

## 4.7 Potential Threatened and Priority Ecological Communities

The desktop search identified the BC listed priority ecological community (PEC) 'Granite outcrop pools with endemic aquatic fauna' as being 9km from the site. This PEC was not relevant to the site as 'Site C – Rollond Road, SLK 0-15.9' had no granite outcrops. No other state or federally listed TEC's or PECs were identified by the desktop study as being within the 20km buffer of 'Site C – Rollond Road, SLK 0-15.9'.

## 4.8 Potential Threatened and Priority Fauna

4 threatened fauna and 2 priority fauna were recorded within a 20 km radius of the proposed impact site (Appendix 4). An additional 6 species were listed as occurring by the EPBC Protected Matters Tool.

## 4.9 *Phytophthora* Dieback

Dieback Information Delivery and Management System (DIDMS; GAIA Resources, SCNRM & State NRM 2022) data shows no *Phytophthora cinnamomi* or other *Phytophthora* sp. dieback sample results in the immediate area.

# 5 FIELD SURVEY RESULTS AND DISCUSSION

## 5.1 Flora

A total of 247 vascular plant taxa from 144 plant genera and 51 plant families were recorded within the 'Rollond Road, SLK 0-15.9' survey area during the 2022 survey. The majority of taxa was recorded within the Proteaceae (18 taxa), Myrtaceae (56 taxa), Fabaceae (37 taxa), and Asteraceae (18 taxa) families (Appendix 1). This total included 219 native species and 28 introduced (weed) species.

Numerous specimen's unknown to surveyors were collected and verified at the WAH as non-threatened species, such as:

- *Leucopogon canaliculatus* (Accession #9740; KSW13322, Specimen retained)
- *Acacia dermatophylla* (Accession #9770; KSW10922, Specimen retained)
- *Acacia hadrophylla* (Accession #9770; KSW12122, Specimen retained)
- *Jacksonia racemosa* (Accession #9857; KSW18922, Specimen retained).
- *Calytrix tetragona* (Accession #9857; KSW19022, Specimen not retained).
- *Cyathostemon* sp. (Accession #9770; KSW11222, Specimen not retained).
- *Cyathostemon* sp. (Accession #9770; KSW11322, Specimen retained).
- *Verticordia plumosa* var. *incrassata* (Accession #9770; KSW11522, Specimen retained).



A number of plant specimens collected could not be identified accurately to species level due to the absence of sufficient taxonomic characters to enable accurate identification. The principal reasons for not being able to fully identify some of the collected specimens to species level were:

- Plant material was sterile or lacked sufficient taxonomic features to permit accurate identification to species level. In these cases, the species is identified as, for example, *Calandrinia* sp. and *Lolium* sp.
- The plant material collected could not be determined to a known taxon. For example, *Lepidosperma* sp. and *Cyathostemon* sp. (currently undergoing taxonomic revision).

## 5.2 Threatened and Priority Flora

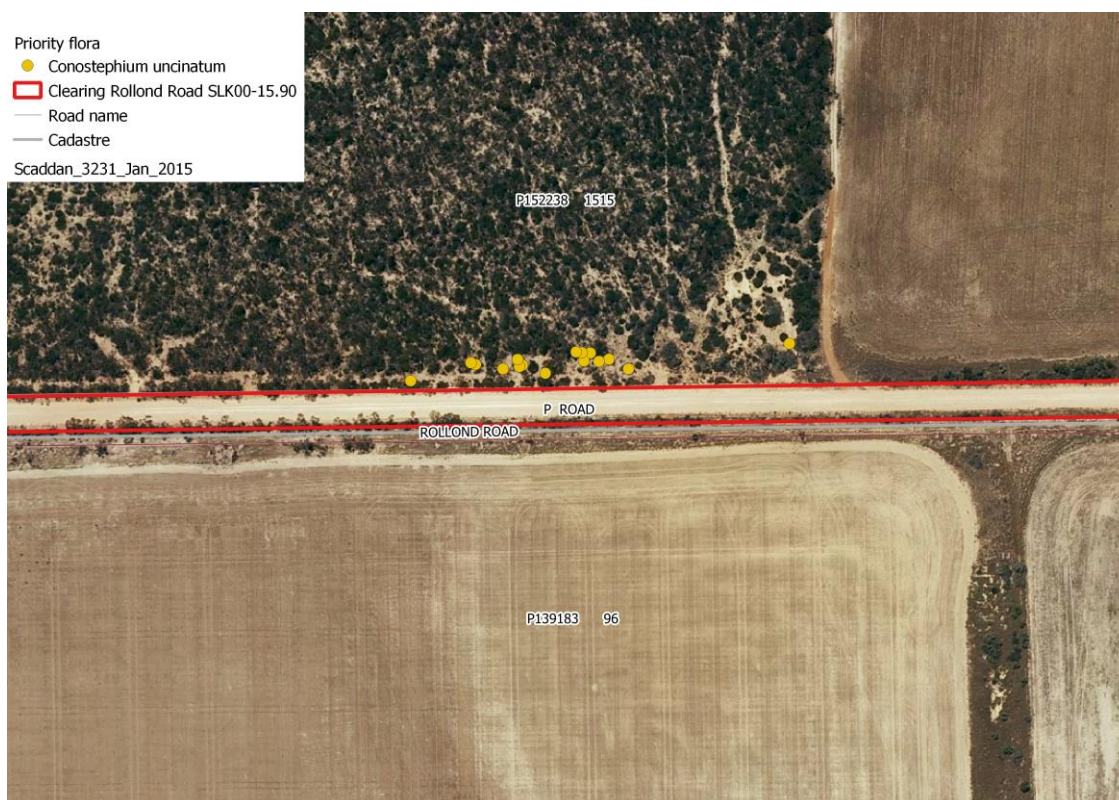
No TF species, were identified within the clearing footprint. In addition, the targeted flora survey identified 8 PF species, 6 of these within the proposed clearing permit footprint (Table 4). Queries of spatial datasets were requested specifically for these species, to interrogate impact of proposed works on species sustainability (DBCA 2022a; DBCA 2022c; DBCA 2022d). DBCA do not actively manage or monitor the majority of low priority species, due to their prevalence in the landscape relative to TF. There are 137 species recorded as priority three or four conservation status within the Shire of Esperance boundaries (DBCA 2023). It was noted that additional information on *Goodenia laevis* ssp. *laevis*, *Acacia bartlei*, *Acacia glaucissima* and *Eucalyptus dolichorhyncha* was located on file.

**Table 4:** Summary of priority flora species recorded in 'Site C – Rollond Road, SLK 0-15.9' project area.

Taxon	Conservation Code	Total Locations	Total Plants	Plants to be cleared
<i>Conostephium uncinatum</i>	P2	1	17	0
<i>Halgania</i> sp. <i>Peak Eleanora</i>	P2	3	298	84
<i>Acacia bartlei</i>	P3	1	1	1
<i>Acacia glaucissima</i>	P3	2	20	14
<i>Conostephium marchantiorum</i>	P3	1	32	0
<i>Goodenia laevis</i> ssp. <i>laevis</i>	P3	3	702	637
<i>Pityrodia chrysocalyx</i>	P3	2	424	2
<i>Eucalyptus dolichorhyncha</i>	P4	2	142	49

### 5.2.1 *Conostephium uncinatum*, Priority 2

A specimen of *Conostephium uncinatum* was sent to the WA Herbarium for identification confirmation (KSW10622; Accession # 9770 with specimen retained). It was confirmed as *Conostephium uncinatum* by Michael Hislop on 27/10/2022. A Threatened and Priority Reporting Form (TPFL) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.1). If proposed works occur none of the 17 plants counted will be impacted upon.



**Figure 2.** Location of Priority 2 species *Conostephium uncinatum* just outside the 'Site C – Rollond Road, SLK 0-15.9' project.

### 5.2.2 *Halgania* sp. *Peak Eleanora*, Priority 2

Specimens of *Halgania* sp. *Peak Eleanora* were sent to the WA Herbarium for identification confirmation, a specimen was collected for each of the three populations.

- Eastern population (SLK 5.74-5.83) (KSW21022; Accession #9874 with specimen retained). It was confirmed as *Halgania* sp. *Peak Eleanora* by Michael Hislop on 23/1/2023.
- Central population (SLK 8.73-10.66) (KSW8922; Accession #9693; PERTH 09516425). It was confirmed as *Halgania* sp. *Peak Eleanora* by Michael Hislop on 23/8/2022.
- Western population (SLK 13.19-13.53) (KSW21022; Accession #9874 with specimen retained & KSW11922 ACC9770 with specimen retained) It was confirmed as *Halgania* sp. *Peak Eleanora* by Michael Hislop on 23/1/2023.

A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/1/2023 (Appendix 2.2, 2.3, 2.4). If proposed works occur, 84 plants will be impacted upon, from a population total of 298. Breaking down clearing by population;

- Eastern population, 1 of 2 plants will be taken
- Central population, 81 of 293 plants will be taken
- Western population, 2 of 3 plants will be taken



The central population was contained within the 100m wide road reserve, which likely has a total population much greater than that counted during the survey, this central population is unlikely to be significantly impacted by the clearing.

Analysing Western Australian Herbarium and DBCA TPFL data, *Halgania* sp. Peak Eleanora has a wide geographic range spanning 320km east to west and a 120km north to south range. With specimens present in the Shire of Esperance and Shire of Kondinin. There were 10 confirmed herbarium specimens for *Halgania* sp. Peak Eleanora, five of the specimens were from Unallocated Crown Land, two specimens were from Peak Charles National Park, the last three specimens were from insecure tenure.

Additionally, 22 populations of this species totaling 6000 plants were reported by Ecoscape during the State Barrier Fence Biological surveys (Ecoscape, 2015), only one of these populations totaling 50+ plants were located on DBCA databases.

There is a large 116km gap between the two westernmost populations and a 90km gap between the first and third easternmost populations, almost the entirety of these gaps is poorly surveyed UCL with potential to have additional populations of this species.

**Table 5.** Known Herbarium records of Priority 2 species *Halgania* sp. Peak Eleanora, detailing locality, frequency, tenure and collection date. (DBCA, 2023a)

Sheet number	Location	Frequency	Tenure	Record date
2631946	3 km SSE of Peak Charles, Peak Charles National Park, c. 45 km W of Salmon Gums	Common	National Park	9/11/1979
2636530	39.5 km SSE of Peak Eleanora, 2.55 km N of Rollond Road on Fields road		Unclear.	25/09/1984
5020190	NW of Grass Patch, roadside Poverty Lane	Occasional.	Road reserve	10/11/1997
8023697	10.4 km E of Bremer Range turnoff track on Lake King-Norseman Road	Occasional	UCL	8/10/2007
8471975	Mt Newmont	Very common.	UCL	15/09/2012
8643482	Peak Charles Road N of Peak Charles both sides of road. Population extends from at least 32° 49' 49" to 32° 50' 13.4"		National Park	5/05/2013
9062297	C. 20 km W of Salmon Gums on agricultural boundary firebreak	50+ plants.	UCL & Dog Fence Reserve.	6/10/2013
8644829	5.5 km SW of Mount Newmont	An extensive colony of several kilometres in length that would number in their millions.	UCL	3/08/2014

9232982	1.5 km SSW of Kau Rock. 1.8 km W along firebreak from NW corner of Loc 417	Localised patch.	UCL	22/05/2019
9215085	Forrestania, 22 km S of Mt Holland Airport, c. 83 km E of Hyden	C. 1% cover.	Private land	3/11/2019

## PERTH O9516425

[\*Halganina\* sp. Peak Eleanora \(M.A. Burgman 3547 B\)](#)

Boraginaceae

**Plant Description, Notes:** Small shrub, 25 cm tall. blue 5 mm wide flowers, small leaves (4-5 mm long).

**Vegetation:** Mixed Mallee over *Melaleuca uncinata* and mixed understorey shrubs. Associated species include: *Prostanthera serpyllifolia*, *Lissanthe rubicunda*, *Pimelea cracens*, *Eucalyptus dolichorhyncha*.

**Site Description:** Roadside, level plain, no signs of fire.

**Frequency:** single plant was found, though no survey has been conducted.

**Nearest Named Place:** Grass Patch

**State:** WA

**Collector:** Waters, J.; Walkerden, K. **Coll No:** KSW8922

**Collection Date:** 13 July 2022

**Conservation Code:** 2

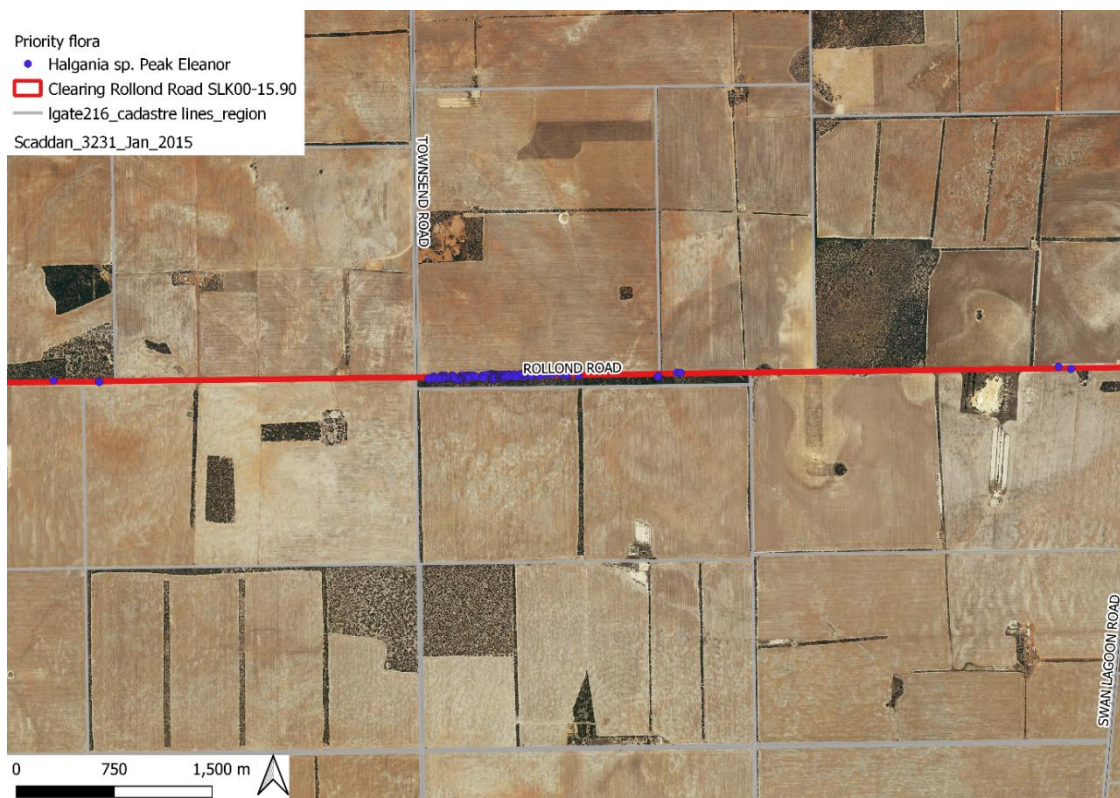
**Confirmavit:** M. Hislop **Date:** 23 August 2022

**Origin:** PERTH

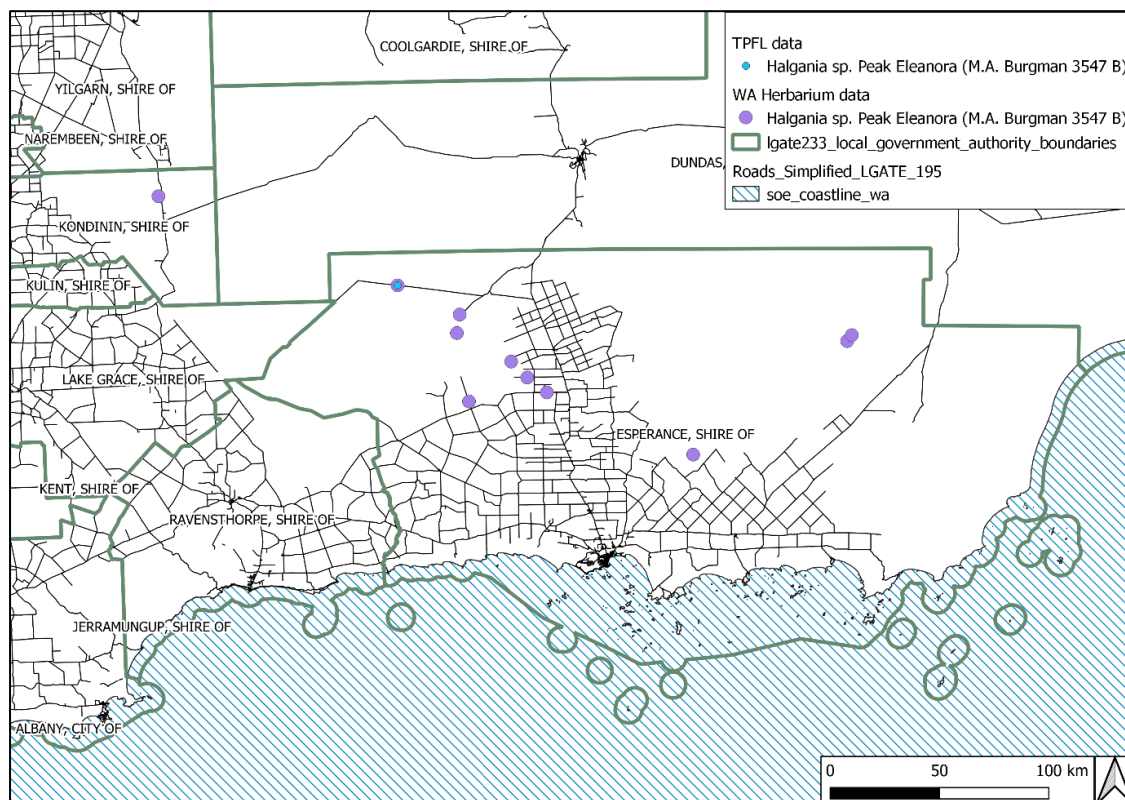
**Duplicates to:** ESP.

**Record Basis:** PreservedSpecimen

**Figure 3.** Extract from Florabase (DBCA 2022) of Priority 2 species, *Halganina* sp. *Peak Eleanora*, record of Specimen KSW8922, located directly within the proposed 'Site C – Rollond Road, SLK 0-15.9' area.



**Figure 4.** Location of Priority 2 species *Halgania* sp. Peak Eleanor within the 'Site C – Rollond Road, SLK 0-15.9' project.



**Figure 5.** Known records of Priority 2 species *Halgania* sp. Peak Eleanor across a 210 km east-west geographic range (DBCA 2023).

### 5.2.3 *Acacia bartlei*, Priority 3

A specimen of *Acacia bartlei* was sent to the WA Herbarium for identification confirmation (KSW11622; Accession # 9770 with specimen retained). It was confirmed as *Acacia bartlei* by Michael Hislop on 27/10/2022. A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.6). If proposed works occur, 1 plant will be impacted upon, from a population total of 1. Despite extensive searching no more plants could be found, this is likely due to historical clearing in that location.

*Acacia bartlei* has a wide geographic range spanning 166km east to west and 64km north to south, all populations of this species are located within the Shire of Esperance. There was a total of 29 preserved herbarium specimens for this species. A large majority of the occurrences are geographically inaccurate and have unclear tenure. A single specimen was located within conservation estate (Dundas Nature Reserve), 3 specimens were located within UCL, 3 specimens were located within Shire of Esperance recreation reserves and 3 had been located within a road reserve, the remaining records had unclear tenure or were within private property. Several of the 29 records are likely to represent the same population, but it is unclear due to geographic uncertainty of the records.

Four additional populations have been found by Julie Waters and Katherine Walkerden during spring 2022, which have not yet been mounted at the WA Herbarium (Table 6.). Two of these were minor eastern range extensions. Examining prior herbarium records and recent finds of *Acacia bartlei*, the species inhabits a range of habitat types, with the most frequent habitat descriptions being Open Mallee woodland, Closed Mallee Woodland and a *Eucalyptus occidentalis* swamp. There were several records of the species growing on the edges of salt lakes. Only a single record of *Acacia bartlei* had been entered into the TPFL database.

**Table 6.** Confirmed records of Priority 3 species, *Acacia bartlei* found by Julie Waters and Katherine Walkerden during Spring 2022.

Herbarium reference	Location	Site description	Frequency	Tenure	Record date	Confirmative
KSW142-p Accession# 9713	Rollond road (SLK 40.58) and Lort River crossing. Southern section of road reserve.	Lort River, fringing saline river	24	Road Reserve & DPLH Parklands Reserve	13/08/2022	R. Davis
KSW14922 Accession# 9783	Circle Valley road at SLK 0.26. Southern side of road.	Open Woodland	Single plant found	Road Reserve	16/09/2022	M. Hislop
KSW15922 Accession# 9841	Coolinup road collected at SLK 38.81. Eastern side of road.	Edge of Salt Lake	7 plants in total	Road Reserve	13/09/2022	M. Hislop
KSW16522 Accession# 9841	Heywood road at SLK 5.47. Eastern side of road.	Salinity affected <i>Eucalyptus occidentalis</i> swamp	7 plants.	Road Reserve	12/10/2022	M. Hislop

**Table 7.** Known Herbarium records of Priority 3 species *Acacia bartlei*, detailing location details, frequency, tenure and collection date (DBCA, 2023a).

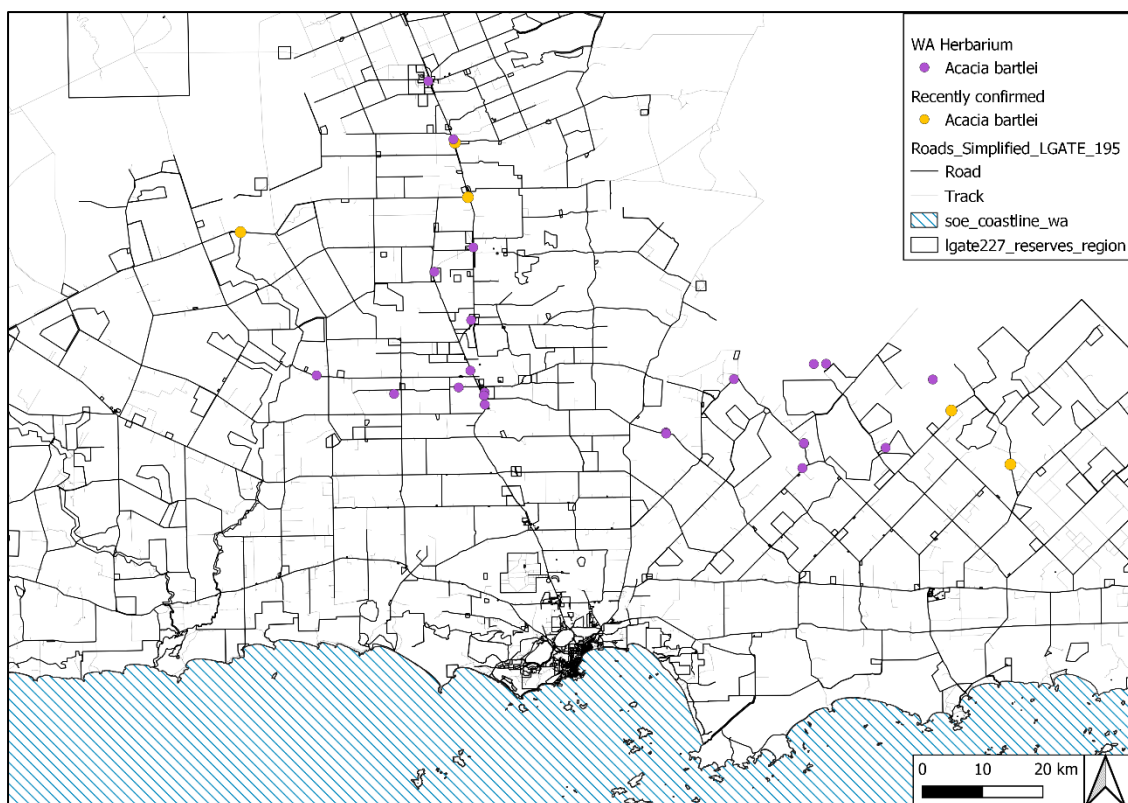
Sheet number	Location	Frequency	Tenure	Record date
192996	1 mile E of Kau Rock		UCL	16/10/1970
666157	15.5 km W of Scaddan		Unclear	19/12/1971
666149	Scaddan		Unclear	1973
666122	62 miles S of Norseman on Esperance Road [= ca 1 km S of Salmon Gums]		Unclear	1973
666130	31.4 miles from Esperance on way to Norseman		Unclear	1973
192457	W of highway on Swan Lagoon Road, between Truslove and Salmon Gums		Unclear	1979
880558	Circle Valley		Unclear	1987



1264540	E of Scaddan - track between Dempster and Burdett Roads		Unclear	6/09/1984
658693	0.5 km W of Kau Rock		UCL	6/09/1984
619876	500 metres W of Highway, ca 5-6 km N of Scaddan (on Aboriginal Lands Trust block),	abundant.	Unclear	14/08/1985
768618	2 km S of Scaddan on Coolgardie - Esperance Highway		Unclear	31/08/1986
5334039	Edge of salt lake boundary Reserve 24952 and Loc.418, ca 600 m W of Highway, Scaddan,		Shire recreation reserve	22/09/1998
5267153	Coolinup, Kau Rock Road (Neridup Location 413), Esperance,		Private land	24/09/1998
5591562	Wittenoom Road, 1 km S of Burdett Road		Road reserve	27/06/2000
5591570	NE of Esperance, Burdett Road, 4 km W of Backmans Road	about 10 plants along road verge.	Private land	27/06/2000
5591511	2 km S of Scaddan on Coolgardie - Esperance Highway		Shire recreation reserve	27/06/2000
5689627	NE of Esperance, Burdett Road, 4 km W of Blackmans Road		Private land	5/12/2000
5689619	2 km S of Scaddan on Coolgardie - Esperance Highway		Shire recreation reserve	5/12/2000
8183546	Grass Patch. Opposite Grass Patch Road. 0.4 km S of Grass Patch Tavern, Roe	moderately common.	Unclear	19/08/2001
8183511	12.2 km S of Grass Patch. Tavern along Coolgardie Esperance Highway, Roe	moderately common.	Unclear	24/01/2002
6736394	Mt Ney Rd, 3 km S of Burdett Rd (NE of Esperance)	Frequent, localised.	Private land	29/09/2002
6748694	On Griggs Road 5.6 km E of Lort River (NW of Esperance)	frequent localised.	Private land	19/03/2003
6748708	8.3 km W of Wittenoom Road on Scaddan Road (NE of Esperance)	frequent.	Road Reserve.	19/03/2003
6748724	Burdett Road, midway between Mt Ney Road and Backmans Road (NE of Esperance)	frequent.	Private land	19/03/2003
6748716	Opposite entrance to Wittenoom Hills station on Backmans Road, 4.1 km NE of Lanes Road (approx 1 km SW of Burdett Road, adjacent to old gravel pit) NE of Esperance	occasional.	Private land	19/03/2003
8391351	ca 4 km SW of Pyramid Lake, 120 km NW of Esperance		Unclear	1/09/2012
9061525	C. 8 km SE of Mt Ney, along firebreak adjacent to agricultural land	200+ plants.	UCL	1/10/2014
8705976	INV 478. Track SW of Gnamma Hill on Fraser Range Station, track joins Dempster Road	infrequent.	Nature Reserve	30/07/2015
192996	Scaddan Road, near entrance to 'Viking' farm, extending W to low lying swampy area	>= 50 plants.	Road reserve.	13/12/2017



**Figure 6.** Location of Priority 3 species *Acacia bartlei* within the 'Site C – Rollond Road, SLK 0-15.9' project.



**Figure 7.** Known records of priority 3 species *Acacia bartlei* across an 166km East to West geographic range and a 64km North to South geographic range (DBCA 2022) including recently discovered populations by the Shire of Esperance.

### 5.2.4 *Acacia glaucissima*, Priority 3

Two specimens of *Acacia glaucissima* were sent to the WA Herbarium for identification confirmation (KSW10822 & KSW12022; Accession # 9770 with specimen KSW12022 retained). Both were confirmed as *Acacia glaucissima* by Michael Hislop on 27/10/2022. A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.6 and Appendix 2.7). If proposed works occur, 14 plants will be impacted upon, from a population total of 20.

There was a total of 22 confirmed herbarium records for this species, A single TPFL record was present and an additional 8 populations were confirmed in 2022 by WA Herbarium staff which have yet to be databased. Additionally, 82 populations of this species totaling 10,000 plants were reported by Ecoscape during the State Barrier Fence Biological surveys (Ecoscape, 2015), only two of these populations totaling 40+ plants were on DBCA databases.

The species had a wide geographic range with a 261km east to west geographic range, and a 69km north to south range. The species contains large gaps in its range in which there are large expanses of poorly surveyed UCL.

Examining herbarium data, *Acacia glaucissima* is listed as growing in Mallee woodland and Shrubland, however most of the records had no site or vegetation descriptions. The Rollond road site has typical vegetation for this species. A single herbarium specimen had been listed as growing within a recent chained firebreak and recent collections (KSW040-p, KSW043-p) were collected within a strategic firebreak and a third specimen was collected within a fire scar (KSW146-p). Germination in this species (along with many other acacia's) appears to be stimulated after disturbance.

A majority of herbarium specimens with clear tenure were located within Shire Road Reserves and UCL, a single specimen was listed within conservation estate.

**Table 8.** Confirmed records of Priority 3 species, *Acacia glaucissima* found by Julie Waters and Katherine Walkerden during 2022.

Herbarium reference	Location	Disturbance	Frequency	Tenure	Record date	Confirmative
KSW040-p Accession# 9604	4.3km north of Dempster Road and Ridley Road intersection, within undeveloped section of Dempster Road Reserve.	Chained firebreak	locally common	Road Reserve	29/05/2022	R. Davis
KSW043-p Accession# 9604	2.5 km North of Dempster road and Ridley Road Intersection. Un developed section of Dempster road reserve.	Chained firebreak	Locally common	Road Reserve	29/05/2022	R. Davis
KSW116-p Accession# 9640	Eldred Road 2.8km West of Hobby Road, South of road within road reserve.		Locally common, several	Road Reserve	15/07/2022	R. Davis

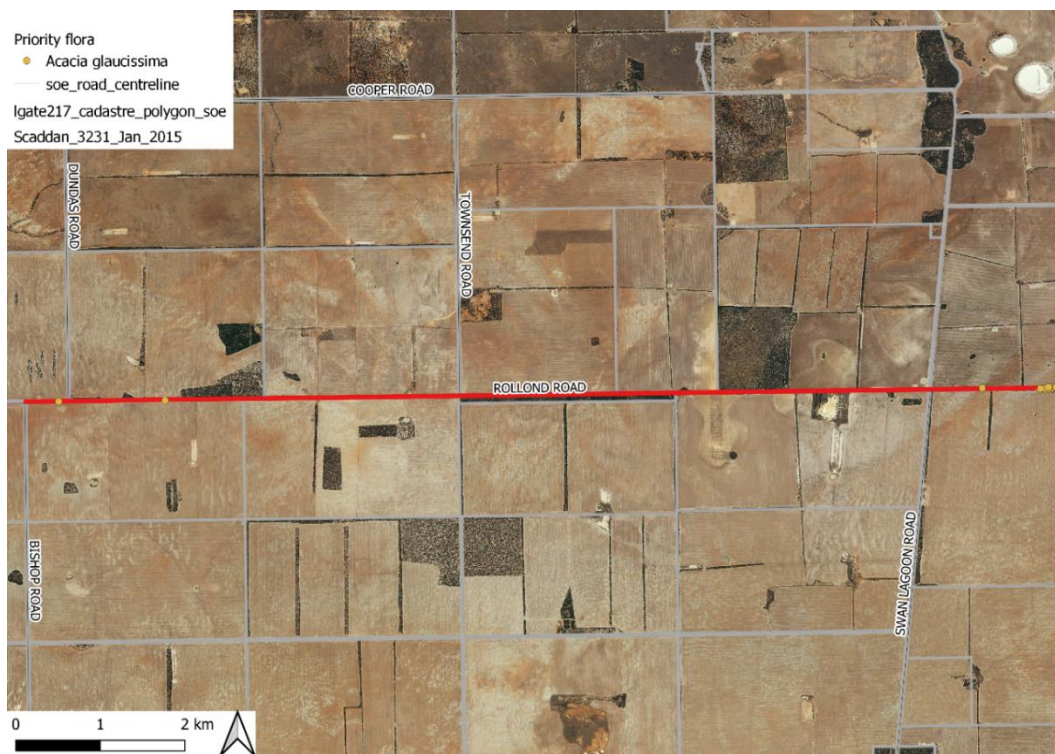


			dozen seen.			
KSW146-p Accession # 9713	Belgian Road at SLK 20.5. Western side of road.	Burned area	Locally common 50+	Road Reserve	13/08/2022	R. Davis
KSW12522 Accession # 9740	40m South of Circle Valley Road at SLK 0.52, Within Reserve 24007		158 plants in a scattered distribution	Road Reserve	16/09/2022	M. Hislop
KSW12722 Accession # 9740	Circle Valley Road at SLK 4.32 On northern side of Road.		Plants scattered throughout road reserve.	Road Reserve	20/09/2022	M. Hislop
KSW13022 Accession # 9740	Eldred road at SLK 16.35		3 in population.	Road Reserve	1/09/2022	M. Hislop
KSW13522 Accession # 9783	Near Eldred road and Hobby road Intersection. Eldred Road at SLK 12.69		19 plants GPS'd within population	Road Reserve	1/09/2022	M. Hislop

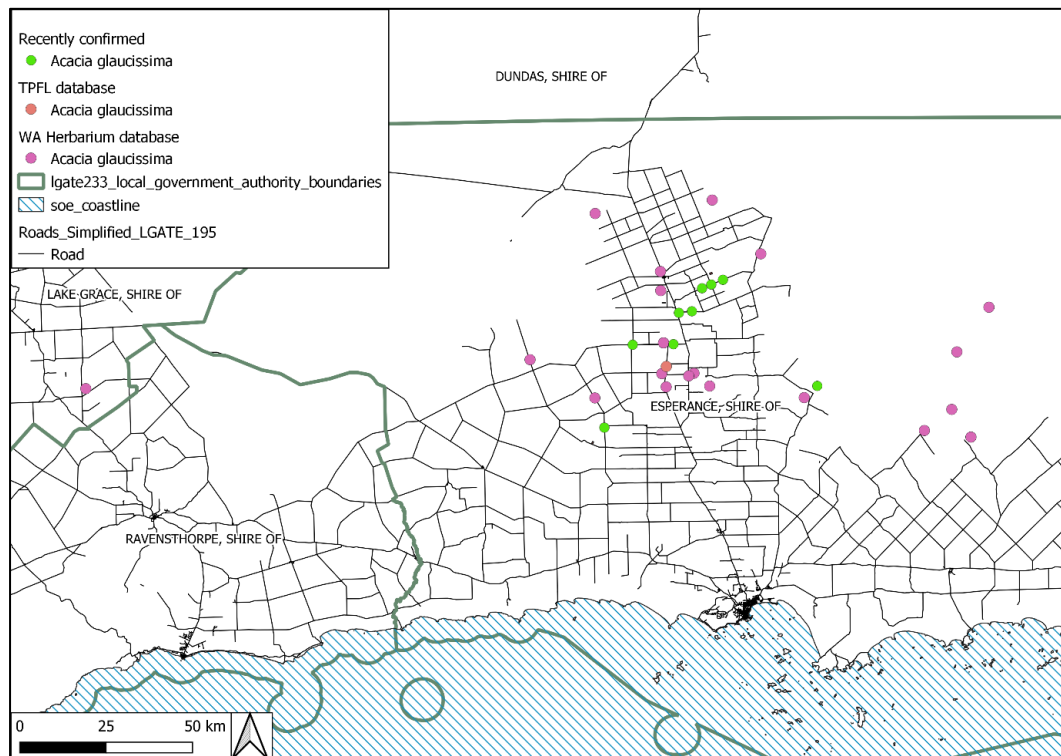
**Table 9.** Known Herbarium records of priority 3 species *Acacia glaucissima*, detailing location details, frequency, tenure and collection date (DBCA, 2023a).

Sheet number	Location	Frequency	Tenure	Record date
178047	Salmon Gums, ca 110 km N of Esperance		Unclear	12/09/1964
932833	S of Mount Madden. (Shire of Lake Grace)		Unclear	12/09/1964
934437	22 miles S of Salmon Gums		Unclear	14/09/1964
178098	Near Mount Heywood		UCL	17/09/1970
133175	2.5 km S of Salmon Gums towards Esperance		Unclear	18/12/1971
178063	W of Grass Patch on the Esperance - Norseman Highway		Unclear	10/1976
178071	1.4 km W of Goodwins turn on Swan Lagoon Road (Swan Lagoon Road is between Truslove and Salmon Gums)		Unclear	09/1979
145408	25 km NNE of Mount Ney		UCL	6/05/1983
332143	8 km due W of Grass Patch, 7.5 km W of Norseman - Esperance Highway on Grass Patch Road		Unclear	9/08/1983
178055	20 km S of Salmon Gums on Coolgardie - Esperance Highway		Road Reserve	25/09/1983
178039	20 km S of Salmon Gums on Coolgardie - Esperance Highway		Road Reserve	25/09/1983

346012	27.85 km ENE of Salmon Gums, 6.1 km N of Elford Road on McNee Road		Unclear	10/12/1983
704873	20 km S of Salmon Gums on Coolgardie - Esperance Highway towards Esperance		Road Reserve	29/12/1983
609676	2.6 km N of Rollands Road on Fields Road [c. 45 km due W of Red Lake]		Road Reserve	08/1984
345547	31.6 km NNE of Mount Heywood, 12.41 km NW of Mount Ney Road on Clyde Road.		UCL	08/1984
758884	Dempster Road (1 km NE of intersection with Bronzewing Road), 4 km due SW of Mount Ridley which is N of Esperance		UCL	15/08/1985
8350256	12.3 km W of Coolgardie Esperance Highway, approximately 120 km N of Esperance town site		UCL	7/02/2002
7400594	Kambalda to Esperance Pipeline Survey, found between rail line and track		Rail Reserve.	5/11/2002
8040044	Mount Ney Road, 2 km NE from junction with Howick Road	occasional.	Conservation reserve	15/09/2005
7504152	4.7 km S of Grass Patch West Road on Belgian Road in rehabilitating gravel pit on E side of road	ca 100 plants.	Road reserve.	7/12/2006
9061460	C. 25 km NE of Salmon Gums, on a firebreak on the agricultural boundary	10+ plants.	UCL	24/11/2013
9061576	C. 2.5 km of Beaumont Nature Reserve and 2 km NE of where Heywood Road terminates	30+ plants.	Undeveloped Road Reserve	25/11/2013



**Figure 8.** Location of Priority 3 species *Acacia glaucissima* within the 'Site C – Rollond Road, SLK 0-15.9' project.

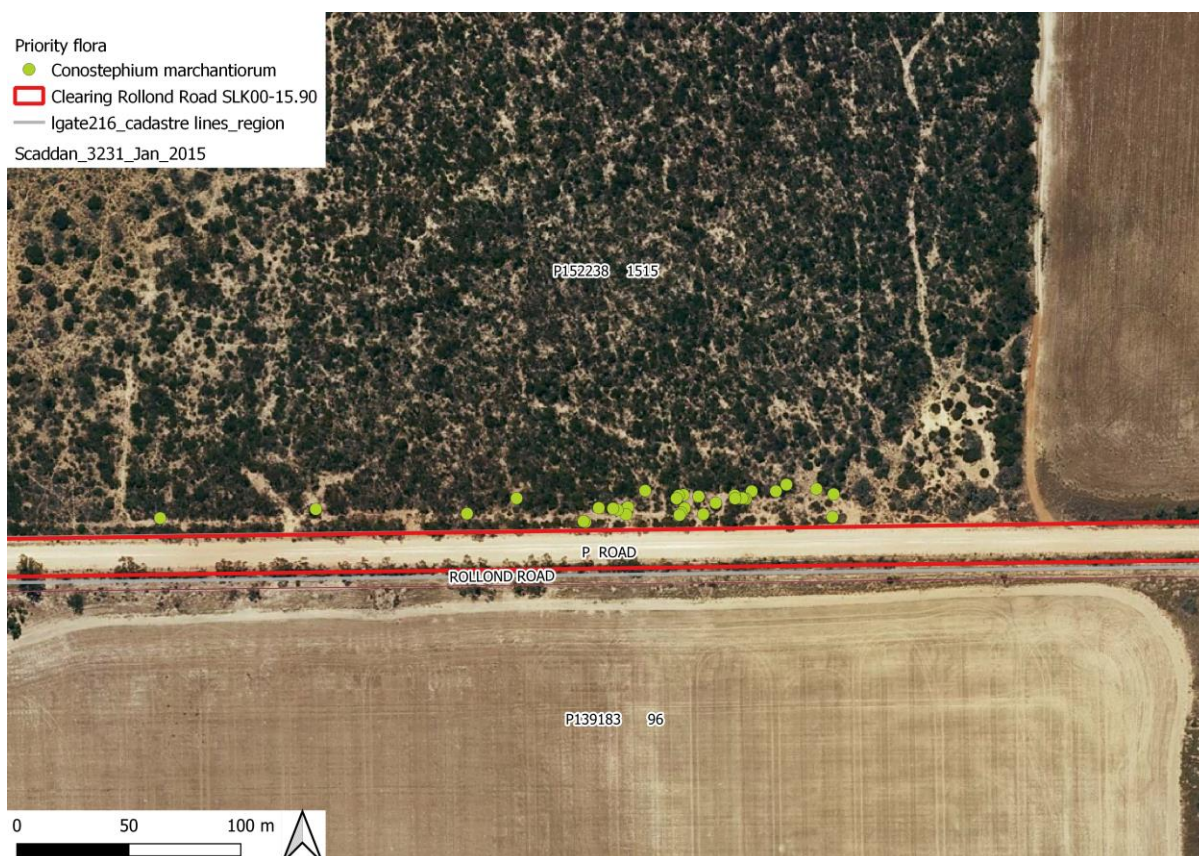


**Figure 9.** Known records of Priority 3 species *Acacia glaucissima* across a 261km east to west geographic range, and a 69km north to south geographic range (DBCA 2022) including recently discovered populations by the Shire of Esperance.

#### 5.2.5 *Conostephium marchantiorum*, Priority 3

A specimen of *Conostephium marchantiorum* was sent to the WA Herbarium for identification confirmation (KSW10522; Accession # 9770 with specimen retained). It was confirmed as *Conostephium marchantiorum* by Michael Hislop on 27/1/2022. A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/1/2023 (Appendix 2.9). If proposed works occur, none of the 32 plants counted will be impacted upon.





**Figure 10.** Location of Priority 3 species *Conostephium marchantiorum* within the 'Site C – Rollond Road, SLK 0-15.9' project.

### 5.2.6 *Goodenia laevis* ssp. *laevis*, Priority 3

Specimens of *Goodenia laevis* ssp. *laevis* were sent to the WA Herbarium for identification confirmation, a specimen was collected for each of the three populations.

- Eastern population (SLK 0.63-1.4) (KSW11022; Accession #9770 with specimen not retained). It was confirmed as *Goodenia laevis* ssp. *laevis* by Michael Hislop on 27/10/22.
- Central population (SLK 9.59-10.63) (KSW11022; Accession #9770 with specimen retained). It was confirmed as *Goodenia laevis* ssp. *laevis* by Michael Hislop on 27/10/22.
- Western population (SLK 12.95-13.27) (KSW11822; Accession #9770 with specimen not retained). It was confirmed as *Goodenia laevis* ssp. *laevis* by Michael Hislop on 27/10/22.

Threatened and Priority Reporting Forms (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.10, 2.11, 2.12). If proposed works occur, 637 plants will be impacted upon, from a population total of 702.

The Shire of Esperance has discovered numerous new populations of *Goodenia laevis* ssp. *laevis* in since 2019 (Table 10). Herbarium specimens and Threatened and Priority Reporting Forms (TPRF)

have been completed for confirmed populations. Only one of these had been entered into TPFL at 07/02/2023.

At all sites, the plants were present in the road active footprint that is regularly graded or in dam catchments – all sites with a high level of disturbance. These are specifically outlined below. It can be inferred that the abundance of *Goodenia laevis* ssp. *laevis* at the site is partially due to the disturbance caused by mechanical grading of the road shoulders.

Using the WA Herbarium spatial data, the below inferences can be discussed:

- *G. laevis* ssp. *laevis* is geographically restricted to the Esperance Mallee area, extending from Scaddan to Norseman, and the Cascade region to the edge of Cape Arid. In total this covers 18,000 km<sup>2</sup>.
- Almost all associated vegetation is described as a variation of mixed Melaleuca shrubland with Eucalyptus woodland over-storey. Extensive areas of this vegetation type remain, providing likely habitat, with similar soil type and associated vegetation.
- 27 records of populations are recorded on the WA Herbarium databases, two records are on the TPFL database. 14 new populations discovered by Shire of Esperance in recent years have not added to DBCA data.
- Of the 27 recorded specimens, seven records are directly described as being within a previously disturbed site, such as old limestone pits, along firebreaks or road shoulders. An additional specimen was listed as growing in a fire scar.

Additionally, Ecoscape had reported finding 58 new populations of *Goodenia laevis* ssp. *laevis* containing a total population of 12,000 plants during the State Barrier Fence Biological surveys (Ecoscape, 2015). There was no record of these collections on DBCA databases.

*Goodenia laevis* ssp. *laevis* is a common species with Mallee habitat and has been historically been under surveyed. The species has had 22 new confirmed populations since 2020 that the Shire of Esperance is aware of, as a result the species has been nominated for delisting by the Esperance DBCA.

**Table 10.** Confirmed records of Priority 3 species, *Goodenia laevis* ssp. *laevis* found by Shire of Esperance staff since 2019.

Herbarium reference	Location	Site description	Frequency	Tenure	Record date	Confirmative
KW041, Accession# 8281, Specimen not retained	Located in historical footprint of Norwood Rd, t intersection of Norwood and Dempster Rd. Road before stagger was put in	Slope, limestone, 30-50% loose rock, sandy loam, white soil, well drained, dry	100-150 plants in road area	Road Reserve.	10/12/2019	M. Hislop
KW043 Accession# 8281, Specimen not retained	2.86 to 3.5 km north of Cascade Rd, on Neds Corner Rd	Slope, limestone, 30-50% loose material, clay loam, white, well drained, dry soil	82 plants present	Road Reserve.	25/10/2019 - mapped 09/12/2019	M. Hislop
KW059, Accession# 8334, Specimen not retained	On Grass Patch Rd, 2.2 km west of Bishops Rd.	Flat, well drained. White/grey clay loam. Limestone base	50+	Road Reserve.		M. Hislop
KW061, Accession# 8334, Specimen not retained	Grass Patch townsite - R19624. north-west corner of intersection of grass patch Rd and Coolgardie-Esperance Hwy	Flat, loose material with large amounts of leaf litter. White soil - clay loam, likely limestone base	3 plants	Road Reserve.	22/01/20	M. Hislop
KW062, Accession# 8334, Specimen not retained	On north-east intersection of Dalyup and Rasyk Rd.	Gentle slope (heading towards constructed dam), white/grey soil, clay loam, limestone bed rock	200-250 plants	Road Reserve.		M. Hislop
KW076, Specimen not retained	On Holt Rd from 2.4 km to intersection of Burnside Rd. On road reserve	Gently undulating plains, yellow-white sandy loam	Scattered along entire transect - total of 83 plants	Road Reserve.	08/09/20	M. Hislop
KW098	~47 km north of Esperance townsite. ~19 km east of Scaddan townsite. On Styles Rd, from 1.5 to 2 km south of	Closed Mallee Woodland with dense Melaleuca shrubland, distinguished from the surrounding	70-90	Road reserve	14/10/2020	M. Hislop

	Norwood Rd and Styles Rd intersection. On both sides of road reserve					
KSW2021, Accession# 9133, Specimen not retained	Holt Rd SLK 6.4-11.61	Narrow Road reserve in mostly excellent condition	24	Road reserve	6/09/2021	M. Hislop
KSW2821, Accession# 9190, Specimen not retained	Neds Corner Rd, near Grass Patch Rd intersection	Road Reserve	100s	Road Reserve	29/09/2021	M. Hislop
KSW5421, Accession# 9361, Specimen not retained	R37505, Cascade Rd, Cascade	Historic landfill site	100+ scattered throughout R37505, estimate only	Shire reserve	13/12/2021	M. Hislop
KSW2722, Accession# 9405, Specimen not retained	Cascade road SLK 94.17	Road shoulder in Shire Road Reserve	4 plants seen, area not surveyed	Road Reserve	25/01/2022	M. Hislop
KSW3122, Accession# 9441, Specimen not retained	Reserve 19965, Neighbouring Hawkey rd & Dalyup rd T junction	formerly used for limestone extraction, burned in 2015 Scaddan/ Grasspatch bushfires	Around 100 older plants growing along access track, 200+ younger plants in burned area, 300+ in rehabilitated limestone pit	Shire reserve	5/02/2022	M. Hislop
KSW032-p, Accession# 9604	Dempster Road SLK 41.58. Eastern side of road.	Limestone road shoulder.	6	Road Reserve	15/05/2022	R. Davis
KSW12922, Accession# 9740,	Coolinup road at SLK 38.95	Road shoulder.	26 plants GPS'd, 300 metres of	Road Reserve	13/09/2022	M. Hislop



Specimen retained			road was surveyed			
KSW16222, Accession# 9841, Specimen not retained	Heywood road at SLK 5.58. Western side of road.	Plants just off road. No signs of fire.	7 plants found during survey.	Road Reserve	12/10/2022	M. Hislop

**Table 11.** Known Herbarium and TPFL records of Priority 3 species *Goodenia laevis* ssp. *laevis*, detailing location details, frequency, tenure and collection date. (DBCA, 2023a)

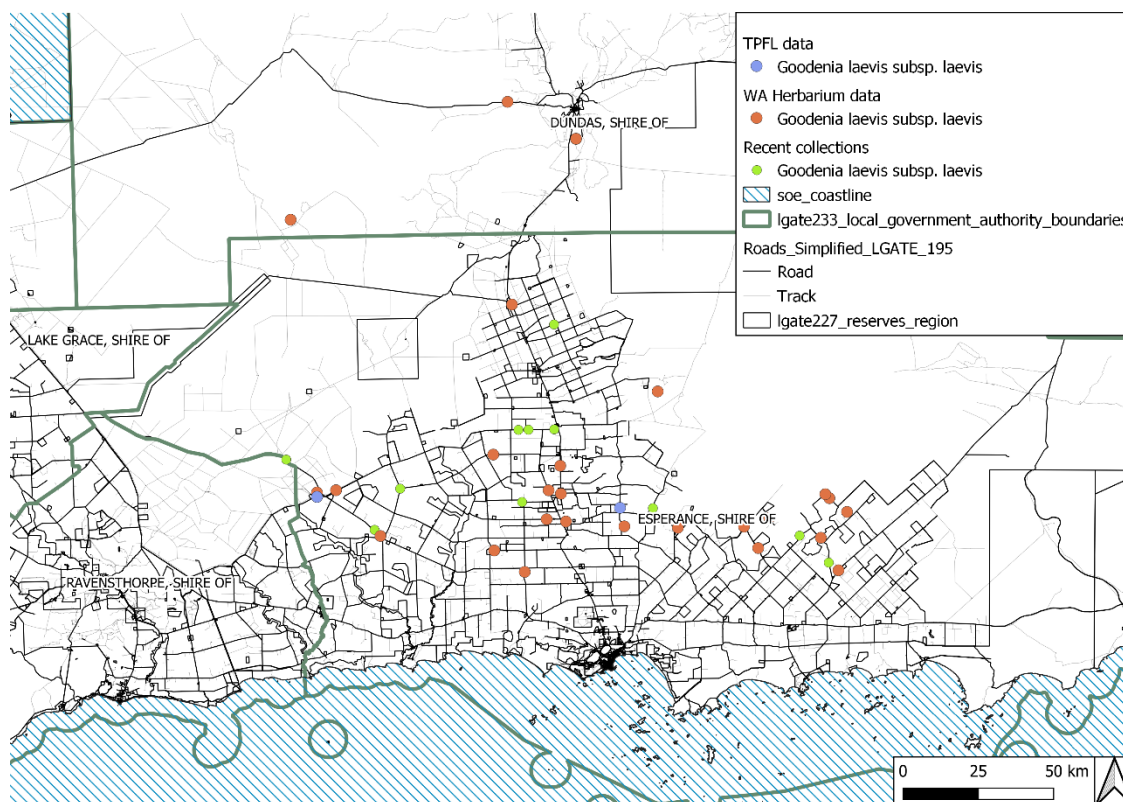
Sheet number/ TPFL population	Location	Frequency	Record date
2607786	Kumarl,		Apr-38
2607719	8 km SE of Mount Beaumont, ca 90 km NE of Esperance	rare.	10/11/1980
2607689	35 km N of Gibson on Esperance - Coolgardie highway		9/11/1982
2607697	20 km E of Scaddan on Styles Road		2/12/1982
2607700	3.4 km S of Mount Ney		Aug-83
4111648	Oldfield 1343 [This location is 28 km NW of Cascade as advised by collector 23/8/2001]		7/12/1993
4256131	Scaddan Road between Norseman-Esperance Highway and rail crossing	abundant locally.	24/12/1995
5083575	28 km NNW of Condingup, Kay Rock Road, NE of Esperance,		31/12/1995
6374417	Grass Patch, 3.9 km S of Grass Patch Track near railway line, E side of Coolgardie Esperance Highway. 5.9 km N of Sime Road. Roe District	moderately common.	15/01/1998
5645115	W side Kau Rock Road ca 300 m N of Mount Ney Road, NE of Esperance,	occasional.	20/11/1998
5400562	New Hyden/Norseman track, ca 17 km W of Great Eastern Highway,	occasional.	13/04/1999
7400330	Norseman, Coolgardie region		20/09/2001
7400403	Norseman, Coolgardie Region		20/09/2001
7184859	1.5 km W of Fields Road on Grass Patch West Road	100+ plants.	16/01/2004
7218923	Bremer Range; c. 50 km S of Hyden-Norseman Road on Maggie Hayes Ninety Mile Tanks track, then E on track to Lake Medcalf for 5-8 km then N on 4WD track for 1.5 km then W along gridline at AGD84 6400000 mN	occasional.	16/03/2005
8111928	N side of Heywood Road ca 4 km N of Karl Berg junction in old limestone pit, Condingup	2-5 plants.	29/11/2008
9062238	N boundary of Beaumont Nature Reserve. c. 1.5 km E of Mt Beaumont	200+ plants.	23/10/2013
9062203	On agricultural boundary firebreak, c. 39 km E of Salmon Gums	50+ plants.	5/11/2013
9062211	On the boundary of Beaumont Nature Reserve, c. 1 km S of Mt Beaumont	30+ plants.	25/11/2013



9139338	Speddingup Reserve, NE boundary on Belgian Road, 60 m W of Robins Road	uncommon; 2 plants per 100 sq m.	22/11/2016
9196420	In the Cascade townsite, on Wilaust Street, c. 60 m N of Asha Court, c. 80 km NW of Esperance townsite	> 15 plants.	9/12/2019
9375384 Population #1	C. 112 km NW of Esperance, c. 25 km NW of Cascade townsite. On West Point Road c. 300 m from the intersection of West Point Road and Cascade Road	25 plants.	17/09/2020
9475788 Population# 2	Griggs Road SLK 4.65		18/09/2020
	Shire Road Reserve, along Styles Rd. Ca 1.5-2.0km S from Norwood Rd and Styles Rd intersection. On both sides of road reserve		14/10/2020
9365362	Parmango Road SLK 21.89 - 22.7	100+	18/01/2022
9475850	Swan Lagoon Road at SLK 20.93, E of Scaddan	24+	5/02/2022
9475893	Dalyup Road SLK 14.43, E of Gibson	300+ plants	16/02/2022
9475885	Norwood Road SLK 1.49, E of Scaddan	100+	27/02/2022



**Figure 11.** Location of Priority 3 species *Goodenia laevis* ssp. *laevis* within the 'Site C – Rollond Road, SLK 0-15.9' project.



**Figure 12.** Known records of Priority 3 species *Goodenia laevis* ssp. *laevis* across an 157km north to south and 188km west to east geographic range (DBCA 2022) including some recently discovered populations by the Shire of Esperance.

#### 5.2.7 *Pityrodia chrysocalyx*, Priority 3

Specimens of *Pityrodia chrysocalyx* was sent to the WA Herbarium for identification confirmation, a specimen was collected for both of the new populations.

- Eastern population (SLK 6.36-6.37) (KSW20822; Accession #9874 with specimen retained). It was confirmed as *Pityrodia chrysocalyx* by Michael Hislop on 23/1/2023.
- Western population (SLK 7.26-7.42) (KSW10722; Accession #9770 with specimen not retained). It was confirmed as *Pityrodia chrysocalyx* by Michael Hislop on 27/10/22.

A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.13, 2.14). If proposed works occur, two plants will be impacted upon, from a population total of 424. Due to only two plants being taken there is unlikely to be any significant impact on this population.

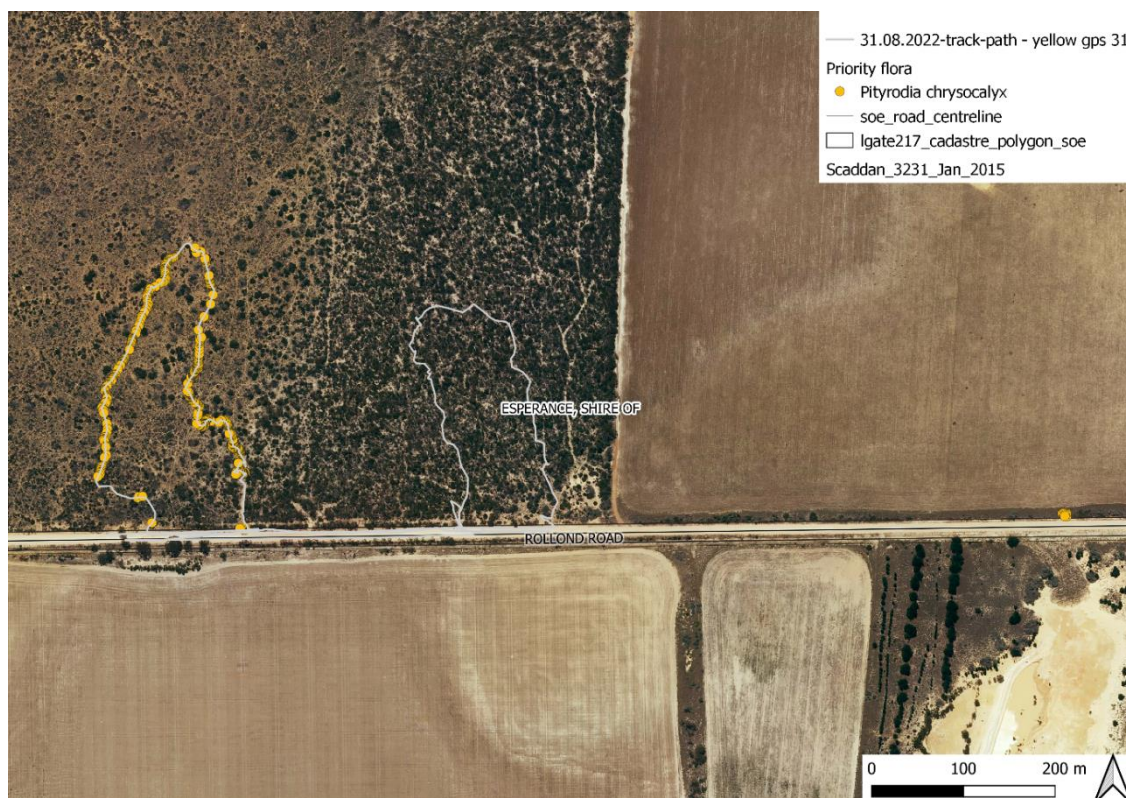
A 30 minute survey occurred within Lot 1515 on Plan 152238 after obtaining permission from the landholders (Figure 13.). 399 plants were found during the brief survey bringing the total number of plants found to 424. The total population within Lot 1515 on Plan 152238 was significantly larger than those counted throughout the 30 minute traverse, with the population appearing to be within the entire sand heath area of the lot. A second traverse occurred in the eastern corner of the bush block within Lot 1515, where no additional plants were found, this area was a different vegetation type explaining



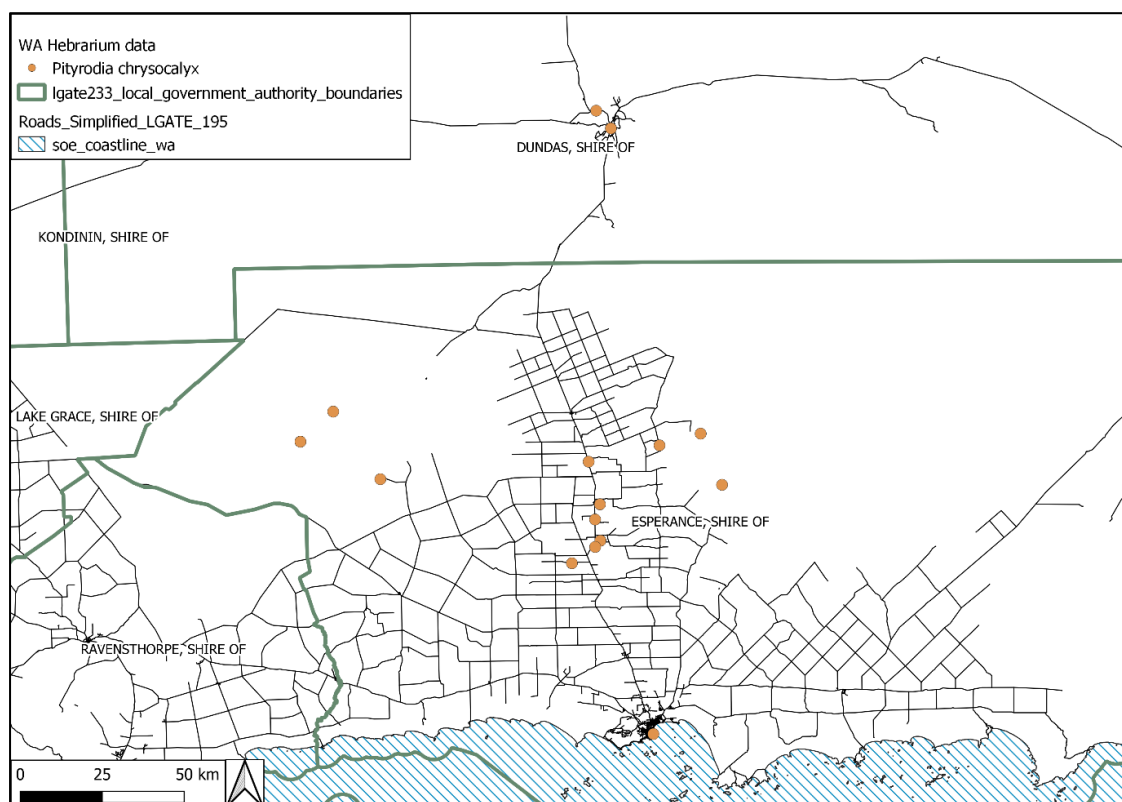
the absence of the species. Given the very large population size it is unlikely that the clearing of two plants will have any impact on this species.

Analysing the WA Herbarium database there was a total of 20 records. There was no TPFL records for this species. The species has a wide geographic range spanning 136km north to south and 130km west to east. Of the confirmed herbarium records, 7 were within UCL, and 4 or 5 were within road and rail reserves, none of the records were within conservation estate.

Additionally, 11 populations of this species totalling 5000 plants were reported by Ecoscape during the State Barrier Fence Biological surveys (Ecoscape, 2015), only two of these populations totalling 150+ plants were located on DBCA databases.



**Figure 13.** Location of Priority 3 species *Pityrodia chrysocalyx* within the 'Site C – Rollond Road, SLK 0-15.9' project.



**Figure 14.** Known records of Priority 3 species *Ptyrodia chrysocalyx* across an 136km north to south and 130km west to east geographic range (DBCA 2023).

**Table 12.** Known Herbarium records of priority 3 species *Ptyrodia chrysocalyx*, detailing location details, frequency, tenure and collection date.

Sheet number/ TPFL population	Location	Frequency	Tenure	Record date
1066005	Esperance area?		Uncertain	1972
1065521	Grass Patch septentrionalem versus (North of Grass Patch)		Uncertain	5/09/1962
1065971	Prope Grass Patch, septentrionalem versus (Near Grass Patch towards N)		Uncertain	5/09/1962
1065947	Near Norseman.		Uncertain	14/10/1967
1065963	Near Norseman.		Uncertain	14/10/1967
1065505	13 km N of Scaddan.		Uncertain	13/11/1976
1065513	13 km N of Scaddan.		Uncertain	13/11/1976
1065939	42 km S of Salmon Gums (13 km N of Scaddan)		Uncertain	13/11/1976
1065998	72 km W of Salmon Gums		UCL	11/11/1979
1065955	About 5 km S of Grass Patch along Coolgardie-Esperance Highway, about 60 km N of Esperance		Road Reserve	2/10/1981
1985353	11 km N of Mount Ridley		UCL	13/10/1990

5328888	ca 5.2 km W along Thomas Road from Coolgardie - Esperance Highway,		Road reserve or Tijuk Foundation Reserve	23/09/1998
5332710	N of Grass Patch on Coolgardie - Esperance highway, opposite WAWA Reserve,	several plants.	Road Reserve	4/11/1998
7400578	Kambalda to Esperance Pipeline Survey ca 125 km S of Kambalda.		Rail Reserve	5/11/2002
8090688	Pyramid Lake Road, where road turns into sand track	21-50 plants.	UCL	24/08/2009
8160899	Lake Tay mine, ca 1 km S of mine area on edge of salt lake	2-5 plants.	UCL	22/09/2009
8667063	On the Cascade to Lake Tay Road. Approximately 2 km SE of the southern shore of Lake Tay	10-20 plants.	UCL	5/09/2012
9061835	1.5 km along Davies Road from Carranya Road intersection, c. 28 km ESE of Salmon Gums	100+ plants.	UCL	5/11/2013
9061827	C. 40 km E of Salmon Gums on agricultural boundary firebreak	50+ plants.	UCL	5/11/2013
9449973	Ca. 55 km N of Esperance townsite and ca. 9.5 km N of Scaddan townsite. On western railway corridor, with two populations at 1 km S and 1.5 km S of the Truslove Road railway crossing	71 plants.	Rail Reserve	12/10/2021



**Figure 15.** Photograph of Priority 3 *Pityrodia chrysocalyx* within the 'Site C – Rollond Road, SLK 0-15.9' project. Photo taken by Katherine Walkerden on 02.09.2022.



#### 5.2.8 *Eucalyptus dolichorhyncha*, Priority 4

Specimens of *Eucalyptus dolichorhyncha* were sent to the WA Herbarium for identification confirmation, a specimen was collected for each of the populations.

- Eastern population (SLK 5.1-5.96) (KSW12222; Accession #9770 with specimen not retained. It was confirmed as *Eucalyptus dolichorhyncha* by Michael Hislop on 31.8.2023.
- Central population (SLK 8.73-10.66) (KSW8822; Accession #9693; PERTH 09516441). It was confirmed as by Michael Hislop on 23.8.22.

A Threatened and Priority Reporting Form (TPRF) was completed and sent to Department of Biodiversity, Conservation and Attractions (DBCA) District Flora Conservation Officer and Species and Communities Branch on 30/01/2023 (Appendix 2.15, 2.16). If proposed works occur, 49 plants will be impacted upon, from a population total of 142.

There was a total of 48 herbarium specimens, two TPFL records and an additional specimen confirmed by Rob Davis which has not yet been added to either DBCA database.

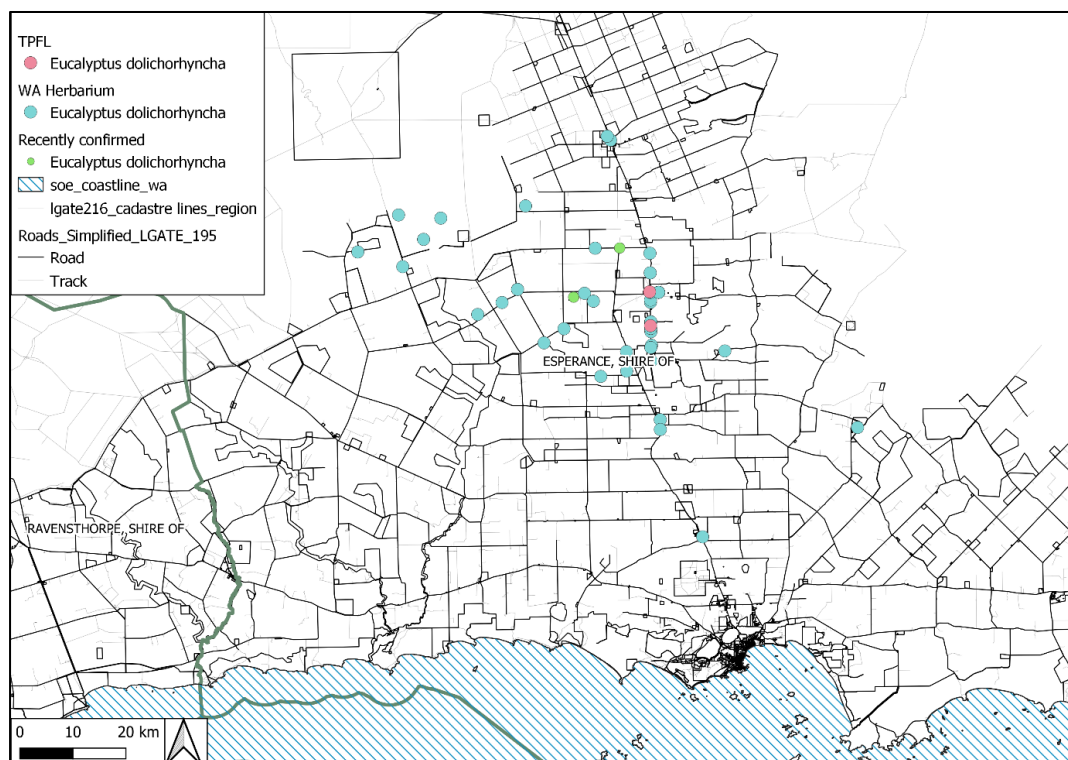
Additionally, 10 populations of this species totaling 435 plants were reported by Ecoscape during the State Barrier Fence Biological surveys (Ecoscape, 2015), no records of these populations are present on DBCA databases.

The species was restricted to the Shire of Esperance between Salmon Gums and Scaddan with a total range of 97km east to west and 55km north to south. Most of the records of this species predate GPS devices becoming widespread and many of the records have non-specific location descriptions, however of the records with specific location details a majority (18) were located within road reserves. Three were located within UCL, one specimen was located within Truslove nature reserve and one specimen was located within rail reserve, one TPFL record was within a Shire water supply reserve. Two specimens were located within farmland that appear to have been cleared since collection.

The species is locally common between Salmon Gums and Grass Patch, though this area has seen widespread clearing for farmland with road reserves being the main refugia for the species, there is significant areas of minimally surveyed UCL to the south-west of Salmon Gums with suitable habitat for the species.



**Figure 16.** Location of Priority 4 species *Eucalyptus dolichorhyncha* within the 'Site C – Rollond Road, SLK 0-15.9' project.



**Figure 17.** Known records of Priority 4 species *Eucalyptus dolichorhyncha* across a 97km east to west km geographic range and a 55km north to south geographic range (DBCA 2023) including recently discovered populations by the Shire of Esperance.

**Table 13.** Known Herbarium records of priority 4 species *Eucalyptus dolichorhyncha*, detailing location details, frequency, tenure and collection date. (DBCA, 2023a)

Sheet number/ TPFL population	Location	Frequency	Tenure	Record date
1162349	Grass Patch, prope Esperance [near Esperance]		Unclear	22/05/1924
1161822	Grass Patch		Unclear	22/05/1924
1161830	Grass Patch		Unclear	22/05/1924
1161849	Grass Patch		Unclear	22/05/1924
1162438	Salmon Gums		Unclear	17/07/1924
1162373	Salmon Gums		Unclear	17/07/1924
1162357	Grass Patch, between Salmon Gums and Esperance		Unclear	10/10/1931
1161377	Near Grass Patch		Unclear	31/01/1935
1161865	Near Grass Patch		Unclear	31/01/1935
1162381	Near Grass Patch		Unclear	31/01/1935
1364189	Scaddan		Unclear	1/12/1938
1161784	2 miles S of Red Lake		Unclear	18/04/1953
1364197	Grass Patch - near hotel		Unclear	16/03/1957
1166166	Grass Patch townsite,		Unclear	16/03/1957
1162403	Grass Patch		Unclear	6/08/1959
1161334	545-mile peg, ca 35 miles S of Salmon Gums		Road reserve.	5/11/1962
1161806	Prope Grass Patch (meridionalem versus) [S of Grass Patch]		Unclear	10/02/1966
1161873	18.7 miles S of Salmon Gums	infrequent.	Unclear	13/03/1967
5253624	Esperance to Ravensthorpe		Unclear	1/04/1968
1162330	532-mile peg on Norseman - Esperance road. [34 km S of Salmon Gums on the Coolgardie - Esperance Highway]		Road reserve.	1/04/1968
1161792	Gibson North, N of Esperance		Unclear	11/06/1969
1162314/ 1162411	13.7 miles S of Salmon Gums		Unclear	15/02/1970
1161342	Esperance - Kalgoorlie 538-mile peg. [44 km S of Salmon Gums on the Coolgardie Esperance Highway.]		Road Reserve	13/01/1972
4340280	Wittenoom Hills, 35 miles N of Esperance,		Unclear	1/08/1975
1364685	Main road S of Salmon Gums		Road reserve.	18/09/1976
1161881	15.2 km S of Grass Patch		Unclear	30/12/1979
1161814	18 km W of Roberts Swamp, ca 50 km W of Grass Patch		Unclear	14/11/1980
1162365	Thomas Road, 7 km S of Truslove Reserve		Road Reserve	21/01/1981

1162322	18 km W on Ravenswood Road, which is 14 km S of Salmon Gums on Highway		Road Reserve	22/01/1981
1162446	Williams Road, NE corner of Block No. 1837 on litho 402/80		Land Act (Type 2) (cleared since collection)	22/01/1981
1161857	4.8 km N of Truslove Reserve on Esperance Highway. litho 402/80		Road Reserve	22/01/1981
1161350	10 km SSW of Roberts Swamp, on Grass Patch Road		Road Reserve	1/03/1983
1161903	11 km W of Grass Patch		Unclear	10/09/1983
1161369	6.7 km W along Hawkey Road from highway		Unclear	14/11/1987
4393600	9 km N/NE of Scaddan		Land Act (Type 2) (cleared since collection)	29/08/1995
5590302	On grid line 1.9 km E from Fields Road, 14.7 km N of Rollands Road	frequent.	UCL	11/11/1999
5762243	On edge of Lort River, ca 11.5 km N of Rolland Road	occasional.	UCL	11/11/1999
5762170	On N-S track, 7.5 km N of Rollands Road, 5 km E of Fields Road,	occasional.	UCL	15/11/1999
5937892	W side of Esperance - Coolgardie Highway, 7.3 km S of Grass Patch, 1.3 km S of Sime Road, Roe District,		Road Reserve	17/04/2000
5766214	10.8-11 km W of Grass Patch West Road on N and S road verges, almost pure stands extend for several kms	100's of plants.	Road reserve	2/03/2001
6975348	Long term monitoring plot 02VA, 1.1 km S from NW corner of Bishops Nature Reserve (Gazetted Reserve 29012) along Bishops Road, 200 m E from road edge		Conservation reserve	4/09/2001
9141073	50 to 100 m E of Coolgardie Esperance Highway between railway line and cleared farmland, 3.9 km N of Red Lake, 13.5 km S of Salmon Gums	c. 5 plants adjacent to 20 m of track.	Rail reserve	30/06/2003
7020570	5 km N of Truslove Road on road to Norseman		Road Reserve	18/12/2004
7905637	Grass Patch Road, between Williams and Belgian, W of Grass Patch		Road Reserve	7/12/2007
7934254	14.5 km NE of Scaddan		Road Reserve	14/08/2008

9448853	Rollond Road, 8.5 km W of Coolgardie - Esperance Highway	dominant.	Road Reserve	7/10/2010
Population #2	Esperance-Coolgardie Highway. 5.0km - 7.0km north of Truslove Rd (7.0km south of Grass Patch).	30	Road Reserve	18/02/2020
Population #1	Crown Reserve #19624, Lot 501. Ca 1.1km WNW of Grass Patch Rd and Coolgardie-Esperance Hwy intersection.	1	Shire Reserve vested for: Water supply, Recreation, Racecourse	25/09/2020
9516441	Rollond Road SLK 9.7, Grass Patch	locally common.	Road Reserve	13/07/2022
9515682/ 9515720	Williams Road SLK 7.07, Lort River	scattered throughout road reserve.	Road Reserve	24/07/2022

#### 5.2.9 *Acacia aff. merrallii*, not threatened

Specimens *Acacia aff. merrallii* was sent to the WA Herbarium for identification confirmation.

- KSW11722; Accession #9770 with specimen retained. It was identified as *Acacia aff. merrallii* by Michael Hislop on 31/10/2023.
- KSW19122; Accession #9857 with specimen retained. It was identified as *Acacia aff. merrallii* by Michael Hislop on 10/01/2023.
- KSW20922; Accession #9874 with specimen retained. It was identified as *Acacia aff. merrallii* by Michael Hislop on 23/01/2023.

An initial specimen of an unidentified *Acacia* (KSW11722; Accession 9770) was sent to the WA Herbarium for identification, the specimen was described as an anomalous entity: "not fitting well within the described taxa, it is clearly close to *Acacia glaucissima* and its close relative *Acacia merrallii* having the stipules of the former combined with the presence of branchlet hairs (although atypically patchy and sparse) associated with the latter." Michael Hislop speculated that the *Acacia* may be a hybrid of *Acacia glaucissima* (P3) and *Acacia merrallii* (NT).

This *Acacia* was prolific throughout the central area of the site, with hundreds of plants seen throughout the survey. An additional flowering specimen was accessioned (KSW19122; Accession #9857) and a fruiting specimen was collected and accessioned in December (KSW20922; Accession #9874). These additional submissions were accessioned in the hopes of providing further understanding of the anomalous population.

No population count of this plant was conducted, however the population was present in high numbers within remnant vegetation within Lot 1515 on Plan 152238 and the 200 metre wide section of the Rollond Road reserve. The population is unlikely to be threatened by the proposed project.





**Figure 18.** Scan of *Acacia* aff. *merrallii*, KSW11722 Accession #9770

### 5.3 Weeds

Agricultural weeds were the most significant issue within 'Site C – Rollond Road, SLK 0-15.9' area. Overall, 29 invasive species were identified within the project area (Appendix 8.1). Of these, the most extensive and of serious concern were invasive grasses such as *Avena barbata*, *Hordeum leporinum*, *Lolium* sp. There were areas within the project which had been historically cleared and had been completely invaded by agricultural weeds.

Weed management strategies are currently being discussed operationally, such as spraying material stockpiles in agricultural private property prior to use and periodic spraying of road verges for a 12 month period after road construction.

### 5.4 Dieback

No signs of dieback were present within the reserve. Vegetation type 'C' had a moderate number of proteaceous species present, and could be susceptible to dieback. Proposed works will be conducted using appropriate hygiene measures to limit spreading of the disease, including clearing in dry conditions and clean down of vehicles and machinery before entering the site.

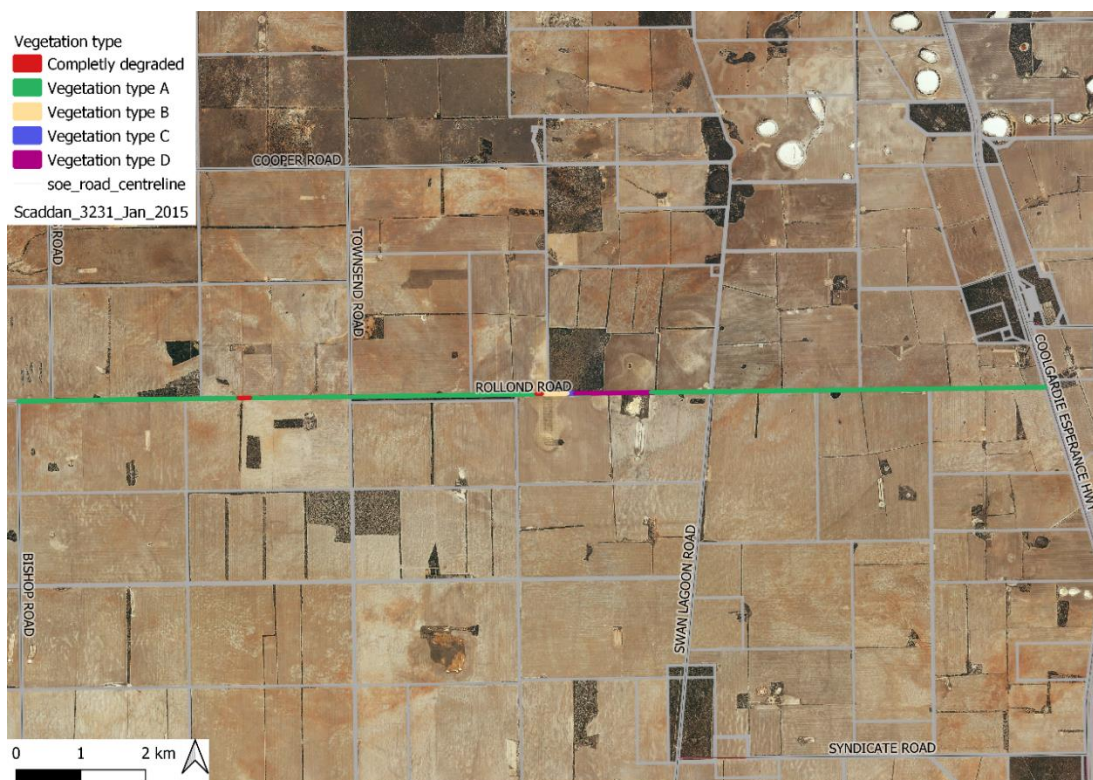
### 5.5 Vegetation Communities

Four vegetation communities were identified within the 'Site C – Rollond Road, SLK 0-15.9', as defined by structure and composition (Table 14). It is believed that the Beard (1973) vegetation associations identified in Section 4.4 are an appropriate match for two of the vegetation types observed. Vegetation type B and C did not match the Beard vegetation types for the area, these were both small microhabitats resulting from variations

of soil and topography, these vegetation types are unlikely to match the broad Beard vegetation mapping.

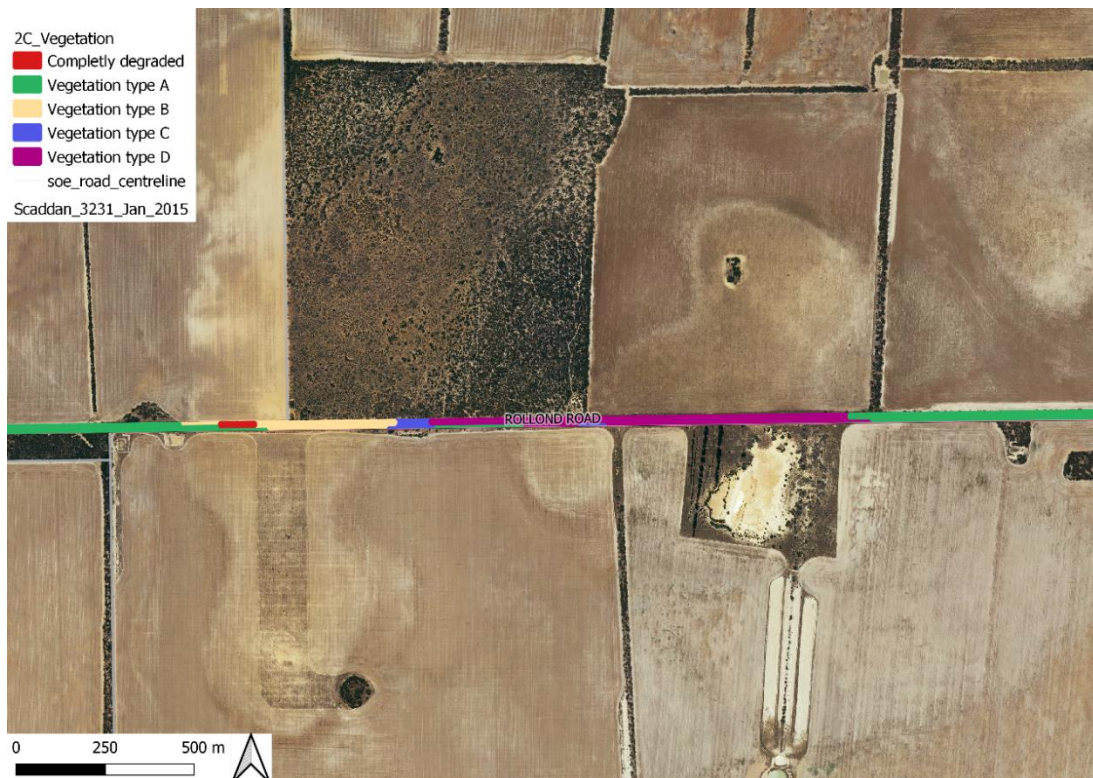
**Table 14.** Vegetation communities identified within proposed 'Site C – Rollond Road, SLK 0-15.9' project area.

Type	Description	Figure	Closest Matching Beard Vegetation Association	Area to be cleared(ha)	Diversity (native species)
A	Eucalyptus over Acacia and mixed Melaleuca shrubland		SALMON GUMS_486	7.500	147
B	<i>Calothamnus quadrifidus</i> and <i>Eucalyptus pleurocarpa</i> dominated mixed sand heath		Did not match listed vegetation associations	0.051	62
C	<i>Eucalyptus occidentalis</i> dominated valley floor		Did not match listed vegetation associations	0.047	21
D	<i>Eucalyptus pleurocarpa</i> and <i>Banksia media</i> low woodland		RIDLEY_519	0.301	49

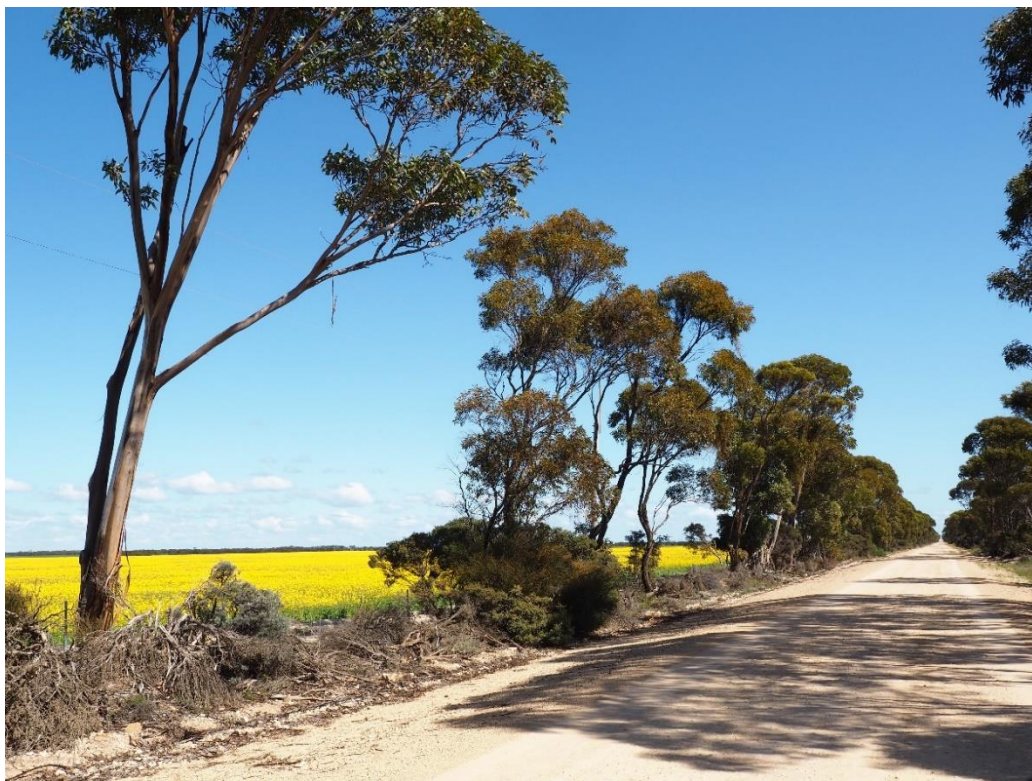


**Figure 19.** Vegetation types within the 'Site C – Rollond Road, SLK 0-15.9' area.





**Figure 20.** Close up of vegetation types within SLK 5.33 and 8.41 section of the 'Site C – Rollond Road, SLK 0-15.9' project area.



**Figure 21.** Vegetation type A identified in 'Site C – Rollond Road, SLK 0-15.9' project, described as Eucalyptus over Acacia and mixed Melaleuca shrubland.





**Figure 22.** Vegetation type B identified in 'Site C – Rollond Road, SLK 0-15.9' project, described as *Calothamnus quadrifidus* and *Eucalyptus pleurocarpa* dominated mixed sand heath.



**Figure 23.** Vegetation type C identified in 'Site C – Rollond Road, SLK 0-15.9' project, described as *Eucalyptus occidentalis* dominated valley floor.





**Figure 24.** Vegetation type D identified in 'Site C – Rollond Road, SLK 0-15.9' project, described as *Eucalyptus pleurocarpa* and *Banksia media* low woodland.

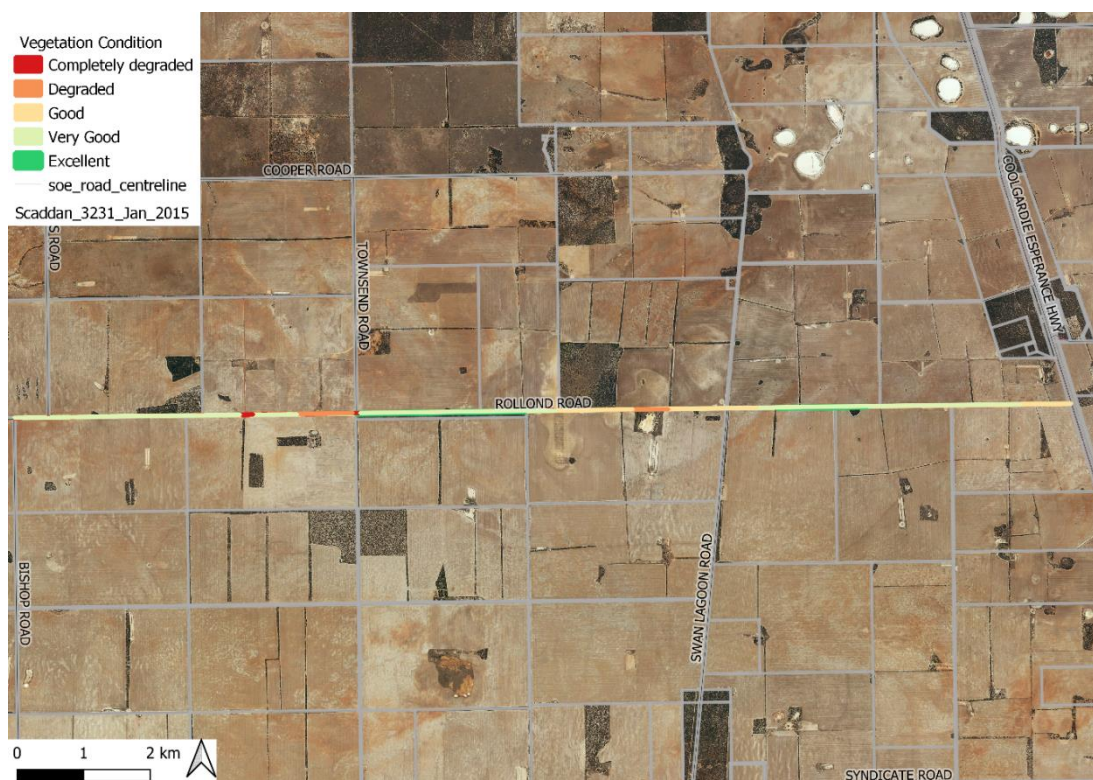
## 5.6 Vegetation Condition

Vegetation condition varies dramatically (table 15). With excellent condition vegetation being present within the 100-metre section of road reserve (SLK 8.2-10.76). The rest of the road reserve was 20 metres wide and was in a generally poorer condition. The site had seen historical fence line clearing, crossover clearing, weed introductions and disturbance from road maintenance activities. A majority of the vegetation was considered to be in a very good condition (Table 15.)

**Table 15.** Quantifying vegetation to be cleared by vegetation type and condition.

Vegetation Type	Excellent	Very Good	Good	Degraded	Completely Degraded	Total
A	1.091	4.733	1.423	0.240	0.012	<b>7.500</b>
B	-	<0.001	0.031	0.020	<0.01	<b>0.051</b>
C	-	-	0.030	0.017	-	<b>0.047</b>
D	-	-	0.145	0.156	-	<b>0.301</b>
-	-	-	-	-	0.04	<b>0.044</b>
<b>Total</b>	<b>1.09</b>	<b>4.74</b>	<b>1.63</b>	<b>0.43</b>	<b>0.06</b>	<b>7.945</b>





**Figure 25.** Vegetation condition across 'Site C - Rollond Road, SLK 0-15.9' project, ranging from an excellent to completely degraded condition.

## 5.7 Threatened Ecological Communities

None of the vegetation communities met criteria to be considered as Kwongkan TEC. There was a low level of proteaceous species, with none of the vegetation types mapped meeting the 30% threshold of proteaceous plant cover at any layer.

Within the 'Site C - Rollond Road, SLK 0-15.9' project area, Vegetation type C was described as *Eucalyptus occidentalis*, this vegetation type was compared to 'Swamp Yate, *Eucalyptus occidentalis*, woodlands in seasonally inundated clay basins in the South Coast of Western Australia' PEC (Table 16). The vegetation lacked any understorey species, was not seasonally inundated and could not be considered to be the Swamp Yate PEC.

**Table 16.** Comparison between potential occurrence of the Swamp Yate PEC and listing documentation criteria "Swamp Yate, *Eucalyptus occidentalis*, woodlands in seasonally inundated clay basins in the South Coast of Western Australia" (Appendix 14) within vegetation types B and D 'Site F – Ridgeland Road, SLK 0 - 5.69'

Swamp Yate ( <i>Eucalyptus occidentalis</i> ) woodlands in seasonally inundated clay basins with intact	Criterion 1: Abiotic Factors i) Occurs on valley floor; ii) Basin is more or	Criterion 2: Centre of basin inhabited by <i>Eucalyptus occidentalis</i> low woodland	Criterion 4: Fringing the wetland is <i>dense rushes and sedges</i> .	Criterion 3: Peripheral to the central basin is a waterlogged zone of <i>E. occidentalis</i> associated	Swamp Yate PEC (Yes / No)  Area (ha) within Site
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<b>understorey and fringing vegetation</b>	less circular; iii) Seasonally inundated.	(often with an understory of <i>Melaleuca cuticularis</i> ).		with heath to open scrub and/or small trees. <i>Melaleuca calycina</i> , <i>M. glaberrima</i> , <i>M. incana</i> , <i>M. pulchella</i> , <i>Taxandria callistachys</i> ;	
Vegetation type C	i) Vegetation type occurred on floor of a shallow valley ii) Basin was not circular iii) Vegetation type was not seasonally inundated	Vegetation type was dominated by <i>Eucalyptus occidentalis</i>	There were no Rushes or sedges within the vegetation type	There was no understorey species present within this vegetation type. Sandplain species were present on the edge of this species.	No

## 5.8 Fauna

Of the species identified within the desktop survey, only *Calyptorhynchus latirostris*, *Dasyurus geoffroii*, *Falco hypoleucos*, *Leipoa ocellata*, *Platycercus icterotis xanthogenys* could have suitable habitat within the proposed clearing permit area.

During the field survey, both foxes and rabbits were both observed within the area. A Dugite (Figure 26) and various bird calls were observed during the flora survey.



**Figure 26.** Dugite photographed on the 24/08/2022 by Katherine Walkerden.

### 5.8.1 Carnaby's Black Cockatoo, *Calyptorhynchus latirostris*, EN

The closest known record for this species was 8.1km from the project area.

The Shire of Esperance Black Cockatoo assessment was conducted in accordance with the EPBC Act referral guidelines for three threatened black cockatoo species (Department of Agriculture, Water and the Environment, 2022). Vegetation types B and D both contained Banksias and Hakeas that provided suitable foraging for the species and had nearby pine trees on private land providing potential roosting habitat. As Vegetation type B and D only contained a combined 0.32 ha of vegetation to be cleared the foraging quality scoring tool (Appendix 13) was not undertaken due to only being applicable to habitat over 1 ha of size.

No evidence of Carnaby's Cockatoos was observed during the survey. While completing the survey the owners of Lot 1515 on Plan 152238 had informed Shire of Esperance staff that they had never seen Carnaby's Cockatoos along Rollond Road despite decades living on the property.



Given that the site did not;

- contain any nesting sites or large trees with hollows;
- contain night roosting areas;
- the amount of high-quality foraging habitat was less than 1 ha;

a referral for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is unlikely to be required.

#### 5.8.2 Chuditch, *Dasyurus geoffroii*, VU

The closest known record for this species was 5.7km from the project area. The Chuditch has been historically inhabited a wide range of habitats, but today it survives mostly in Jarrah Eucalyptus marginata forests and woodlands, mallee shrublands and heathlands. The vegetation within this site likely provides important habitat connectivity for this species, the 200-metre section of road reserve and road reserve bordered by intact vegetation has the potential to provide suitable foraging habitat for this species, this includes a total of 1.67ha of vegetation.

#### 5.8.3 Malleefowl, *Leipoa ocellata*, VU

The closest known record for this species was 3.1km from the project area. Malleefowl are predominantly found within shrublands and low woodlands dominated by Mallees and are associated with Broombush (*Melaleuca uncinata*). Vegetation type A is somewhat suitable for this species, though most of the site is lacking the dense leaf litter that's the species uses for its nest construction. Foxes had been directly overserved at this site and are a contributing factor to the declining population of this species. Malleefowl are unlikely to utilise the narrow sections of road reserve where predation by foxes is most likely. The 200 m wide section of road reserve is likely the only section of the site that provides abundant leaf litter and suitable cover from predators for this species, the clearing in this area is a total of 0.94 ha. No Malleefowl or evidence of Malleefowl activity was encountered during the flora survey or fieldwork.

#### 5.8.4 Grey Falcon, *Falco hypoleucos*, VU

The closest known record for this species was 10.88km from the project area. The distribution of this species is restricted largely to areas of the highest annual average temperatures where there is an average annual rainfall of less than 500 mm. It favours lightly timbered and untimbered lowland plains that are crossed by tree-lined watercourses. It uses the abandoned nests of other bird species, particularly corvids. All of the vegetation within the site provided potentially suitable hunting grounds for this species, vegetation types A & C provided potentially suitable nesting habitat for this species, this includes a total of 7.58 ha of vegetation to be cleared by the project.

#### 5.8.5 Western Rosella, *Platycercus icterotis xanthogenys*, P4

The closest known record for this species was 1.1km from the project area at the Red Lake Townsite Nature Reserve. The species is found in open eucalypt forest and timbered areas.

The Mallee woodland within Red Lake Nature Reserve is a closed woodland, not matching the habitat description for the Western Rosella. Vegetation type A was consistent with the within the Red Lake Townsite Nature reserve in which this species has been previously recorded, Vegetation type A has a total of 7.5ha of vegetation to be cleared.

No Western Rosellas were observed during the flora survey.

## 6 REVIEW OF 10 CLEARING PRINCIPLES FOR NATIVE VEGETATION

The 'Site C – Rollond Road, SLK 0-15.9' project may be at variance to some of the clearing principles that the Department of Water and Environmental Regulations (DWER) assess applications, as listed under Schedule 5 of the Environmental Protection Act 1986 (DWER 2019).

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

Biodiversity at this site is high with 222 native species recorded over four vegetation communities.

### 6.2 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.

Vegetation type B & D contained suitable foraging habitat for Carnaby's Black Cockatoo, there was a combined total of 0.32ha of Carnaby's habitat within 'Site C – Rollond Road, SLK 0-15.9'. Due to the low amount of clearing a referral for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is unlikely to be required.

The vegetation being cleared is also potentially provides suitable habitat for the Chuditch, Grey Falcon, Malleefowl and Western Rosella.

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

Eight priority flora species were observed in the area:

*Conostephium uncinatum* (P2) and *Conostephium marchantiorum* (P3) will not impacted by the project as all specimens were outside the project area.

*Halganina* sp. Peak Eleanora (P2) has 3 populations within 'Site C – Rollond Road, SLK 0-15.9'. The two small populations will each only have single plant remaining after works occur. The central population was within the 100m wide road reserve and likely has a total population much greater than that counted



during the survey, this central population is unlikely to be significantly impacted by the clearing. In total, 84 plants from a total of 298 plants will be cleared.

*Acacia bartlei* (P3) has only a single isolated plant within the project area. The entire population will be taken.

*Acacia glaucissima* (P3) is a relatively common species within the Eastern Mallee IBRA subregion, the species has been under reported, with Julie Waters and Katherine Walkerden having accessioned 8 additional populations over 2022. 14 of the total population of 20 plants within 'Site C – Rollond Road, SLK 0-15.9' will be taken.

*Goodenia laevis ssp. laevis* (P3) is a common species which benefits from routine disturbance, the species has been nominated for delisting by the Esperance DBCA.

Only two *Pityrodia chrysocalyx* (P3) plants from a total counted population of 424 plants will be cleared. The total population at this location is likely to be significantly higher and extends well outside the clearing footprint. It is highly unlikely that there will be any significant impacts to this population.

*Eucalyptus dolichorhyncha* (P4) is a relatively common species between Scaddan and Salmon Gums which is dependent on road reserves for habitat, 49 plants from a total count of 142 will be taken.

#### **6.4 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.**

None of the vegetation associations were relevant to the 'Proteaceae Dominated Kwongkan Shrublands of the southeast coastal floristic province of Western Australia' TEC.

Vegetation type C was potentially relevant to the 'Swamp Yate, *Eucalyptus occidentalis*, woodlands in seasonally inundated clay basins in the South Coast of Western Australia' PEC, however due to the vague description of this PEC it is unclear whether this vegetation type qualifies. There was 0.03ha of good condition vegetation and 0.02 ha of degraded condition vegetation in this vegetation type.

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

The immediate surroundings of the site were highly cleared agricultural land, with the intact vegetation within the site likely playing contributing to ecological linkages in the area. The 20m wide sections of narrow road reserve do not represent significant remnants of native vegetation, the 100m section of road reserve would constitute a significant remnant of vegetation, but only a small area of this is being cleared (0.94 ha).

#### **6.6 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 only section of vegetation that could be potentially be considered a wetland was Vegetation type 'C' the *Eucalyptus occidentalis* woodland, though it was not evident that there was any water pooling at the vegetation type during winter.

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

Vegetation within this area will be providing limited function as windbreaks and erosion control for the agricultural areas surrounding it. Given the narrowness of the road reserve and extent of clearing wind erosion will be significantly worsened for neighbouring agricultural properties, many of which lack windbreaks.

**6.8 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 project is located 680m from the Red Lake Townsite Nature Reserve, the vegetation along Rollond road likely provides important ecological linkages to this Reserve and clearing for this project is likely to have a negative impact on the ecological connectivity of the Red Lake Townsite Nature Reserve.

**6.9 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.**

Clearing of this size is unlikely to have any significant impacts of surface or groundwater quality.

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

Clearing of this size in a low rainfall area of Grass Patch is unlikely to have any impact on flood risk.

## **7 RECOMMENDATIONS**

As Shire Environmental Coordinator signs off on project work packs the following recommendation will be included within the internal SOE approval process for the road project

- Minimise clearing to minimum amount required
- Avoid larger habitat trees wherever possible;
- Maintain existing drainage systems, spoon drains and ensuring tracks and other infrastructure areas do not disrupt or divert historic water flow patterns;
- Remove and stockpile topsoil, log debris and leaf litter where possible for use in future rehabilitation programs. If possible, stockpiled topsoil should be directly replaced on disturbed areas;
- Minimise soil disturbance during clearing and practice standard vehicle hygiene to ensure introduced (exotic) species do not become established within the 'Rollond Road, SLK 0-15.9' survey area;
- Minimize all threatening processes to native vegetation.

## 8 LIST OF PERSONNEL

The following Shire of Esperance Staff were involved in this project.

<b>Name</b>	Julie Waters
<b>Position</b>	Environmental Coordinator
<b>Project Involvement</b>	Desktop and Field Survey, Specimen Identification, GIS Mapping Data Interpretation and Report writing
<b>Qualifications</b>	BEnvSc (Hons)
<b>Experience</b>	20 years working in environmental field including Flora Conservation Officer for previous DBCA, and 15 years' experience as a botanist in the region
<b>Scientific Licence</b>	FT61000787

<b>Name</b>	Katherine Walkerden
<b>Position</b>	Environmental Officer
<b>Project Involvement</b>	Desktop and Field Survey, Specimen Identification, GIS Mapping, Data Interpretation and Report writing
<b>Qualifications</b>	BSc, MEnvSc
<b>Experience</b>	Two years' experience as a Botanist in the region (as of April 2023)
<b>Scientific Licence</b>	FT61000788

<b>Name</b>	Rosamund Mary Hoggart
<b>Position</b>	Environmental Assistant
<b>Project Involvement</b>	Specimen Identification
<b>Qualifications and Experience</b>	BSc (Hons)Ag 15 years' experience as a botanist in the region and is highly regarded by Esperance Wildflower Society and her peers in Esperance as one of the best botanists in Esperance.
<b>Scientific Licence</b>	N/A

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## 10 APPENDICES

### Appendix 1: Incidental species list

Family	Genus	Species	Weed	WA Conservation Status	Herbarium Reference
Aizoaceae	<i>Carpobrotus</i>	<i>modesta</i>			
Aizoaceae	<i>Mesembryanthemum</i>	<i>crystallinum</i>	X		
Aizoaceae	<i>Mesembryanthemum</i>	<i>nodiflorum</i>	X		
Amaranthaceae	<i>Ptilotus</i>	<i>holosericeus</i>			
Anarthriaceae	<i>Lyginia</i>	<i>imberbis</i>			
Apiaceae	<i>Platysace</i>	<i>effusa</i>			
Apocynaceae	<i>Alyxia</i>	<i>buxifolia</i>			
Asparagaceae	<i>Lomandra</i>	<i>effusa</i>			
Asparagaceae	<i>Lomandra</i>	<i>mucronata</i>			
Asparagaceae	<i>Thysanotus</i>	<i>patersonii</i>			
Asphodelaceae	<i>Asphodelus</i>	<i>fistulosus</i>	X		
Asteraceae	<i>Arctotheca</i>	<i>calendula</i>	X		
Asteraceae	<i>Asteridea</i>	<i>athrixoides</i>			
Asteraceae	<i>Brachyscome</i>	<i>ciliaris</i>			
Asteraceae	<i>Cirsium</i>	<i>vulgare</i>	X		
Asteraceae	<i>Erigeron</i>	<i>bonariensis</i>	X		
Asteraceae	<i>Hyalosperma</i>	<i>demissum</i>			
Asteraceae	<i>Monoculus</i>	<i>monstrosus</i>	X		
Asteraceae	<i>Olearia</i>	<i>muelleri</i>			
Asteraceae	<i>Olearia</i>	sp. Eremicola			
Asteraceae	<i>Onopordum</i>	<i>acaulon</i>	X		
Asteraceae	<i>Podolepis</i>	<i>rugata</i>			
Asteraceae	<i>Pogonolepis</i>	<i>muelleriana</i>			
Asteraceae	<i>Pseudognaphalium</i>	<i>luteoalbum</i>	X		
Asteraceae	<i>Siemssenia</i>	<i>capillaris</i>			
Asteraceae	<i>Sonchus</i>	<i>oleraceus</i>	X		
Asteraceae	<i>Vittadinia</i>	<i>gracilis</i>			
Asteraceae	<i>Waitzia</i>	<i>suaveolens</i> var. <i>flava</i>			
Boraginaceae	<i>Halgania</i>	<i>andromedifolia</i>			
Boraginaceae	<i>Halgania</i>	sp. Peak Eleanora		P2	KSW8922 ACC9693, KSW11922 ACC9770, KSW21022 &

					KSW21122 ACC9874
Brassicaceae	<i>Brassica</i>	<i>napus</i>	X		
Brassicaceae	<i>Brassica</i>	<i>tournefortii</i>	X		
Brassicaceae	<i>Carrichtera</i>	<i>annua</i>	X		
Brassicaceae	<i>Lepidium</i>	<i>africanum</i>	X		
Brassicaceae	<i>Rapistrum</i>	<i>rugosum</i>	X		
Caryophyllaceae	<i>Silene</i>	<i>nocturna</i>	X		
Casuarinaceae	<i>Allocasuarina</i>	<i>huegelii</i>			
Casuarinaceae	<i>Allocasuarina</i>	<i>lehmanniana</i> ssp. <i>ecarinata</i>			
Chenopodiaceae	<i>Atriplex</i>	<i>exilifolia</i>			
Chenopodiaceae	<i>Atriplex</i>	<i>lindleyi</i> ssp. <i>inflata</i>			
Chenopodiaceae	<i>Atriplex</i>	<i>semibaccata</i>			
Chenopodiaceae	<i>Chenopodium</i>	<i>desertorum</i> ssp. <i>desertorum</i>			
Chenopodiaceae	<i>Enchylaena</i>	<i>tomentosa</i>			
Chenopodiaceae	<i>Eriochiton</i>	<i>sclerolaenoides</i>			
Chenopodiaceae	<i>Maireana</i>	<i>eriolada</i>			
Chenopodiaceae	<i>Maireana</i>	<i>trichoptera</i>			
Chenopodiaceae	<i>Rhagodia</i>	<i>baccata</i> ssp. <i>baccata</i>			
Chenopodiaceae	<i>Rhagodia</i>	<i>crassifolia</i>			
Chenopodiaceae	<i>Rhagodia</i>	<i>preissii</i> ssp. <i>preissii</i>			
Chenopodiaceae	<i>Sclerolaena</i>	<i>diacantha</i>			
Chenopodiaceae	<i>Sclerolaena</i>	<i>obliquicuspis</i>			
Chenopodiaceae	<i>Threlkeldia</i>	<i>diffusa</i>			
Convolvulaceae	<i>Wilsonia</i>	<i>humilis</i>			
Cupressaceae	<i>Callitris</i>	<i>roei</i>			
Cyperaceae	<i>Gahnia</i>	<i>ancistrophylla</i>			
Cyperaceae	<i>Lepidosperma</i>	sp.			
Cyperaceae	<i>Schoenus</i>	<i>caespititius</i>			
Dilleniaceae	<i>Hibbertia</i>	<i>exasperata</i>			
Dilleniaceae	<i>Hibbertia</i>	<i>oligantha</i>			
Dilleniaceae	<i>Hibbertia</i>	<i>psilocarpa</i>			
Dilleniaceae	<i>Hibbertia</i>	<i>pungens</i>			
Ericaceae	<i>Conostephium</i>	<i>marchantiorum</i>		P3	KSW10522 ACC9770
Ericaceae	<i>Conostephium</i>	<i>uncinatum</i>		P2	KSW10622 ACC9770
Ericaceae	<i>Leucopogon</i>	<i>canaliculatus</i>			KSW13322 ACC 9740
Ericaceae	<i>Lissanthe</i>	<i>rubicunda</i>			
Ericaceae	<i>Lysinema</i>	<i>ciliatum</i>			



Ericaceae	<i>Styphelia</i>	sp. Cascades			KSW20722 ACC9874
Ericaceae	<i>Styphelia</i>	<i>subulata</i>			
Euphorbiaceae	<i>Beyeria</i>	<i>sulcata</i>			
Euphorbiaceae	<i>Monotaxis</i>	<i>paxii</i>			
Fabaceae	<i>Acacia</i>	<i>aff. Merrallii</i>			KSW11722 ACC9770, KSW20922 ACC9874, KSW19122 ACC9857
Fabaceae	<i>Acacia</i>	<i>assimilis</i> ssp. <i>atroviridis</i>			
Fabaceae	<i>Acacia</i>	<i>bartlei</i>		P3	KSW11622 ACC9770
Fabaceae	<i>Acacia</i>	<i>brachyclada</i>			
Fabaceae	<i>Acacia</i>	<i>crassuloides</i>			
Fabaceae	<i>Acacia</i>	<i>cupularis</i>			
Fabaceae	<i>Acacia</i>	<i>dermatophylla</i>			KSW10922 ACC9770
Fabaceae	<i>Acacia</i>	<i>erinacea</i>			
Fabaceae	<i>Acacia</i>	<i>glaucissima</i>		P3	KSW10822, KSW12022 ACC9770
Fabaceae	<i>Acacia</i>	<i>gonophylla</i>			
Fabaceae	<i>Acacia</i>	<i>hadrophylla</i>			KSW12122 ACC9770
Fabaceae	<i>Acacia</i>	<i>lachnophylla</i>			
Fabaceae	<i>Acacia</i>	<i>mutabilis</i> ssp. <i>angustifolia</i>			
Fabaceae	<i>Acacia</i>	<i>pachypoda</i>			
Fabaceae	<i>Acacia</i>	<i>patagiata</i>			
Fabaceae	<i>Acacia</i>	<i>pravifolia</i>			KSW13322 ACC 9740
Fabaceae	<i>Acacia</i>	<i>profusa</i>			
Fabaceae	<i>Acacia</i>	<i>sulcata</i> ssp. <i>sulcata</i>			
Fabaceae	<i>Acacia</i>	<i>pritzeliana</i>			
Fabaceae	<i>Aotus</i>	sp. Esperance			
Fabaceae	<i>Bossiaea</i>	<i>leptacantha</i>			
Fabaceae	<i>Chorizema</i>	<i>aciculare</i>			
Fabaceae	<i>Daviesia</i>	<i>aphylla</i>			
Fabaceae	<i>Daviesia</i>	<i>lancifolia</i>			
Fabaceae	<i>Dillwynia</i>	sp. Mallee			
Fabaceae	<i>Gastrolobium</i>	<i>melanocarpum</i>			
Fabaceae	<i>Gompholobium</i>	<i>tomentosum</i>			

Fabaceae	<i>Jacksonia</i>	<i>racemosa</i>			KSW18922 ACC9857
Fabaceae	<i>Kennedia</i>	sp. South Coast			
Fabaceae	<i>Medicago</i>	<i>tornata</i>	X		
Fabaceae	<i>Pisum</i>	sp.	X		
Fabaceae	<i>Pultenaea</i>	<i>arida</i>			
Fabaceae	<i>Pultenaea</i>	<i>elachista</i>			
Fabaceae	<i>Pultenaea</i>	<i>purpurea</i>			
Fabaceae	<i>Senna</i>	<i>cardiosperma</i>			
Fabaceae	<i>Templetonia</i>	<i>sulcata</i>			
Fabaceae	<i>Vicia</i>	<i>sativa</i>	X		
Goodeniaceae	<i>Coopernookia</i>	<i>polygalacea</i>			
Goodeniaceae	<i>Coopernookia</i>	<i>strophiolata</i>			
Goodeniaceae	<i>Dampiera</i>	<i>lavandulacea</i>			
Goodeniaceae	<i>Goodenia</i>	<i>incana</i>			
Goodeniaceae	<i>Goodenia</i>	<i>laevis</i> ssp. <i>laevis</i>		P3	KSW11022, KSW11122, KSW11822 ACC9770
Goodeniaceae	<i>Goodenia</i>	<i>scapigera</i>			
Haemodoraceae	<i>Anigozanthos</i>	<i>rufus</i>			
Hemerocallidaceae	<i>Dianella</i>	<i>brevicaulis</i>			
Hemerocallidaceae	<i>Dianella</i>	<i>revoluta</i>			
Iridaceae	<i>Patersonia</i>	<i>occidentalis</i>			
Lamiaceae	<i>Microcorys</i>	<i>glabra</i> ssp. <i>glabra</i>			
Lamiaceae	<i>Pityrodia</i>	<i>chrysocalyx</i>		P3	KSW10722 ACC9770, 20822 ACC9874
Lamiaceae	<i>Prostanthera</i>	<i>serpyllifolia</i>			
Lamiaceae	<i>Westringia</i>	<i>rigida</i>			
Lauraceae	<i>Cassytha</i>	<i>melantha</i>			
Loganiaceae	<i>Logania</i>	<i>stenophylla</i>			
Malvaceae	<i>Lasiopetalum</i>	<i>compactum</i>			
Malvaceae	<i>Lasiopetalum</i>	<i>rosmarinifolium</i>			
Malvaceae	<i>Malva</i>	<i>parvifolia</i>	X		
Montiaceae	<i>Calandrinia</i>	sp.			
Myrtaceae	<i>Beaufortia</i>	<i>empetrifolia</i>			
Myrtaceae	<i>Calothamnus</i>	<i>gracilis</i>			
Myrtaceae	<i>Calothamnus</i>	<i>quadrifidus</i>			
Myrtaceae	<i>Calytrix</i>	<i>depressa</i>			

Myrtaceae	<i>Calytrix</i>	<i>tetragona</i>			KSW19022 ACC9857 not retained
Myrtaceae	<i>Calytrix</i>	<i>lechenaultii</i>			
Myrtaceae	<i>Conothamnus</i>	<i>aureus</i>			
Myrtaceae	<i>Cyathostemon</i>	<i>blackettii</i>			
Myrtaceae	<i>Cyathostemon</i>	sp.			KSW11222, KSW11322 ACC 9770
Myrtaceae	<i>Darwinia</i>	sp. Karonie			
Myrtaceae	<i>Eucalyptus</i>	<i>angulosa</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>calycogona</i> ssp. <i>calycogona</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>conglobata</i> ssp. <i>perata</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>cylindriflora</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>dielsii</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>diptera</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>dolichorhyncha</i>		P4	KSW8822 ACC9693, KSW12222 ACC 9770
Myrtaceae	<i>Eucalyptus</i>	<i>dundasii</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>eremophila</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>extensa</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>flocktoniae</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>incrassata</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>leptocalyx</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>longicornis</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>occidentalis</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>platypus</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>pleurocarpa</i>			
Myrtaceae	<i>Eucalyptus</i>	sp. Southern Wheatbelt			
Myrtaceae	<i>Eucalyptus</i>	<i>tumida</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>uncinata</i>			
Myrtaceae	<i>Eucalyptus</i>	<i>virella</i>			
Myrtaceae	<i>Leptospermum</i>	<i>maxwellii</i>			
Myrtaceae	<i>Melaleuca</i>	<i>bromelioides</i>			
Myrtaceae	<i>Melaleuca</i>	<i>calycina</i>			
Myrtaceae	<i>Melaleuca</i>	<i>cucullata</i>			
Myrtaceae	<i>Melaleuca</i>	<i>eleuterostachya</i>			
Myrtaceae	<i>Melaleuca</i>	<i>hamata</i>			
Myrtaceae	<i>Melaleuca</i>	<i>hamata</i>			
Myrtaceae	<i>Melaleuca</i>	<i>johnsonii</i>			

Myrtaceae	<i>Melaleuca</i>	<i>linguiformis</i>			
Myrtaceae	<i>Melaleuca</i>	<i>pentagona</i> ssp. <i>pentagona</i>			
Myrtaceae	<i>Melaleuca</i>	<i>podocarpa</i>			
Myrtaceae	<i>Melaleuca</i>	<i>sapientes</i>			
Myrtaceae	<i>Melaleuca</i>	<i>strobophylla</i>			
Myrtaceae	<i>Melaleuca</i>	<i>strobophylla</i>			
Myrtaceae	<i>Melaleuca</i>	<i>teuthidoides</i>			
Myrtaceae	<i>Melaleuca</i>	<i>thyoides</i>			
Myrtaceae	<i>Melaleuca</i>	<i>undulata</i>			
Myrtaceae	<i>Melaleuca</i>	<i>carrii</i>			
Myrtaceae	<i>Melaleuca</i>	<i>glaberrima</i>			
Myrtaceae	<i>Melaleuca</i>	<i>phoidophylla</i>			
Myrtaceae	<i>Melaleuca</i>	<i>societatis</i>			
Myrtaceae	<i>Micromyrtus</i>	<i>elobata</i> ssp. <i>elobata</i>			
Myrtaceae	<i>Rinzia</i>	<i>icosandra</i>			
Myrtaceae	<i>Verticordia</i>	<i>chrysantha</i>			
Myrtaceae	<i>Verticordia</i>	<i>plumosa</i> var. <i>incrassata</i>			KSW11522, 9770
Orchidaceae	<i>Orchid</i>	<i>mutica</i>			
Orchidaceae	<i>Pterostylis</i>	<i>vittata</i>			
Phyllanthaceae	<i>Lasiandra</i>	<i>calycina</i>			
Pinaceae	<i>Pinus</i>	<i>pinaster</i>	X		
Pittosporaceae	<i>Billardiera</i>	<i>coriacea</i>			
Pittosporaceae	<i>Cheiranthra</i>	<i>filifolia</i>			
Plumbaginaceae	<i>Limonium</i>	<i>lobatum</i>	X		
Poaceae	<i>Aristida</i>	<i>contorta</i>			
Poaceae	<i>Austrostipa</i>	<i>drummondii</i>			
Poaceae	<i>Austrostipa</i>	<i>elegantissima</i>			
Poaceae	<i>Avena</i>	<i>barbata</i>	X		
Poaceae	<i>Hordeum</i>	<i>leporinum</i>	X		
Poaceae	<i>Lolium</i>	sp.	X		
Poaceae	<i>Rytidosperma</i>	<i>setaceum</i>			
Poaceae	<i>Triticum</i>	<i>aestivum</i>	X		
Polygalaceae	<i>Comesperma</i>	<i>scoparium</i>			
Polygalaceae	<i>Comesperma</i>	<i>spinosum</i>			
Polygonaceae	<i>Muehlenbeckia</i>	<i>adpressa</i>			
Primulaceae	<i>Lysimachia</i>	<i>arvensis</i>	X		
Proteaceae	<i>Banksia</i>	<i>media</i>			
Proteaceae	<i>Grevillea</i>	<i>plurijuga</i>			
Proteaceae	<i>Grevillea</i>	<i>acuaria</i>			
Proteaceae	<i>Grevillea</i>	<i>huegelii</i>			
Proteaceae	<i>Grevillea</i>	<i>incrassata</i>			




Proteaceae	<i>Grevillea</i>	<i>oligantha</i>			
Proteaceae	<i>Grevillea</i>	<i>pectinata</i>			
Proteaceae	<i>Grevillea</i>	<i>teretifolia</i>			
Proteaceae	<i>Hakea</i>	<i>cinerea</i>			
Proteaceae	<i>Hakea</i>	<i>commutata</i>			
Proteaceae	<i>Hakea</i>	<i>corymbosa</i>			
Proteaceae	<i>Hakea</i>	<i>multilineata</i>			
Proteaceae	<i>Hakea</i>	<i>nitida</i>			
Proteaceae	<i>Hakea</i>	<i>adnata</i>			
Proteaceae	<i>Persoonia</i>	<i>helix</i>			
Proteaceae	<i>Persoonia</i>	<i>teretifolia</i>			
Proteaceae	<i>Petrophile</i>	<i>seminuda</i>			
Proteaceae	<i>Synaphea</i>	<i>media</i>			
Restionaceae	<i>Chordifex</i>	<i>sphacelatus</i>			
Restionaceae	<i>Hopkinsia</i>	<i>adscendens</i>			
Rhamnaceae	<i>Cryptandra</i>	<i>pungens</i>			
Rhamnaceae	<i>Cryptandra</i>	<i>recurva</i>			
Rhamnaceae	<i>Pomaderris</i>	<i>rotundifolia</i>			
Rhamnaceae	<i>Spyridium</i>	<i>minutum</i>			
Rhamnaceae	<i>Spyridium</i>	<i>mucronatum</i> ssp. <i>mucronatum</i>			
Rhamnaceae	<i>Trymalium</i>	<i>myrtillus</i> ssp. <i>myrtillus</i>			
Rubiaceae	<i>Opercularia</i>	<i>spermacoea</i>			
Rutaceae	<i>Boronia</i>	<i>crassifolia</i>			
Rutaceae	<i>Boronia</i>	<i>inornata</i>			
Rutaceae	<i>Cyanothamnus</i>	<i>baeckeacea</i> ssp. <i>baeckeacea</i>			
Rutaceae	<i>Cyanothamnus</i>	<i>inconspicuus</i>			
Rutaceae	<i>Cyanothamnus</i>	<i>fabianoides</i> ssp. <i>fabianoides</i>			
Rutaceae	<i>Microcybe</i>	<i>multiflora</i> ssp. <i>multiflora</i>			
Rutaceae	<i>Microcybe</i>	<i>multiflora</i> ssp. <i>multiflora</i>			
Rutaceae	<i>Phebalium</i>	<i>obovatum</i>			
Santalaceae	<i>Exocarpos</i>	<i>aphyllus</i>			
Santalaceae	<i>Exocarpos</i>	<i>sparteus</i>			
Santalaceae	<i>Santalum</i>	<i>acuminatum</i>			
Sapindaceae	<i>Dodonaea</i>	<i>bursariifolia</i>			
Sapindaceae	<i>Dodonaea</i>	<i>stenozyga</i>			
Scrophulariaceae	<i>Eremophila</i>	<i>dichroantha</i>			
Scrophulariaceae	<i>Eremophila</i>	<i>psilocalyx</i>			
Solanaceae	<i>Solanum</i>	<i>nigrum</i>	X		
Thymelaeaceae	<i>Pimelea</i>	<i>aeruginosa</i>			

Violaceae	<i>Hybanthus</i>	<i>epacroides</i>			
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## Appendix 2: TPRF Forms

### Appendix 2.1 - *Conostephium uncinatum* – P2



Department of Biodiversity,  
Conservation and Attractions

### Threatened and Priority Flora Report Form

Version 1.4 March 2021

**Please complete as much of the form as possible, with emphasis on those sections bordered in black.** For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-flora](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-flora)

<b>TAXON:</b> <i>Conostephium uncinatum</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 02/12/2022		<b>CONSERVATION STATUS:</b> P2	
<b>OBSERVER/S:</b> Katherine Walkerden		<b>PHONE:</b> 0418558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
 Rolld Road Reserve between SLK 6.87 -7.06 and Plan 152238 Lot 1515

**Reserve No.:**

<b>DBC DISTRICT:</b> Esperance	<b>LOA:</b> Esperance	<b>Land manager present:</b> <input checked="" type="checkbox"/>
--------------------------------	-----------------------	--

**DATUM:**

GDA94 / MGA94 ☒ Lat / Northing: 372735.0

AGD84 / AMG84 ☐ Long / Easting: 6330501.6

WGS84 ☐ Zone: 51

Unknown ☐

**COORDINATE S:** (If UTM coords provided, Zone is also required)

DecDegrees ☐ DegMinSec ☐ UTM ☐

**METHOD USED:**

GPS ☒ Differential GPS ☐ Map ☐

No. satellites:   Map used:  

Boundary polygon captured: ☐ Map scale:

**LAND TENURE:**

Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input checked="" type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole <span style="border: 1px solid black; padding: 0 20px;"> </span> to <span style="border: 1px solid black; padding: 0 20px;"> </span>	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m²):  

**EFFORT:** Time spent surveying (minutes): 40 No. of minutes spent / 100 m²:  

**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:  

(Refer to field manual for list)

**WHAT COUNTED:** Plants ☒ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	17	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Area of pop (m²):  

Note: Pls record count as numbers (not percentages) for database.

**QUADRATS PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m²):  

Summary Quad. Totals: Alive  

**REPRODUCTIVE STATE:** Clonal ☐ Vegetative ☒ Flowerbud ☐ Flower ☐

Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower:  %

**CONDITION OF PLANT S:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

**COMMENT:** Population was significantly larger than count extending into private property

THREATS - type, agent and supporting information: <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats &amp; agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (&lt;12mths), M=Medium (&lt;5yrs), L=Long (5yrs+)</small>	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mitreagona)

Eucalyptus pleurocarpa and Banksia media over sparse heath with mixed shrubs and Restionaceae sedges.

Associated species includes: Dampiera lavandulacea, Verticordia picta, Lomandra mucronata, Leucopogon sp.

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED

#### SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE NO:** FT61000788-1a. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb: ☒ Regional Herb: ☐ District Herb: ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_ KSW10622 ACC9770 Specimen retained

**LODGE:** No: \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,


Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐



Appendix 2.2 *Halgania* sp. Peak Eleanor – P2 Eastern population

 Department of Biodiversity, Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-flora](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-flora)*

<b>TAXON:</b> <i>Halgania</i> sp. Peak Eleanor		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 2.12.2022		<b>CONSERVATION STATUS:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span> <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  

Rollond road, Southern side of road. 540m West of Swan Lagoon road and Rollond road intersection. Immediately north of Lot 96 on Plan 139183. 9.7km North West of Grass Patch Townsite.

**SLK** 5.84-5.74

<b>DBC DISTRICT:</b> Esperance		<b>LOA:</b> Esperance		<b>Reserve No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/>		DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input type="checkbox"/>		GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>	
AGD84 / AMG84 <input type="checkbox"/>		Lat / Northing: 373984.1		No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span> Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span>	
WGS84 <input type="checkbox"/>		Long / Easting: 6330496.3		Boundary polygon captured: <input type="checkbox"/> Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>	
Unknown <input type="checkbox"/>		<b>ZONE:</b> 51			

**LAND TENURE:**

Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole 5.84 to 5.74	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m<sup>2</sup>):  

**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:  

**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:  

(Refer to field manual for list)

<b>WHAT COUNTED:</b>	Plants <input checked="" type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>	<b>Area of pop (m<sup>2</sup>):</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
	<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	
Alive	2	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

**QUADRATS PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m<sup>2</sup>):  

**Summary Quad. Totals:** Alive        

**REPRODUCTIVE STATE:**

Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>	Flower <input type="checkbox"/>
Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehiscent fruit <input type="checkbox"/>	Percentage in flower: 50%

**CONDITION OF PLANTS:** Healthy ☐ Moderate ☐ Poor ☐ Senescent ☐

**COMMENT:**  

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Low population size	M	E	
• Road widening	N	E	S
• <span style="border: 1px solid black; padding: 0 20px;"> </span>			

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____ (Refer to field manual for additional values)				

### CONDITION OF SOIL:

Dry ☒ Moist ☐ Waterlogged ☐ Inundated ☐

**VEGETATION CLASSIFICATION\*:** Eucalyptus flocktoniae over sparse shrubland. Associated species include: Cyathostemon sp., Atriplex sp., Melaleuca glaberrima, Austrostipa elegantissima, Enchylaena tomentosa, Asphodelus fistulosus, Eragrostis curvula.

Eg. 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Mitretrixia)

2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp. \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER 8:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE No:** FT61000788-1a. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb. KSW21122 ACC9874  
Lodgement No: \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐

Appendix 2.3 *Halgania* sp. Peak Eleanor – P2 Central population

Department of Biodiversity, Conservation and Attractions  
Threatened and Priority Flora Report Form  
Version 1.4 March 2021

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/birds-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/birds-and-animals/threatened-species-and-communities/threatened-plants)

TAXON: <i>Halgania</i> sp. Peak Eleanor		TPFL Pop. No: [ ]
OBSERVATION DATE: 30.07.2022	CONSERVATION STATUS: [ ]	New population <input checked="" type="checkbox"/>
OBSERVER/S: Katherine Walkerden, Julie Waters		PHONE: 0416558774
ROLE: Environmental Officer	ORGANISATION: Shire of Esperance	
EMAIL: Katherine.Walkerden@esperance.wa.gov.au		

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place): [ ]

Rollond road slk 10.76-8.73

Roadside, level plain, no signs of fire.

Reserve No: [ ]

DBC DISTRICT: Esperance	LGA: Esperance	Land manager present: <input type="checkbox"/>
COORDINATES: (If UTM coords provided, Zone is also required)		METHOD USED:
DATUM: <input checked="" type="checkbox"/> GDA94 / MGA94 <input type="checkbox"/> AGD84 / AMG84 <input type="checkbox"/> WGS84 <input type="checkbox"/> Unknown Lat / Northing: 389798.5 Long / Easting: 6330434.6 ZONE: 51		GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/> No. satellites: [ ] Map used: [ ] Boundary polygon captured: <input type="checkbox"/> Map scale: [ ]
LAND TENURE:		
<input type="checkbox"/> Nature reserve <input type="checkbox"/> National park <input type="checkbox"/> Conservation park	<input type="checkbox"/> Timber reserve <input type="checkbox"/> State forest <input type="checkbox"/> Water reserve	<input type="checkbox"/> Private property <input type="checkbox"/> Pastoral lease <input type="checkbox"/> UCL <input type="checkbox"/> Rail reserve <input type="checkbox"/> MRWA road reserve <input type="checkbox"/> SLK/Pole [ ] to [ ] <input type="checkbox"/> Shire road reserve <input type="checkbox"/> Other Crown reserve Specify other: [ ]

AREA ASSESSMENT: Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m²): [ ]

EFFORT: Time spent surveying (minutes): [ ] No. of minutes spent / 100 m²: [ ]

POP'N COUNT ACCURACY: Actual ☐ Extrapolation ☐ Estimate ☐ Count method: [ ] (Refer to field manual for list)

WHAT COUNTED: Plants ☒ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:	Area of pop (m²): [ ] Note: Pls record count as numbers (not percentages) for database.
Alive	293	[ ]	[ ]	[ ]	
Dead	[ ]	[ ]	[ ]	[ ]	

QUADRATS PRESENT: No. [ ] Size [ ] Data attached ☐ Total area of quadrats (m²): [ ]

Summary Quad. Totals: Alive [ ]

REPRODUCTIVE STATE: Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐  
Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower: 95%

CONDITION OF PLANTS: Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

COMMENT: Only plants near the road were surveyed, population likely considerably larger.

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• Road widening Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• [ ]	N	L	S
• [ ]	[ ]	[ ]	[ ]
• [ ]	[ ]	[ ]	[ ]

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by: [ ] Sheet No.: [ ] Record Entered In Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____ (Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mistragona)

Mixed Mallee over Melaleuca uncinata and mixed understorey shrubs. Associated species include:  
Prostanthera serpyllifolia, Lissanthe rubicunda, Pimelea cracens, Eucalyptus dolichorhyncha

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp: \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

**FLORA AUTHORISATION / LICENCE NO:** FT61000788-1a. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_ KSW8922 ACC9639 PERTH 09516425

**LODGE:** WA Herb \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,


Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐



Appendix 2.4 *Halgania* sp. Peak Eleanor – P2 Western population

 Department of Biodiversity, Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbcwa.gov.au/plantsandanimals/threatened-species-and-communities/threatened-plants](http://www.dbcwa.gov.au/plantsandanimals/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Halgania</i> sp. Peak Eleanor		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 2.12.2022		<b>CONSERVATION STATUS:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span> <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine walkerden		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):    
 Rollond Road at SLK 13.19- 13.53, 2.45km West of Townsend road. Specimen collected from Southern side of road reserve.

**Reserve No.:**  

<b>DBCA DISTRICT:</b> Esperance	<b>LGA:</b> Esperance	<b>Land manager present:</b> <input type="checkbox"/>
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<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/>	DecDegrees <input type="checkbox"/>	DegMinSec <input type="checkbox"/>	UTMs <input type="checkbox"/>	GPS <input checked="" type="checkbox"/>	Differential GPS <input type="checkbox"/>
AGD84 / AMG84 <input type="checkbox"/>	<b>Lat / Northing:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>			No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span>	Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span>
WGS84 <input type="checkbox"/>	<b>Long / Easting:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>			Boundary polygon captured: <input type="checkbox"/>	Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>
Unknown <input type="checkbox"/>	<b>ZONE:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>				

**LAND TENURE:**

Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole <span style="border: 1px solid black; padding: 0 20px;"> </span> to <span style="border: 1px solid black; padding: 0 20px;"> </span>	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>

<b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input type="checkbox"/> Full survey <input checked="" type="checkbox"/>		<b>Area observed (m²):</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>EFFORT:</b> Time spent surveying (minutes): <span style="border: 1px solid black; padding: 0 20px;"> </span>		<b>No. of minutes spent / 100 m²:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/> Count method: <span style="border: 1px solid black; padding: 0 20px;"> </span>		(Refer to field manual for list)	

<b>WHAT COUNTED:</b>	Plants <input checked="" type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>	
<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	<b>Seedlings:</b>	<b>Totals:</b>
Alive	3	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

**QUADRATS PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m²):  

**Summary Quad. Totals:** Alive  

**REPRODUCTIVE STATE:**

Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>	Flower <input checked="" type="checkbox"/>
Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehiscent fruit <input type="checkbox"/>	Percentage in flower: 100%

**CONDITION OF PLANTS:** Healthy ☐ Moderate ☒ Poor ☐ Senescent ☐

**COMMENT:**  

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. <b>Specify agent</b> where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Low population size	M	H	
• Road widening	N	E	S
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbcwa.gov.au](mailto:flora.data@dbcwa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____				
	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

Eg: 1. Banksia woodland (B. attenuata, B. illidifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mitregrana)

Mixed Mallee woodland with Melaleucas and Fabaceae shrubs.

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

#### ASSOCIATED

#### SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

#### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE No:** FT61000788-1a. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb  
Lodgement No: KSW11922 ACC 9770 Specimen retained \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐

Appendix 2.6 *Acacia bartlei* – P3

**Threatened and Priority  
Flora Report Form**

Version 1.4 March 2021

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)

<b>TAXON:</b> <i>Acacia bartlei</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 22/08/2022		<b>CONSERVATION STATUS:</b> P3 <span style="float: right;"><b>New population</b> <input checked="" type="checkbox"/></span>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie waters		<b>PHONE:</b> 0418558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  

Rollond Road, 200 metres west of Coolgardie-Esperance Highway. Rollond road SLK 0.2.

Narrow road reserve. Clay-loam soil. No signs of fire.

**Reserve No.:**  

<b>DBCA DISTRICT:</b> Esperance	<b>LGA:</b> Esperance	<b>Land manager present:</b> <input checked="" type="checkbox"/>
---------------------------------	-----------------------	--

<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/>	Lat / Northing: 379514.4	DecDegrees <input type="checkbox"/>	DegMinSec <input type="checkbox"/>	UTMs <input type="checkbox"/>	GPS <input checked="" type="checkbox"/>
AGD84 / AMG84 <input type="checkbox"/>	Long / Easting: 6330568.8			No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span>	Differential GPS <input type="checkbox"/>
WGS84 <input type="checkbox"/>				Boundary polygon captured: <input type="checkbox"/>	Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span>
Unknown <input type="checkbox"/>					Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>ZONE:</b> 51					

**LAND TENURE:**

Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole <span style="border: 1px solid black; padding: 0 20px;"> </span> to <span style="border: 1px solid black; padding: 0 20px;"> </span>	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>

<b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input checked="" type="checkbox"/> Full survey <input type="checkbox"/>	<b>Area observed (m²):</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>EFFORT:</b> Time spent surveying (minutes): <span style="border: 1px solid black; padding: 0 20px;"> </span>	<b>No. of minutes spent / 100 m²:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/> Count method: <span style="border: 1px solid black; padding: 0 20px;"> </span>	(Refer to field manual for list)

<b>WHAT COUNTED:</b>	Plants <input checked="" type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>	
<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	<b>Seedlings:</b>	<b>Totals:</b>
Alive	1	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>QUADRATS PRESENT:</b>	No. <span style="border: 1px solid black; padding: 0 20px;"> </span>	Size <span style="border: 1px solid black; padding: 0 20px;"> </span>	Data attached <input type="checkbox"/>	Total area of quadrats (m²): <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>Summary Quad. Totals: Alive</b>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

**REPRODUCTIVE STATE:**

Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>	Flower <input type="checkbox"/>
Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehiscent fruit <input type="checkbox"/>	Percentage in flower: <span style="border: 1px solid black; padding: 0 20px;"> </span> %

**CONDITION OF PLANTS:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

**COMMENT:** Single isolated plant seen, several kms of road reserve surveyed and no additional plants found.

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Road widening	N	E	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• Low population size	E	E	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: (Refer to field manual for additional values)				
	Dry <input checked="" type="checkbox"/> Moist <input type="checkbox"/> Waterlogged <input type="checkbox"/> Inundated <input type="checkbox"/>				

### CONDITION OF SOIL:

**VEGETATION CLASSIFICATION\*:** Mixed Mallee woodland with scattered Melaleucas and Fabaceae shrubs with mixed Brassicaceae and Poaceae weeds.

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Mitregrana)

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROAD SIDE MARKER:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

**FLORA AUTHORISATION / LICENCE No:** FT61000788-1a Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb KSW11622 ACC9770 specimen retained

**LODGE:** Lodge No: \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,


Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐



Appendix 2.7 *Acacia glaucissima* – P3 – Eastern population

 **Threatened and Priority  
Flora Report Form** Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Acacia glaucissima</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>OBSERVATION DATE:</b> 22/08/2022		<b>CONSERVATION STATUS:</b> P3 <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  

Rollond Road 3.8km west of Esperance-Coolgardie Highway. Population was present between Rollond Road between SLK 3.69 and 3.85. Sample collected at SLK 3.69.

Narrow road reserve. Clay-loam soil. No signs of fire.

**Reserve No.:**  

<b>DBC DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Land manager present:</b> <input type="checkbox"/>	
<b>DATUM:</b> <input checked="" type="checkbox"/> GDA94 / MGA94 <input type="checkbox"/> AGD84 / AMG84 <input type="checkbox"/> WGS84 <input type="checkbox"/> Unknown					
<b>COORDINATE S:</b> (If UTM coords provided, Zone is also required) <input type="checkbox"/> DecDegrees <input type="checkbox"/> DegMinSec <input checked="" type="checkbox"/> UTM <input type="checkbox"/> GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>					
<b>Lat / Northing:</b> 375872		<b>No. satellites:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>		<b>Map used:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>Long / Easting:</b> 6330509		<b>Boundary polygon captured:</b> <input type="checkbox"/>		<b>Map scale:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>ZONE:</b> 51					

**LAND TENURE:**

<input type="checkbox"/> Nature reserve	<input type="checkbox"/> Timber reserve	<input type="checkbox"/> Private property	<input type="checkbox"/> Rail reserve	<input checked="" type="checkbox"/> Shire road reserve
<input type="checkbox"/> National park	<input type="checkbox"/> State forest	<input type="checkbox"/> Pastoral lease	<input type="checkbox"/> MRWA road reserve	<input type="checkbox"/> Other Crown reserve
<input type="checkbox"/> Conservation park	<input type="checkbox"/> Water reserve	<input type="checkbox"/> UCL	<input type="checkbox"/> SLK/Pole 3.69 to 4.57	<input type="checkbox"/> Specify other: <span style="border: 1px solid black; padding: 0 10px;"> </span>

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m<sup>2</sup>):  

**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:  

**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:   (Refer to field manual for list)

**WHAT COUNTED:** ☒ Plants ☐ Clumps ☐ Clonal stems

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	18	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>

**QUADRAT S PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m<sup>2</sup>):  

**Summary Quad. Totals:** Alive        

**REPRODUCTIVE STATE:** ☐ Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐ Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower:  %

**CONDITION OF PLANT S:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

**COMMENT:**  

THREAT S - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Road widening	N	H	S
• <span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
• <span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORD S: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:   Sheet No.:   Record Entered In Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Methanogona)

Mixed Mallee woodland with scattered Melaleucas and Fabaceae shrubs with mixed Brassicaceae and Poaceae weeds. Associated species include: Enchylaena tomentosa, Pultenaea arida, Cooperhooia strophilata, Eremophila microantha

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

**COMMENT:** \_\_\_\_\_

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE No:** FT61000788-1a Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_  
Lodgement No: KSW10822 ACC9770 specimen not retained

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023


Please return completed form to Species And Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐

Appendix 2.8 *Acacia glaucissima* – P3 – Western population

 Department of Biodiversity, Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

**Please complete as much of the form as possible, with emphasis on those sections bordered in black.** For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)

<b>TAXON:</b> <i>Acacia glaucissima</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>OBSERVATION DATE:</b> 31/08/2022		<b>CONSERVATION STATUS:</b> P3 <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

<b>DESCRIPTION OF LOCATION</b> (Provide at least nearest town/named locality, and the distance and direction to that place):	
Rollond road SLK 14.23-15.5	
Narrow road reserve, Clay-loam soil. No signs of fire.	
<b>Reserve No.:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	

<b>DBCA DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Land manager present:</b> <input type="checkbox"/>	
<b>DATUM:</b>					
<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)					
DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input type="checkbox"/>		<b>METHOD USED:</b>			
GDA94 / MGA94 <input checked="" type="checkbox"/>		GPS <input checked="" type="checkbox"/>		Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>	
AGD84 / AMG84 <input type="checkbox"/>		No. satellites: <span style="border: 1px solid black; padding: 0 10px;"> </span>		Map used: <span style="border: 1px solid black; padding: 0 10px;"> </span>	
WGS84 <input type="checkbox"/>		Boundary polygon captured: <input type="checkbox"/>		Map scale: <span style="border: 1px solid black; padding: 0 10px;"> </span>	
Unknown <input type="checkbox"/>					
<b>Lat / Northing:</b> 364249					
<b>Long / Easting:</b> 6330357					
<b>ZONE:</b> 51					
<b>LAND TENURE:</b>					
Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>	
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>	
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole 14.23 to 15.5	Specify other: <span style="border: 1px solid black; padding: 0 10px;"> </span>	

<b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input checked="" type="checkbox"/> Full survey <input type="checkbox"/>		<b>Area observed (m²):</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>EFFORT:</b> Time spent surveying (minutes): <span style="border: 1px solid black; padding: 0 10px;"> </span>		<b>No. of minutes spent / 100 m²:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/>		<b>Count method:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
(Refer to field manual for list)			
<b>WHAT COUNTED:</b>			
Plants <input checked="" type="checkbox"/> Clumps <input type="checkbox"/> Clonal stems <input type="checkbox"/>			
<b>TOTAL POP'N STRUCTURE:</b>			
Alive	<b>Mature:</b> <span style="border: 1px solid black; padding: 0 10px;">2</span>	<b>Juveniles:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	<b>Seedlings:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
		<b>Totals:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
		<b>Area of pop (m²):</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
Note: Pls record count as numbers (not percentages) for database.			
<b>QUADRATS PRESENT:</b>			
No. <span style="border: 1px solid black; padding: 0 10px;"> </span>	Size <span style="border: 1px solid black; padding: 0 10px;"> </span>	Data attached <input type="checkbox"/>	Total area of quadrats (m²): <span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>Summary Quad. Totals:</b> Alive <span style="border: 1px solid black; padding: 0 10px;"> </span>			
<b>REPRODUCTIVE STATE:</b>			
Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>	Flower <input type="checkbox"/>
Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehiscent fruit <input type="checkbox"/>	Percentage in flower: <span style="border: 1px solid black; padding: 0 10px;"> </span> %
<b>CONDITION OF PLANTS:</b> Healthy <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Senescent <input type="checkbox"/>			
<b>COMMENT:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>			

<b>THREATS - type, agent and supporting information:</b>			
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant.			
Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme			
Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Low population density	E	E	
• Road widening	N	E	S
• <span style="border: 1px solid black; padding: 0 10px;"> </span>			
• <span style="border: 1px solid black; padding: 0 10px;"> </span>			

Please return completed form to Species And Communities Program DBCA,  
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
**RECORD S:** Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____				
	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. littoralis);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mitretrix)

Degraded mixed Mallee woodland with Melaleucas and Fabaceae shrubs with Mixed Poaceae and Brassicaceae weeds.

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED

#### SPECIES:

Other (non-dominant) spp

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☐ Good ☐ Degraded ☒ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER S:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**FLORA AUTHORIZATION / LICENCE NO:** FT61000788-1a Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_ KSW12022 ACC9770 specimen retained

**Lodgement No:** \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐





## Appendix 2.9 *Conostephium marchantiorum* – P3



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-clients](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-clients)

TAXON: <u>Conostephium marchantiorum</u>	TPFL Pop. No: <u>        </u>
OBSERVATION DATE: <u>2/12/2022</u>	CONSERVATION STATUS: <u>P3</u> New population <input type="checkbox"/>
OBSERVER/S: <u>Katherine Walkerden</u>	PHONE <u>0416558774</u>
ROLE: <u>Environmental Officer</u>	ORGANISATION: <u>Shire of Esperance</u>
EMAIL: <u>Katherine.Walkerden@esperance.wa.gov.au</u>	

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place): <u>        </u>	
<u>Private land on edge of road reserve. Sandy soil.</u>	
<u>Rollond Road 6.9km west of Esperance-Coolgardie Highway. Rollond Road at SLK 6.96.</u>	
DBCA DISTRICT: <u>        </u>	Reserve No: <u>        </u>
LGA: <u>        </u>	Land manager present: <input type="checkbox"/>
DATUM: <u>        </u>	METHOD USED: <u>        </u>
COORDINATES: (If UTM coords provided, Zone is also required)	GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>
DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input type="checkbox"/>	No. satellites: <u>        </u> Map used: <u>        </u>
GDA94 / MGA94 <input checked="" type="checkbox"/> Lat / Northing: <u>372757.1</u>	Boundary polygon captured: <input type="checkbox"/> Map scale: <u>        </u>
AGD84 / AMG84 <input type="checkbox"/> Long / Easting: <u>6330498.3</u>	
WGS84 <input type="checkbox"/> ZONE: <u>51</u>	
Unknown <input type="checkbox"/>	
LAND TENURE:	
Nature reserve <input type="checkbox"/> Timber reserve <input type="checkbox"/> Private property <input type="checkbox"/> Rail reserve <input type="checkbox"/> Shire road reserve <input checked="" type="checkbox"/>	
National park <input type="checkbox"/> State forest <input type="checkbox"/> Pastoral lease <input type="checkbox"/> MRWA road reserve <input type="checkbox"/> Other Crown reserve <input type="checkbox"/>	
Conservation park <input type="checkbox"/> Water reserve <input type="checkbox"/> UCL <input type="checkbox"/> SLK/Pole <u>        </u> to <u>        </u> Specify other: <u>        </u>	

AREA ASSESSMENT: <input checked="" type="checkbox"/> Edge survey <input type="checkbox"/> Partial survey <input type="checkbox"/> Full survey <input type="checkbox"/> Area observed (m <sup>2</sup> ): <u>        </u>
EFFORT: Time spent surveying (minutes): <u>        </u> No. of minutes spent / 100 m <sup>2</sup> : <u>        </u>
POP'N COUNT ACCURACY: Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/> Count method: <u>        </u>
(Refer to field manual for list)
WHAT COUNTED: Plants <input checked="" type="checkbox"/> Clumps <input type="checkbox"/> Clonal stems <input type="checkbox"/>
TOTAL POP'N STRUCTURE:
Alive
Dead
QUADRATS PRESENT: No. <u>        </u> Size <u>        </u> Data attached <input type="checkbox"/> Total area of quadrats (m <sup>2</sup> ): <u>        </u>
Summary Quad. Totals: Alive <u>        </u>
REPRODUCTIVE STATE: Clonal <input type="checkbox"/> Vegetative <input type="checkbox"/> Flowerbud <input type="checkbox"/> Flower <input type="checkbox"/>
Immature fruit <input type="checkbox"/> Fruit <input type="checkbox"/> Dehiscent fruit <input type="checkbox"/> Percentage in flower: <u>        </u> %

CONDITION OF PLANTS: Healthy <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Poor <input type="checkbox"/> Senescent <input type="checkbox"/>
COMMENT: <u>Population extends into private property. Estimate is likely a significant undercount</u>

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• <u>        </u>			
• <u>        </u>			
• <u>        </u>			
• <u>        </u>			

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:          Sheet No.:          Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: <input type="text"/>		Specify other: <input type="text"/>	Specify other: <input type="text"/>	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: <input type="text"/>				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

Eg 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Miscanthus)

1. Eucalyptus pleurocarpa and Banksia media over sparse heath with mixed shrubs and Restionaceae sedges.  
Associated species includes: Dampiera lavandulacea, Verticordia picta, Lomandra mucronata, Leucopogon sp.
2.
3.
4.

### ASSOCIATED SPECIES:

Other (non-dominant) spp

Conostephium uncinatum

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month:  Year:  Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☒

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd:

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd:

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)


**FLORA AUTHORISATION / LICENCE NO:** FT61000788 (Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.)

**SPECIMEN:** Collectors No:  WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other:

**LODGE:** WA Herb Lodgement No:  KSW10522 ACC 9770 specimen retained


**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other:

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other:

Submitter of Record:  Role:  Signed:  Date:

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:  Sheet No.:  Record Entered In Database ☐

Appendix 2.10 *Goodenia laevis* ssp. *laevis* – P3 – Eastern population


**Threatened and Priority  
Flora Report Form**
Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Goodenia laevis</i> subsp. <i>laevis</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 22/08/2022		<b>CONSERVATION STATUS:</b> P3 <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  

Rollond Road 600 metres west of Esperance-Coolgardie Highway. Population was present between Rollond Road at SLK 0.63-1.4

Narrow road reserve. Clay-loam soil. No signs of fire. Plants growing on road shoulder.

**Reserve No.:**  

<b>DBCA DISTRICT:</b> Esperance	<b>LGA:</b> Esperance	<b>Land manager present:</b> <input type="checkbox"/>
---------------------------------	-----------------------	---

<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input type="checkbox"/>	DecDegrees <input type="checkbox"/>	DegMinSec <input type="checkbox"/>	UTMs <input type="checkbox"/>	GPS <input checked="" type="checkbox"/>	Differential GPS <input type="checkbox"/>
AGD84 / AMG84 <input type="checkbox"/>	<b>Lat / Northing:</b> 378373.3			No. satellites:	Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span>
WGS84 <input type="checkbox"/>	<b>Long / Easting:</b> 6330551.8			Boundary polygon captured: <input type="checkbox"/>	Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>
Unknown <input type="checkbox"/>	<b>ZONE:</b> 51				

**LAND TENURE:**

<input type="checkbox"/> Nature reserve	<input type="checkbox"/> Timber reserve	<input type="checkbox"/> Private property	<input type="checkbox"/> Rail reserve	<input checked="" type="checkbox"/> Shire road reserve
<input type="checkbox"/> National park	<input type="checkbox"/> State forest	<input type="checkbox"/> Pastoral lease	<input type="checkbox"/> MRWA road reserve	<input type="checkbox"/> Other Crown reserve
<input type="checkbox"/> Conservation park	<input type="checkbox"/> Water reserve	<input type="checkbox"/> UCL	<input type="checkbox"/> SLK/Pole 0.63 to 1.4	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>

<b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input type="checkbox"/> Full survey <input checked="" type="checkbox"/>	<b>Area observed (m²):</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>EFFORT:</b> Time spent surveying (minutes): <span style="border: 1px solid black; padding: 0 20px;"> </span>	No. of minutes spent / 100 m²: <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/>	<b>Count method:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
(Refer to field manual for list)	

<b>WHAT COUNTED:</b>	Plants <input checked="" type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>	
<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	<b>Seedlings:</b>	<b>Totals:</b>
Alive	33	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

**QUADRATS PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m²):  

**Summary Quad. Totals:** Alive        

**REPRODUCTIVE STATE:**

<input type="checkbox"/> Clonal	<input type="checkbox"/> Vegetative	<input type="checkbox"/> Flowerbud	<input type="checkbox"/> Flower
<input type="checkbox"/> Immature fruit	<input type="checkbox"/> Fruit	<input type="checkbox"/> Dehiscent fruit	<input type="checkbox"/> Percentage in flower: 20%

**CONDITION OF PLANT:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

**COMMENT:**  

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Road widening	N	L	S
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered In Database ☐





Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

Eg: 1. Banksia woodland (B. attenuata, B. illidifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Mitretragona)

1. Mixed Mallee woodland with scattered Melaleuca and Fabaceae shrubs with mixed Brassicaceae and Poaceae weeds. Associated species include: Enchylaena tomentosa, Pultenaea arida, Cooperhooia strophilata, Eremophila dicroantha

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp: \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

**FLORA AUTHORISATION / LICENCE NO:** FT61000788 Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

<b>SPECIMEN:</b>	Collectors No: _____	WA Herb. <input checked="" type="checkbox"/>	Regional Herb. <input type="checkbox"/>	District Herb. <input type="checkbox"/>	Other: _____
<b>LODGE:</b>	WA Herb Lodgement No: _____	KSW11022 ACC9770			
<b>ATTACHED:</b>	Map <input type="checkbox"/> Mudmap <input type="checkbox"/>	Photo <input type="checkbox"/>	GIS data <input checked="" type="checkbox"/>	Field notes <input type="checkbox"/>	Other: _____
<b>COPY SENT TO:</b>	Regional Office <input type="checkbox"/>	District Office <input checked="" type="checkbox"/>	Other: _____		

Submitter of Record: Katherine Walkerdon Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/01/2023


Please return completed form to Species and Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐

Appendix 2.11 *Goodenia laevis* ssp. *laevis* – P3 – Central population

 Department of Biodiversity, Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Goodenia laevis</i> subsp. <i>laevis</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 24/08/2022		<b>CONSERVATION STATUS:</b> P3	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie waters		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
 Rollond Road, population extends between SLK 10.21-9.59  
 Road reserve. Clay loam soil. No signs of fire. Plants growing on road shoulder

<b>DBC DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Reserve No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/> AGD84 / AMG84 <input type="checkbox"/> WGS84 <input type="checkbox"/> Unknown <input type="checkbox"/>		DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input checked="" type="checkbox"/> Lat / Northing: 369819.43 Long / Easting: 6330440.95 Zone: 51		GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/> No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span> Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span> Boundary polygon captured: <input type="checkbox"/> Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>	

**LAND TENURE:**  
 Nature reserve ☐ Timber reserve ☐ Private property ☐ Rail reserve ☐ Shire road reserve ☒  
 National park ☐ State forest ☐ Pastoral lease ☐ MRWA road reserve ☐ Other Crown reserve ☐  
 Conservation park ☐ Water reserve ☐ UCL ☐ SLK/Pole 10.21 to 9.59 Specify other:

**AREA ASSESSMENT:** Edge survey ☒ Partial survey ☐ Full survey ☐ Area observed (m<sup>2</sup>):    
**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:    
**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:    
 (Refer to field manual for list)  
**WHAT COUNTED:** Plants ☐ Clumps ☐ Clonal stems ☐  

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	646	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

 Area of pop (m<sup>2</sup>):    
 Note: Pls record count as numbers (not percentages) for database.  
**QUADRAT \$ PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m<sup>2</sup>):    
**Summary Quad. Totals:** Alive    
**REPRODUCTIVE STATE:** Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐  
 Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower: 20%

**CONDITION OF PLANTS:** Healthy ☐ Moderate ☐ Poor ☐ Senescent ☐  
**COMMENT:**

THREATS - type, agent and supporting information: <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats &amp; agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (&lt;12mths), M=Medium (&lt;5yrs), L=Long (5yrs+)</small>	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

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 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered in Database ☐



## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input checked="" type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____				
	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

1. Mixed Mallee woodland with Melaleucas and Fabaceae shrubs. Associated species include Halganina sp. Peak Eleanor, Brachyscome ciliaris, Goodenia scapigera

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROAD SIDE MARKER 8:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

**FLORA AUTHORISATION / LICENCE NO:** \_\_\_\_\_ Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb Lodgement No: \_\_\_\_\_ KSW11122 ACC 9770

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental Officer Signed: \_\_\_\_\_ Date: 30/12/2023


Please return completed form to Species And Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐

Appendix 2.12 *Goodenia laevis* ssp. *laevis* – P3 – Western population


**Threatened and Priority  
Flora Report Form**
Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Goodenia laevis</i> subsp. <i>laevis</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 30/08/2022		<b>CONSERVATION STATUS:</b> P3 <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
 Rollond Road at SLK 12.95-13.27, 2.5km West of Townsend road. Specimen collected from Southern side of road reserve.

**Reserve No.:**

<b>DBC DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Land manager present:</b> <input checked="" type="checkbox"/>	
<b>DATUM:</b> <input checked="" type="checkbox"/> GDA94 / MGA94 <input type="checkbox"/> AGD84 / AMG84 <input type="checkbox"/> WGS84 <input type="checkbox"/> Unknown					
<b>COORDINATES:</b> (If UTM coords provided, Zone is also required) DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input checked="" type="checkbox"/> <b>Lat / Northing:</b> 366498 <b>Long / Easting:</b> 6330397 <b>ZONE:</b> 51					
<b>METHOD USED:</b> GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/> No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span> Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span> Boundary polygon captured: <input type="checkbox"/> Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>					
<b>LAND TENURE:</b> Nature reserve <input type="checkbox"/> Timber reserve <input type="checkbox"/> Private property <input type="checkbox"/> Rail reserve <input type="checkbox"/> Shire road reserve <input checked="" type="checkbox"/> National park <input type="checkbox"/> State forest <input type="checkbox"/> Pastoral lease <input type="checkbox"/> MRWA road reserve <input type="checkbox"/> Other Crown reserve <input type="checkbox"/> Conservation park <input type="checkbox"/> Water reserve <input type="checkbox"/> UCL <input type="checkbox"/> SLK/Pole 12.95 to 13.27 Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>					

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☐ Full survey ☐ Area observed (m<sup>2</sup>):    
**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:    
**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:    
 (Refer to field manual for list)

<b>WHAT COUNTED:</b>		Plants <input type="checkbox"/>		Clumps <input type="checkbox"/>		Clonal stems <input type="checkbox"/>			
<b>TOTAL POP'N STRUCTURE:</b>		<b>Mature:</b>		<b>Juveniles:</b>		<b>Seedlings:</b>		<b>Totals:</b>	
Alive		23		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>	
Dead		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>QUADRAT \$ PRESENT:</b>		No. <span style="border: 1px solid black; padding: 0 20px;"> </span>		Size <span style="border: 1px solid black; padding: 0 20px;"> </span>		Data attached <input type="checkbox"/>		Total area of quadrats (m <sup>2</sup> ): <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>Summary Quad. Totals: Alive</b>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>		<span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>REPRODUCTIVE STATE:</b>		Clonal <input type="checkbox"/>		Vegetative <input type="checkbox"/>		Flowerbud <input type="checkbox"/>		Flower <input checked="" type="checkbox"/>	
		Immature fruit <input type="checkbox"/>		Fruit <input type="checkbox"/>		Dehiscent fruit <input type="checkbox"/>		Percentage in flower: 20%	

**CONDITION OF PLANTS:** Healthy ☐ Moderate ☐ Poor ☐ Senescent ☐  
**COMMENT:**

<b>THREATS - type, agent and supporting information:</b> <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats &amp; agents. Specify agent where relevant.            Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme            Estimate time to potential impact: S=Short (&lt;12mths), M=Medium (&lt;5yrs), L=Long (5yrs+)</small>						
	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)			
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>			
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>			
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>			

Please return completed form to Species And Communities Program DBCA,  
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered In Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. illidifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mitregrana)

1. Mixed Mallee woodland with Melaleucas and Fabaceae shrubs.

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED

#### SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE NO:** \_\_\_\_\_ Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_ KSW11822 ACC9770  
Lodgement No: \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_


Submitter of Record: Katherine Walkerdon Role: Environmental officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐



Appendix 2.13 *Pityrodia chrysocalyx* – P3 – Eastern population

 **Threatened and Priority  
Flora Report Form** Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/Threatened-and-priority-species-and-communities/threatened-and-priority-flora-report-form](http://www.dbca.wa.gov.au/Threatened-and-priority-species-and-communities/threatened-and-priority-flora-report-form)*

<b>TAXON:</b> <i>Pityrodia chrysocalyx</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 02/12/2023		<b>CONSERVATION STATUS:</b> P3 <span style="float: right;"><b>New population</b> <input checked="" type="checkbox"/></span>	
<b>OBSERVER/S:</b> Katherine Walkerden		<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  

Rollond road SLK 6.36, 1.17km West of Rollond road and Swan Lagoon road intersection. 10km North West of Grass Patch townsite.

Degraded road reserve. Loss of vegetation structure, historical clearing for fence construction.

**Reserve No.:**  

<b>DBCA DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Land manager present:</b> <input checked="" type="checkbox"/>	
<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/>		DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input checked="" type="checkbox"/>		GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>	
AGD84 / AMG84 <input type="checkbox"/>		Lat / Northing: 373360.2		No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span> Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span>	
WGS84 <input type="checkbox"/>		Long / Easting: 6330502.0		Boundary polygon captured: <input type="checkbox"/> Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>	
Unknown <input type="checkbox"/>		<b>ZONE:</b> 51			

**LAND TENURE:**

Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/> SLK/Pole <span style="border: 1px solid black; padding: 0 20px;"> </span> to <span style="border: 1px solid black; padding: 0 20px;"> </span>	Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>	

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☐ Full survey ☐ Area observed (m<sup>2</sup>):  

**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:  

**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:    
(Refer to field manual for list)

**WHAT COUNTED:** Plants ☐ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:	Area of pop (m <sup>2</sup> ): <span style="border: 1px solid black; padding: 0 20px;"> </span> <small>Note: Pls record count as numbers (not percentages) for database.</small>
Alive	9	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	

**QUADRATS PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m<sup>2</sup>):  

**Summary Quad. Totals:** Alive  

**REPRODUCTIVE STATE:** Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☒  
Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower: 10%

**CONDITION OF PLANTS:** Healthy ☐ Moderate ☒ Poor ☒ Senescent ☐

**COMMENT:**  

THREATS - type, agent and supporting information: <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats &amp; agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (&lt;12mths), M=Medium (&lt;5yrs), L=Long (5yrs+)</small>	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• Road widening <span style="border: 1px solid black; padding: 0 20px;"> </span>	N	M	S-M
• Competition with weeds <span style="border: 1px solid black; padding: 0 20px;"> </span>	M	M	
• Small population size <span style="border: 1px solid black; padding: 0 20px;"> </span>	L	M	

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:   Sheet No.:   Record Entered in Database ☐



## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>					
Wetland <input type="checkbox"/>	Specific Landform Element: _____				
	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input checked="" type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION\*

1. Degraded roadside with Scattered Anigozanthos rufus, Gompholobium baxteri, Asphodelus fistulosus, Olearia sp., Pinus pinaster and significant invasion by Eragrostis curvula and Avena barbata.
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### ASSOCIATED

#### SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☐ Good ☐ Degraded ☒ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

**FLORA AUTHORISATION / LICENCE No:** FT61000788 Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licenses should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_  
Lodgement No: KSW20822 ACC 9874 specimen retained

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐

Appendix 2.14 *Pityrodia chrysocalyx* – P3 – Western population

Department of Biodiversity, Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

*Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/biodiversity/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/biodiversity/threatened-species-and-communities/threatened-plants)*

<b>TAXON:</b> <i>Pityrodia chrysocalyx</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>OBSERVATION DATE:</b> 24/08/2022	<b>CONSERVATION STATUS:</b> P3 <b>New population</b> <input checked="" type="checkbox"/>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters	<b>PHONE:</b> 0416558774	
<b>ROLE:</b> Environmental Officer	<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au		

<b>DESCRIPTION OF LOCATION</b> (Provide at least nearest town/named locality, and the distance and direction to that place): <span style="border: 1px solid black; padding: 0 10px;"> </span>	
Rollond Road 7.2km west of Esperance-Coolgardie Highway. Rollond Road at SLK 7.26.	
Plan 152238 Lot 1515	
Narrow road reserve bordering intact bushland. Sandy soil. No signs of fire. Decline, shallow valley. <b>Reserve No.:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>	
<b>DBC DISTRICT:</b> Esperance	<b>LGA:</b> Esperance <b>Land manager present:</b> <input checked="" type="checkbox"/>

<b>DATUM:</b>		<b>COORDINATES:</b> (If UTM coords provided, Zone is also required)		<b>METHOD USED:</b>	
GDA94 / MGA94 <input checked="" type="checkbox"/>	Lat / Northing:	DecDegrees <input type="checkbox"/>	DegMinSec <input type="checkbox"/>	UTMs <input checked="" type="checkbox"/>	GPS <input checked="" type="checkbox"/>
AGD84 / AMG84 <input type="checkbox"/>	Long / Easting:	No. satellites: <span style="border: 1px solid black; padding: 0 10px;"> </span>		Differential GPS <input type="checkbox"/>	
WGS84 <input type="checkbox"/>	Zone: 51	Boundary polygon captured: <input type="checkbox"/>		Map used: <span style="border: 1px solid black; padding: 0 10px;"> </span>	
Unknown <input type="checkbox"/>		Map scale: <span style="border: 1px solid black; padding: 0 10px;"> </span>			

<b>LAND TENURE:</b>	Nature reserve <input type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input checked="" type="checkbox"/>
	National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
	Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLK/Pole <span style="border: 1px solid black; padding: 0 10px;"> </span> to <span style="border: 1px solid black; padding: 0 10px;"> </span>	Specify other: <span style="border: 1px solid black; padding: 0 10px;"> </span>

<b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input checked="" type="checkbox"/> Full survey <input type="checkbox"/>	<b>Area observed (m²):</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>EFFORT:</b> Time spent surveying (minutes): 70	<b>No. of minutes spent / 100 m²:</b> <span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input type="checkbox"/> Count method: <span style="border: 1px solid black; padding: 0 10px;"> </span>	(Refer to field manual for list)

<b>WHAT COUNTED:</b>	Plants <input type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>
<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	<b>Seedlings:</b>
Alive	415	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>QUADRAT'S PRESENT:</b>	No. <span style="border: 1px solid black; padding: 0 10px;"> </span>	Size <span style="border: 1px solid black; padding: 0 10px;"> </span>	Data attached <input type="checkbox"/>
<b>Summary Quad. Totals:</b> Alive	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
<b>REPRODUCTIVE STATE:</b>	Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>
	Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehiscent fruit <input type="checkbox"/>
			Flower <input checked="" type="checkbox"/>
			Percentage in flower: 70%

<b>CONDITION OF PLANTS:</b> Healthy <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Poor <input type="checkbox"/> Senescent <input type="checkbox"/>
<b>COMMENT:</b> Only a very small section of the bushland block was surveyed, total population is likely to be significantly higher

THREATS - type, agent and supporting information:	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Road widening	N	L	S-M
• <span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>
• <span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>	<span style="border: 1px solid black; padding: 0 10px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by:   Sheet No.:   Record Entered In Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input checked="" type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>	0-10% <input type="checkbox"/>	Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	30-50% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	50-100% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____		Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Mitretrichia)

1. Calothamnus quadrifidus dominated shrubland with mixed Myrtaceae, Proteaceae and Fabaceae shrubs. Associated species include Calothamnus gracilis, Melaleuca glaberrima, Persoonia helix, Beyeria sulcata

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp: \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☐ Good ☐ Degraded ☐ Completely degraded ☐

**COMMENT:** \_\_\_\_\_

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKER:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE No:** \_\_\_\_\_ Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb Lodgement No: \_\_\_\_\_ KSW10722

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental officer Signed: \_\_\_\_\_ Date: 30/01/2023


Please return completed form to Species and Communities Program DBCA,

Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐

Appendix 2.15 *Eucalyptus dolichorhyncha* – P4 - Eastern population


 Department of Biodiversity, Conservation and Attractions

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Version 1.4 March 2021

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<b>TAXON:</b> <i>Eucalyptus dolichorhyncha</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>OBSERVATION DATE:</b> 31/08/2022	<b>CONSERVATION STATUS:</b> P4	<b>New population</b> <input checked="" type="checkbox"/>
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0416558774
<b>ROLE:</b> Environmental Officer	<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au		

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
 Rollond road at SLK 5.09-5.98  
 Narrow road reserve, Clay-loam soil. No signs of fire.

**Reserve No.:**    
**DBCA DISTRICT:** Esperance **LGA:** Esperance **Land manager present:** ☐

**DATUM:** ☒ GDA94 / MGA94 ☐ AGD84 / AMG84 ☐ WGS84 ☐ Unknown  
**COORDINATES:** (If UTM coords provided, Zone is also required)  
 DecDegrees ☐ DegMinSec ☐ UTM ☒  
**Lat / Northing:** 374629.42  
**Long / Easting:** 6330494.38  
**ZONE:** 51  
**METHOD USED:** ☒ GPS ☐ Differential GPS ☐ Map ☐  
 No. satellites:   Map used:    
 Boundary polygon captured: ☐ Map scale:

**LAND TENURE:**  
 Nature reserve ☐ Timber reserve ☐ Private property ☐ Rail reserve ☐ Shire road reserve ☒  
 National park ☐ State forest ☐ Pastoral lease ☐ MRWA road reserve ☐ Other Crown reserve ☐  
 Conservation park ☐ Water reserve ☐ UCL ☐ SLK/Pole   to   Specify other:

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☐ Full survey ☐ Area observed (m<sup>2</sup>):    
**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:    
**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:    
 (Refer to field manual for list)  
**WHAT COUNTED:** Plants ☐ Clumps ☐ Clonal stems ☐  

TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	11	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

 Area of pop (m<sup>2</sup>):    
 Note: Pls record count as numbers (not percentages) for database.  
**QUADRAT \$ PRESENT:** No.   Size   Data attached ☐ Total area of quadrats (m<sup>2</sup>):    
**Summary Quad. Totals:** Alive

**REPRODUCTIVE STATE:** Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐  
 Immature fruit ☐ Fruit ☐ Dehiscent fruit ☐ Percentage in flower:  %

**CONDITION OF PLANTS:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐  
**COMMENT:**

THREATS - type, agent and supporting information: <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats &amp; agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (&lt;12mths), M=Medium (&lt;5yrs), L=Long (5yrs+)</small>	Current Impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• Road widening	N	E	S-M
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

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 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered In Database ☐





Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland  
(Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges  
(Mitregrana)

1. Mixed Mallee woodland with scattered Melaleucas and Fabaceae shrubs. Associated species include:  
*Enchylaena tomentosa*, *Pultenaea arida*, *Coopernookia strophilata*, *Eremophila dicranantha*

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp. \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☐ Very good ☒ Good ☐ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire Intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☒ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☒ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE No:** FT61000788. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb  
Lodgement No: KSW12222 ACC 9770


**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerden Role: Environmental officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au  
RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐

Appendix 2.16 *Eucalyptus dolichorhyncha* – P4 - Western population

 Department of Biodiversity, Conservation and Attractions

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Version 1.4 March 2021

**Please complete as much of the form as possible, with emphasis on those sections bordered in black.** For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at [www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants](http://www.dbca.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)

<b>TAXON:</b> <i>Eucalyptus dolichorhyncha</i>		<b>TPFL Pop. No.:</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>OBSERVATION DATE:</b> 13/07/2022		<b>CONSERVATION STATUS:</b> P4 <span style="float: right;"><b>New population</b> <input checked="" type="checkbox"/></span>	
<b>OBSERVER/S:</b> Katherine Walkerden, Julie Waters		<b>PHONE:</b> 0418558774	
<b>ROLE:</b> Environmental Officer		<b>ORGANISATION:</b> Shire of Esperance	
<b>EMAIL:</b> Katherine.Walkerden@esperance.wa.gov.au			

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
 Rollond Road SLK 8.01 and 14.19

**Reserve No.:**

<b>DBCA DISTRICT:</b> Esperance		<b>LGA:</b> Esperance		<b>Land manager present:</b> <input checked="" type="checkbox"/>	
<b>DATUM:</b> <input checked="" type="checkbox"/> GDA94 / MGA94 <input type="checkbox"/> AGD84 / AMG84 <input type="checkbox"/> WGS84 <input type="checkbox"/> Unknown <b>COORDINATES:</b> (If UTM coords provided, Zone is also required) DecDegrees <input type="checkbox"/> DegMinSec <input type="checkbox"/> UTM <input checked="" type="checkbox"/> <b>Lat / Northing:</b> 370040 <b>Long / Easting:</b> 6330450 <b>ZONE:</b> 51 <b>METHOD USED:</b> <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/> No. satellites: <span style="border: 1px solid black; padding: 0 20px;"> </span> Map used: <span style="border: 1px solid black; padding: 0 20px;"> </span> Boundary polygon captured: <input type="checkbox"/> Map scale: <span style="border: 1px solid black; padding: 0 20px;"> </span>					
<b>LAND TENURE:</b> Nature reserve <input type="checkbox"/> Timber reserve <input type="checkbox"/> Private property <input type="checkbox"/> Rail reserve <input type="checkbox"/> Shire road reserve <input checked="" type="checkbox"/> National park <input type="checkbox"/> State forest <input type="checkbox"/> Pastoral lease <input type="checkbox"/> MRWA road reserve <input type="checkbox"/> Other Crown reserve <input type="checkbox"/> Conservation park <input type="checkbox"/> Water reserve <input type="checkbox"/> UCL <input type="checkbox"/> SLK/Pole <span style="border: 1px solid black; padding: 0 20px;"> </span> to <span style="border: 1px solid black; padding: 0 20px;"> </span> Specify other: <span style="border: 1px solid black; padding: 0 20px;"> </span>					

**AREA ASSESSMENT:** Edge survey ☐ Partial survey ☐ Full survey ☐ Area observed (m<sup>2</sup>):    
**EFFORT:** Time spent surveying (minutes):   No. of minutes spent / 100 m<sup>2</sup>:    
**POP'N COUNT ACCURACY:** Actual ☐ Extrapolation ☐ Estimate ☐ Count method:    
 (Refer to field manual for list)

<b>WHAT COUNTED:</b>		<input type="checkbox"/> Plants <input type="checkbox"/> Clumps <input type="checkbox"/> Clonal stems <input type="checkbox"/>	
<b>TOTAL POP'N STRUCTURE:</b>	<b>Mature:</b>	<b>Juveniles:</b>	<b>Seedlings:</b>
Alive	132	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
Dead	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
<b>QUADRATS PRESENT:</b>		<b>Total area of quadrats (m<sup>2</sup>):</b> <span style="border: 1px solid black; padding: 0 20px;"> </span>	
Summary Quad. Totals: Alive		<span style="border: 1px solid black; padding: 0 20px;"> </span>	
<b>REPRODUCTIVE STATE:</b>		Percentage in flower: 90%	
Clonal <input type="checkbox"/> Vegetative <input type="checkbox"/> Flowerbud <input checked="" type="checkbox"/> Flower <input checked="" type="checkbox"/> Immature fruit <input checked="" type="checkbox"/> Fruit <input checked="" type="checkbox"/> Dehiscent fruit <input type="checkbox"/>			

**CONDITION OF PLANTS:** Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐  
**COMMENT:**

<b>THREATS - type, agent and supporting information:</b>			
Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)			
• Road widening	N	M	S-M
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>
• <span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>	<span style="border: 1px solid black; padding: 0 20px;"> </span>

Please return completed form to Species And Communities Program DBCA,  
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: [flora.data@dbca.wa.gov.au](mailto:flora.data@dbca.wa.gov.au)  
 RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.  
 Record entered by:   Sheet No.:   Record Entered in Database ☐



Department of Biodiversity,  
Conservation and Attractions

## Threatened and Priority Flora Report Form

Version 1.4 March 2021

### HABITAT INFORMATION:

<b>LANDFORM:</b>	<b>ROCK TYPE:</b>	<b>LOOSE ROCK:</b>	<b>SOIL TYPE:</b>	<b>SOIL COLOUR:</b>	<b>DRAINAGE:</b>
Crest <input type="checkbox"/>	Granite <input type="checkbox"/>	(on soil surface; eg gravel, quartz fields)	Sand <input type="checkbox"/>	Red <input type="checkbox"/>	Well drained <input type="checkbox"/>
Hill <input type="checkbox"/>	Dolerite <input type="checkbox"/>		Sandy loam <input type="checkbox"/>	Brown <input type="checkbox"/>	Seasonally inundated <input type="checkbox"/>
Ridge <input type="checkbox"/>	Laterite <input type="checkbox"/>		Loam <input type="checkbox"/>	Yellow <input type="checkbox"/>	Permanently inundated <input type="checkbox"/>
Outcrop <input type="checkbox"/>	Ironstone <input type="checkbox"/>	0-10% <input type="checkbox"/>	Clay loam <input type="checkbox"/>	White <input type="checkbox"/>	Tidal <input type="checkbox"/>
Slope <input type="checkbox"/>	Limestone <input type="checkbox"/>	10-30% <input type="checkbox"/>	Light clay <input type="checkbox"/>	Grey <input type="checkbox"/>	
Flat <input type="checkbox"/>	Quartz <input type="checkbox"/>	30-50% <input type="checkbox"/>	Peat <input type="checkbox"/>	Black <input type="checkbox"/>	
Open depression <input type="checkbox"/>	Specify other: _____	50-100% <input type="checkbox"/>	Specify other: _____	Specify other: _____	
Drainage line <input type="checkbox"/>					
Closed depression <input type="checkbox"/>	Specific Landform Element: _____				
Wetland <input type="checkbox"/>	(Refer to field manual for additional values)				
<b>CONDITION OF SOIL:</b>	Dry <input type="checkbox"/>	Moist <input type="checkbox"/>	Waterlogged <input type="checkbox"/>	Inundated <input type="checkbox"/>	

### VEGETATION

#### CLASSIFICATION:

Eg: 1. Banksia woodland (B. attenuata, B. ilicifolia);  
2. Open shrubland (Hibbertia sp., Acacia spp.);  
3. Isolated clumps of sedges (Mitretragona)

1. Mixed Mallee over Melaleuca uncinata and mixed understorey shrubs. Associated species include: Prostanthera serpyllifolia, Lissanthe rubicunda, Pimelea cracens, Halganina sp. Peak Eleanor

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### ASSOCIATED SPECIES:

Other (non-dominant) spp \_\_\_\_\_

\* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 Australian Soil and Land Survey Field Handbook guidelines – refer to field manual for further information and structural formation table.

**CONDITION OF HABITAT:** Pristine ☐ Excellent ☒ Very good ☒ Good ☒ Degraded ☐ Completely degraded ☐

### COMMENT:

**FIRE HISTORY:** Last Fire: Season/Month: \_\_\_\_\_ Year: \_\_\_\_\_ Fire intensity: High ☐ Medium ☐ Low ☐ No signs of fire ☐

**FENCING:** Not required ☐ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☐ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

**OTHER COMMENTS:** (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FLORA AUTHORISATION / LICENCE NO:** FT61000788. Note if only observing plants (i.e. no specimens or plant material is taken) then no authorisation/licence is required. For further information on authorisation and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licenses should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☒ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**LODGE:** WA Herb \_\_\_\_\_  
Lodgement No: KSW8822 ACC 9839 - PERTH 9516441

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☒ Other: \_\_\_\_\_

Submitter of Record: Katherine Walkerdon Role: Environmental officer Signed: \_\_\_\_\_ Date: 30/01/2023

Please return completed form to Species And Communities Program DBCA,  
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to Flora Administrative Officer, Species and Communities Program.

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered In Database ☐

### Appendix 3: Description of Threatened and Priority Flora Species with the Potential to occur within the 'Rollond Road, SLK 0-15.9' Survey Area

Threatened or priority flora identified by the desktop study to be present within a 20 km radius of 'Site C – Rollond Road, SLK 0-15.9' project area, using Threatened and Priority Flora Reporting (TPFL; DBCA 2022c), WA Herbarium (DBCA 2022d) and Esperance District Threatened Flora (DBCA 2022a).

Nt. Acronyms used in the table include priority flora (P), threatened flora (TF), Biodiversity Conservation (BC) Act 2018, Environmental Protection and Biodiversity Conservation (EPBC) Act 1999, critically endangered (CN) and endangered (EN).

Species	Cons Status	Associated Habitat	Likely to occur	Distance from site (km)
<i>Acacia diaphana</i>	P1	Salmon Gums area, waterlogged depressions in brown/grey sandy clay. Tolerates low level salinity	Unlikely	16681.09591
<i>Aotus lanea</i>	P1	Grey clayey sand, yellow clay, deep sand. Edge of salt lakes and valleys	Unlikely	17544.20569
<i>Cyathostemon</i> sp. Esperance (A. Fairall 2431)	P1	Only two records – salt lake and sandy gravel.	Unlikely	14088.88883
<i>Dicrastylis archeri</i>	P1	Associated with open Mallee woodland.	Potentially	11891.92478
<i>Lepidium fasciculatum</i>	P1	Scattered distribution all over Southern Australia. Semi-arid areas	Potentially	18463.05921
<i>Leucopogon rugulosus</i> (sp. Roberts Swamp)	P1	Recorded along Rollonds Rd and Fields Rd area. Associated with open Mallee.	Potentially	14594.49889
<i>Acacia amyctica</i>	P2	Salmon Gums area on well-drained loams and sandy clay plains with <i>Eucalyptus flocktoniae</i> low woodland.	Potentially	10794.85394
<i>Aotus</i> sp. Dundas (M.A. Burgman 2835)	P2	Recorded across a variety of habitats, including open Mallee woodlands, clay, loam, limestone and on the periphery of salt lakes.	Potentially	6301.616765
<i>Stenanthera lacsilaria</i>	P2	Grey-white fine sand over clay on the margins of salt lakes, associated w myrtaceous shrubs and halophytes	Unlikely	7449.95346
<i>Conospermum sigmoideum</i>	P2	<i>Eucalyptus pleurocarpa</i> woodlands. Associated with sand. Originally only known in Frank Hann, but recently found in Cascade area. Has been recorded in burnt areas.	Potentially	10887.50684
<i>Conostephium uncinatum</i>	P2	Various habits - Deep sandy soils, edge of salt lakes, undulating plains, claypans. Most records associated with salt lakes.	Unlikely	12337.20717
<i>Halgania</i> sp. Peak Eleanor	P2	Salmon Gums area. Loamy sand. Undulating plains.	Specimens collected prior to flora surveys	7340.998393

<i>Persoonia spathulata</i>	P2	Grows in deep sandy soils, with other Proteaceae species.	Potentially	11864.40245
<i>Acacia bartlei</i>	P3	Small, localised populations, flat or gently undulating landscapes (mostly cleared for ag) often in waterlogged depressions in brown or grey sandy loam or clay loam often with <i>E. occidentalis</i>	Potentially, Author had previously accessioned a population further along Rollond Road.	8362.512229
<i>Acacia glaucissima</i>	P3	Salmon Gums on open low/Mallee woodland with dwarf scrub or low heath. Common within the Salmon Gums & grass patch area	Likely. Species is locally common throughout Salmon Gums	184.1587336
<i>Acacia improcera</i>	P3	Sand, loamy clay on undulating plains & flats	Potentially	11817.23087
<i>Bossiaea flexuosa</i>	P3	"Recorded in Salmon Gums region – grows after fire in soil over gravel or deep sands. Mostly recorded to the west in north-grass patch area and Bremer Ranges."	Unlikely	19322.25559
<i>Conostephium marchantiorum</i>	P3	White/grey sand. Plains, creeklines, edges of salt lakes.	Unlikely	2608.873861
<i>Cyathostemon</i> sp. Salmon Gums ( <i>B. Archer</i> 769)	P3	Various soils - orange sand, white sandy, sandy clay over granite, light brown clay, saline soils. Various habitats – flats, dry river beds, claypans	Unlikely	16574.62305
<i>Daviesia pauciflora</i>	P3	White or grey sand over laterite or limestone. Flats.	Potentially	9845.479222
<i>Eremophila chamaeophila</i>	P3	Grows on light brown sandy clay loams in Eucalypt or Mallee woodland.	Potentially	9644.653445
<i>Eremophila compressa</i>	P3	Grass Patch area, open woodland with red brown clay, clay loam, sandy lam on undulating plains	Potentially	1926.98625
<i>Eucalyptus histophylla</i>	P3	Dec. Sandy loam on granite or laterite. Granite outcrops. Dundas, Northern Salmon Gums area.	Unlikely. To far south.	18095.77215
<i>Goodenia laevis</i> ssp. <i>laevis</i>	P3	Woodland with Melaleuca shrubland. Prefers limestone or white clay loam. Associated with disturbance. Grows on most road shoulder in Grass Patch, Salmon Gums area.	Likely	8277.497284



<i>Kunzea salina</i>	P3	White sand over clay at the margins of salt lakes. Typically found at the bottom of sand dune rises gently from lake floor between a community of <i>Tecticornia</i> and <i>Melaleuca</i> / <i>Eucalyptus</i> shrubland.	Unlikely	16497.75457
<i>Persoonia cymbifolia</i>	P3	Grass Patch, Salmon Gums and Cascade area. Sandy soils. On flats or in rock crevices.	Potentially	16557.99958
<i>Pityrodia chrysocalyx</i>	P3	Salmon Gums area. Sandplains with yellow sands. Associated with <i>Eucalyptus</i> Mallee woodlands with <i>Banksia media</i> and <i>Hakea</i> sp.	Possible	4391.12619
<i>Adenanthos ileticos</i>	P4	Grows on sandy soil with open <i>Eucalyptus</i> woodland. Eastern Salmon Gums area and Grass Patch area.	Potentially	4378.42465
<i>Caladenia voigtii</i>	P4	Wide variety of habitats, from granite, salt lakes and shrubland.	Potentially	9628.08355
<i>Darwinia polycephala</i>	P4	Flats, near salt lakes. Sand and clay soils. Eastern Salmon Gums to Scaddan area.	Unlikely	8488.815717
<i>Eucalyptus dolichorhyncha</i>	P4	Small areas south of Salmon gums flats or slightly rising ground with whitish to yellowish sandy clay soil	Specimens collected prior to flora survey	1249.149206
<i>Grevillea aneura</i>	P4	Grows in heath or Mallee scrub, in yellow sand or sandy loam over laterite. Mostly recorded on rises.	Potentially	1704.931372
<i>Grevillea baxteri</i>	P4	Prefers shrubby heathland with an acid sandy soil usually overlaying heavier soils. Associated with highly diverse Proteaceous shrublands.	Potentially	13100.82349
<i>Melaleuca fissurata</i>	P4	White/grey sand, sandy loam. Samphire flats, salt pans.	Unlikely	13046.3697
<i>Eremophila lactea</i>	T	Grass Patch area. White sandy clay loam. Open disturbed road verge. Mass germination after fire	Unlikely	5384.652767
<i>Eucalyptus merrickiae</i>	T	Associated with margin of salt lakes	Unlikely	5931.742996
<i>Marianthus aquilonaris</i>	T	Near Lake Hope & Johnston.	Unlikely	16857.66619

## Appendix 4: Description of Threatened and Priority Fauna Species with the Potential to occur within the 'Rollond Road, SLK 0-15.9' Survey Area

Threatened or priority Fauna identified by the desktop study to be present within a 20 km radius of 'Site C – Rollond Road, SLK 0-15.9' project area using the DBCA Threatened and Priority Fauna dataset (DBCA, 2022e) or using the EPBC Act Protected Matters Report

Nt. Acronyms used in the table include critically endangered (CR) and endangered (EN), Vulnerable (VU), other specially protected (OS), Priority (P).

Taxon	Common name	WA Constat	Habitat Description	Likely to occur
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	Densely vegetated wetlands.	No
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	Intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms.	No
<i>Calyptorhynchus latirostris</i>	Carnaby's Cockatoo	EN	Uncleared and remnant areas of woodland, shrubland and kwongan heath dominated by proteaceous species. They breed in the semiarid and subhumid interior eucalypt woodlands, principally dominated by Salmon Gum Eucalyptus salmonophloia or Wandoo Eucalyptus wandoo.	Potentially
<i>Cereopsis novaehollandiae grisea</i>	Recherche Cape Barren Goose	VU	It occurs on offshore islands and rocks, and at adjacent sites on the mainland. It inhabits grasslands and low fields of succulent herbs (comprised of Carpobrotus sp.), and occasionally occurs in open areas in taller and denser vegetation.	No
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	VU	Historically inhabited a wide range of habitats, but today it survives mostly in Jarrah Eucalyptus marginata forests and woodlands, mallee shrublands and heathlands.	Potentially
<i>Falco hypoleucos</i>	Grey Falcon	VU	The distribution of this species is restricted largely to areas of the highest annual average temperatures where there is an average annual rainfall of less than 500 mm. It favours lightly timbered and untimbered lowland plains that are crossed by tree-lined watercourses. It uses the abandoned nests of other bird species, particularly corvids.	Potentially

<i>Falco peregrinus</i>	Peregrine Falcon	OS	most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites, and prefers coastal and inland cliffs or open woodlands near water, and may even be found nesting on high city buildings.	Unlikely
<i>Leipoa ocellata</i>	Malleefowl	VU	Malleefowl are found in arid and semi-arid areas dominated by mallee eucalypts on sandy soils. They are known to also occur in Mulga ( <i>Acacia aneura</i> ), Broombush ( <i>Melaleuca uncinata</i> ), Scrub Pine ( <i>Callitris verrucosa</i> ), Eucalyptus woodlands and coastal heathlands. Malleefowl require abundant leaf litter and a sandy substrate for the successful construction of nest mounds.	Potentially
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	CR	Coastal mudflats and estuaries.	No
<i>Pezoporus occidentalis</i>	Night Parrot	CR	Spinifex grasslands in stony or sandy areas and samphire and chenopod associations on floodplains, salt lakes and clay pans. Suitable habitat is characterized by the presence of large and dense clumps of Spinifex, and it may prefer mature spinifex that is long and unburnt.	No
<i>Platycercus icterotis xanthogenys</i>	Western Rosella (inland)	P4	Open eucalypt forest and timbered areas, including cultivated land and orchards. The xanthogenys subspecies is found in drier woodland, with a heath understorey.	Potentially
<i>Thinornis rubricollis</i>	Hooded Plover	P4	Freshwater lakes, freshwater marshes, coastal saline lagoons, and sandy beaches.	No

## Appendix 5: State Threatened and Priority Flora and Fauna Definitions

Category	Definition
<b>T – Threatened</b>	<p>Taxa that 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 (Schedules 1 to 4 of the Wildlife Conservation (Rare Flora) Notice under the WC Act). Threatened flora are further ranked by the DBCA to align with IUCN Red List categories and criteria:</p> <p><b>CR:</b> Critically Endangered – considered to be facing an extremely high risk of extinction in the wild (Schedule 1);</p> <p><b>EN:</b> Endangered – considered to be facing a very high risk of extinction in the wild (Schedule 2); or</p> <p><b>VU:</b> Vulnerable – considered to be facing a high risk of extinction in the wild (Schedule 3).</p> <p><b>EX:</b> Presumed Extinct – taxa that have been adequately searched for and there is no reasonable doubt that the last individual has died (Schedule 4)</p>
<b>P1 – Priority 1</b> (Poorly known taxa)	<p>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.</p> <p>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.</p>
<b>P2 – Priority 2</b> (Poorly known taxa)	<p>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.</p> <p>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.</p>
<b>P3 – Priority 3</b> (Poorly known taxa)	<p>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.</p> <p>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.</p>
<b>P4 – Priority 4</b> (Rare, Near Threatened and other taxa in need of monitoring)	<p><b>1. Rare</b> - 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 species are usually represented on conservation lands.</p> <p><b>2. Near Threatened</b> - 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>

	3. Taxa that have been removed from the list of threatened species during the past five years for reasons other than taxonomy
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## Appendix 6: Commonwealth Definition of Threatened Flora and Fauna Species (Environment Protection and Biodiversity Conservation, EPBC Act 1999)

Category Code	Category
Ex	<b>Extinct</b> Taxa which at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.
ExW	<b>Extinct in the Wild</b> Taxa which is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
CE	<b>Critically Endangered</b> Taxa which at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
E	<b>Endangered</b> Taxa which is not critically endangered and it is facing a very high risk of extinction in the wild in the immediate or near future, as determined in accordance with the prescribed criteria.
V	<b>Vulnerable</b> Taxa which is not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
CD	<b>Conservation Dependent</b> Taxa which at a particular time if, at that time, the species is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.



## Appendix 7: State Definition of Threatened Ecological Communities

Category Code	Category
<b>PTD</b>	<p><b>Presumed Totally Destroyed</b></p> <p>An ecological community will be listed as Presumed Totally Destroyed if there are no recent records of the community being extant and either of the following applies:</p> <ul style="list-style-type: none"> <li>(i) records within the last 50 years have not been confirmed despite thorough searches or known likely habitats or;</li> <li>(ii) all occurrences recorded within the last 50 years have since been destroyed.</li> </ul>
<b>CE</b>	<p><b>Critically Endangered</b></p> <p>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, meeting any one of the following criteria:</p> <ul style="list-style-type: none"> <li>(i) The estimated geographic range and distribution has been reduced by at least 90% and is either continuing to decline with total destruction imminent, or is unlikely to be substantially rehabilitated in the immediate future due to modification;</li> <li>(ii) The current distribution is limited ie. highly restricted, having very few small or isolated occurrences, or covering a small area;</li> <li>(iii) The ecological community is highly modified with potential of being rehabilitated in the immediate future.</li> </ul>
<b>E</b>	<p><b>Endangered</b></p> <p>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. The ecological community must meet any one of the following criteria:</p> <ul style="list-style-type: none"> <li>(i) The estimated geographic range and distribution has been reduced by at least 70% and is either continuing to decline with total destruction imminent in the short term future, or is unlikely to be substantially rehabilitated in the short term future due to modification;</li> <li>(ii) The current distribution is limited ie. highly restricted, having very few small or isolated occurrences, or covering a small area;</li> <li>(iii) The ecological community is highly modified with potential of being rehabilitated in the short term future.</li> </ul>
<b>V</b>	<p><b>Vulnerable</b></p> <p>An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing high risk of total destruction in the medium to long term future. The ecological community must meet any one of the following criteria:</p> <ul style="list-style-type: none"> <li>(i) The ecological community exists largely as modified occurrences that are likely to be able to be substantially restored or rehabilitated;</li> <li>(ii) The ecological community may already be modified and would be vulnerable to threatening process, and restricted in range or distribution;</li> </ul>

	(iii) The ecological community may be widespread but has potential to move to a higher threat category due to existing or impending threatening processes.
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## Appendix 8: State Definition of Priority Ecological Communities

Category Code	Category
P1	<b>Poorly-known ecological communities</b> Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist.
P2	<b>Poorly-known ecological communities</b> Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation.
P3	<b>Poorly known ecological communities</b> (i) 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: (ii) Communities known from a few widespread occurrences, which are either large or within Significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; (iii) Communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing and inappropriate fire regimes.
P4	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.
P5	<b>Conservation Dependent ecological communities</b> 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.

## Appendix 9: Commonwealth Definition of Threatened Ecological Communities

Three categories exist for listing threatened ecological communities under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

Listing Category Code	Explanation of Category
<b>Critically endangered</b>	If, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future.
<b>Endangered</b>	If, at that time, it is not critically endangered and is facing a very high risk of extinction in the wild in the near future.
<b>Vulnerable</b>	If, at that time, it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium term future.

## Appendix 10: Categories and Control of Declared (Plant) Pests in Western Australia

Control Category	Control Measures
<p><b>C1 (Exclusion)</b>            '(a) Category 1 (C1) — Exclusion: if in the opinion of the Minister introduction of the declared pest into an area or part of an area for which it is declared should be prevented'            Pests will be assigned to this category if they are not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.</p>	<p>In relation to a category 1 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.</p>
<p><b>C2 (Eradication)</b>            '(b) Category 2 (C2) — Eradication: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is feasible'.            Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.</p>	<p>In relation to a category 2 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.</p>
<p><b>C3 (Management)</b>            '(c) Category 3 (C3) — Management: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is not feasible but that it is necessary to —            (i) alleviate the harmful impact of the declared pest in the area; or            (ii) reduce the number or distribution of the declared pest in the area; or            (iii) prevent or contain the spread of the declared pest in the area.'            Pests will be assigned to this category if they are established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest.</p>	<p>In relation to a category 3 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to —            (a) alleviate the harmful impact of the declared pest in the area for which it is declared; or            (b) reduce the number or distribution of the declared pest in the area for which it is declared; or            (c) prevent or contain the spread of the declared pest in the area for which it is declared.</p>





## Appendix 11: Definition of Vegetation Condition Scale

For the south west and interzone botanical provinces

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

## Appendix 12: Carnaby's Cockatoo foraging habitat scoring template

Adapted from Tables A1 and A2 of Department of Agriculture, Water and the Environment (2022)

Starting score	Carnaby's Cockatoo	
10	<p><b>Start at a score of 10</b> if your site is native shrubland, kwongan heathland or woodland, dominated by proteaceous plant species such as <i>Banksia</i> spp. (including <i>Dryandra</i> spp.), <i>Hakea</i> spp. and <i>Grevillea</i> spp., as well as native eucalypt woodland and forest that contains foraging species, within the range of the species, including along roadsides and parkland cleared areas. Also includes planted native vegetation.</p> <p><b>*This tool only applies to sites equal to or larger than 1 hectare in size.</b></p>	
Attribute	Subtractions	Context adjustor (attributes reducing functionality of foraging habitat)
Foraging potential	-2	<b>Subtract 2</b> from your score if there is no evidence of feeding debris on your site.
Connectivity	-2	<b>Subtract 2</b> from your score if you have evidence to conclude that there is no other foraging habitat within 1km of your site.
Proximity to breeding	-2	<b>Subtract 2</b> if you have evidence to conclude that your site is more than 12km from breeding habitat.
Proximity to roosting	-1	<b>Subtract 1</b> if you have evidence to conclude that your site is more than 20km from a known night roosting habitat.
Impact from significant plant disease	-1	<b>Subtract 1</b> if your site has disease present (e.g. <i>Phytophthora</i> spp. or Marri canker) and the disease is preferred food plants present.
Total score	Enter score	
Other considerations for assessment of foraging habitat	<ul style="list-style-type: none"> <li>- The presence, extent and density (including foliage cover and flowering density) of all plant species that provide foraging, including non-native food sources used</li> <li>- The distribution and size of foraging habitat in proximity (e.g. up to 12 km) to the impact site.</li> <li>- Site degradation (such as cleared, disturbed or degraded areas).</li> <li>- The fire history of the impact site.</li> <li>- Landscape characteristics around the impact site, including details of roosting and breeding habitat in proximity (e.g. up to 20km for roosting and 12km for breeding); and</li> <li>- The location and details of watering points that could support the use of the foraging habitat.</li> </ul>	
Appraisal	<p>To support your habitat score, you should provide an overall appraisal of the habitat on the impact site and within 20km of the impact area to clearly explain and justify the score. It should include discussion on the foraging habitat's proximity to other resources (e.g. exact distance to proximate resources), frequency of use of proximate sites, the degree of evidence and description of vegetation type and condition.</p>	

## Appendix 13: EPBC Act Protected Matters Report

### Listed Threatened Ecological Communities:

			Presence	
Community Name	Threatened Category	Rank	Text	Buffer Status
Proteaceae Dominated Kwongan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Endangered	Likely	Community likely to occur within area	In feature area

### Listed Threatened Species:

Scientific Name	Common Name	Class	Simple Presence	Presence Text	Threatened Category	Migratory Status
<i>Thunnus maccoyii</i>	Southern Bluefin Tuna	Fish	Likely	Species or species habitat likely to occur within area	Conservation Dependent	
<i>Galeorhinus galeus</i>	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark	Shark	May	Species or species habitat may occur within area	Conservation Dependent	
<i>Limosa lapponica menzbieri</i>	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit	Bird	May	Species or species habitat may occur within area	Critically Endangered	
<i>Calidris ferruginea</i>	Curlew Sandpiper	Bird	Known	Species or species habitat known to occur within area	Critically Endangered	Migratory
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	Bird	Likely	Species or species habitat likely to occur within area	Critically Endangered	Migratory
<i>Rhizanthella johnstonii</i>	South Coast Underground Orchid	Plant	Known	Species or species habitat known to occur within area	Critically Endangered	
<i>Balaenoptera musculus</i>	Blue Whale	Mammal	May	Species or species habitat may occur within area	Endangered	Migratory

<i>Diomedea sanfordi</i>	Northern Royal Albatross	Bird	May	Species or species habitat may occur within area	Endangered	Migratory
<i>Conostylis lepidospermoides</i>	Sedge Conostylis	Plant	Known	Species or species habitat known to occur within area	Endangered	
<i>Neophoca cinerea</i>	Australian Sea-lion, Australian Sea Lion	Mammal	Likely	Species or species habitat likely to occur within area	Endangered	
<i>Macronectes giganteus</i>	Southern Giant-Petrel, Southern Giant Petrel	Bird	May	Species or species habitat may occur within area	Endangered	Migratory
<i>Diomedea dabbenena</i>	Tristan Albatross	Bird	May	Species or species habitat may occur within area	Endangered	Migratory
<i>Caretta caretta</i>	Loggerhead Turtle	Reptile	Likely	Breeding likely to occur within area	Endangered	Migratory
<i>Dermochelys coriacea</i>	Leatherback Turtle, Leathery Turtle, Luth	Reptile	Likely	Breeding likely to occur within area	Endangered	Migratory
<i>Eubalaena australis</i>	Southern Right Whale	Mammal	Known	Breeding known to occur within area	Endangered	Migratory (as <i>Balaena glacialis australis</i> )
<i>Anigozanthos bicolor subsp. minor</i>	Little Kangaroo Paw, Two-coloured Kangaroo Paw, Small Two-colour Kangaroo Paw	Plant	Likely	Species or species habitat likely to occur within area	Endangered	
<i>Pseudomys shortridgei</i>	Heath Mouse, Dayang, Heath Rat	Mammal	May	Species or species habitat may occur within area	Endangered	
<i>Thalassarche cauta</i>	Shy Albatross	Bird	Likely	Foraging, feeding or related behaviour likely to occur within area	Endangered	Migratory

<i>Pezoporus occidentalis</i>	Night Parrot	Bird	May	Species or species habitat may occur within area	Endangered	
<i>Ricinocarpus trichophorus</i>	Barrens Wedding Bush	Plant	May	Species or species habitat may occur within area	Endangered	
<i>Calidris canutus</i>	Red Knot, Knot	Bird	May	Species or species habitat may occur within area	Endangered	Migratory
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Bird	May	Species or species habitat may occur within area	Endangered	
<i>Zanda latirostris</i>	Carnaby's Black Cockatoo, Short-billed Black-cockatoo	Bird	Known	Breeding known to occur within area	Endangered (listed as <i>Calyptorhynchus latirostris</i> )	
<i>Thalassarche impavida</i>	Campbell Albatross, Campbell Black-browed Albatross	Bird	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Diomedea antipodensis</i>	Antipodean Albatross	Bird	Likely	Foraging, feeding or related behaviour likely to occur within area	Vulnerable	Migratory
<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)	Bird	May	Species or species habitat may occur within area	Vulnerable	
<i>Carcharodon carcharias</i>	White Shark, Great White Shark	Shark	Known	Foraging, feeding or related behaviour known to occur within area	Vulnerable	Migratory
<i>Phoebastria fusca</i>	Sooty Albatross	Bird	May	Species or species habitat may	Vulnerable	Migratory



				occur within area		
<i>Falco hypoleucos</i>	Grey Falcon	Bird	Likely	Species or species habitat likely to occur within area	Vulnerable	
<i>Macronectes halli</i>	Northern Giant Petrel	Bird	Likely	Foraging, feeding or related behaviour likely to occur within area	Vulnerable	Migratory
<i>Thalassarche melanophris</i>	Black-browed Albatross	Bird	Likely	Foraging, feeding or related behaviour likely to occur within area	Vulnerable	Migratory
<i>Chelonia mydas</i>	Green Turtle	Reptile	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Halobaena caerulea</i>	Blue Petrel	Bird	May	Species or species habitat may occur within area	Vulnerable	
<i>Leipoa ocellata</i>	Malleefowl	Bird	Known	Species or species habitat known to occur within area	Vulnerable	
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover	Bird	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Thalassarche steadi</i>	White-capped Albatross	Bird	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	Bird	Likely	Species or species habitat likely to occur within area	Vulnerable	Migratory
<i>Diomedea exulans</i>	Wandering Albatross	Bird	Likely	Foraging, feeding or	Vulnerable	Migratory

				related behaviour likely to occur within area		
<i>Diomedea epomophora</i>	Southern Royal Albatross	Bird	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Cereopsis novaehollandiae grisea</i>	Cape Barren Goose (south-western), Recherche Cape Barren Goose	Bird	Likely	Species or species habitat likely to occur within area	Vulnerable	
<i>Rhincodon typus</i>	Whale Shark	Shark	May	Species or species habitat may occur within area	Vulnerable	Migratory
<i>Pterodroma mollis</i>	Soft-plumaged Petrel	Bird	May	Species or species habitat may occur within area	Vulnerable	
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Bird	Known	Foraging, feeding or related behaviour known to occur within area	Vulnerable	
<i>Carcharias taurus</i> (west coast population)	Grey Nurse Shark (west coast population)	Shark	Likely	Species or species habitat likely to occur within area	Vulnerable	
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	Mammal	Likely	Species or species habitat likely to occur within area	Vulnerable	

#### Appendix 14: Swamp Yate (*Eucalyptus occidentalis*) woodland in seasonally-inundated basins - Community Description

Description obtained from: Ecologia for Grange Resources Limited (2008) Southdown Magnetite Proposal. Regional Flora and vegetation assessment. Unpublished Report

##### Swamp Yate (*Eucalyptus occidentalis*) woodland in seasonally-inundated basins

### Community Description

The centre of these sumplands was usually inhabited by Swamp Yate (*Eucalyptus occidentalis*) low woodland often with an understorey of the Saltwater Paperbark (*Melaleuca cuticularis*). Peripheral to the central seasonally-inundated basin of these wetlands there was often a waterlogged zone of *E. occidentalis* associated with *Kunzea recurva* heath to open scrub and/or the small trees *Melaleuca preissiana* and *Banksia littoralis* and a number of mallees (primarily *Eucalyptus decipiens* subsp. *adesmophloia*). Fringing the wetland there was usually an *Anarthria laevis* sedgeland. However in the wetlands where there was shallow laterite, the sedgeland was usually replaced with a *Pericalymma ellipticum* heath.

The understorey shrubs of this vegetation were typically very open. *Melaleuca cuticularis*, *Kunzea recurva* and *Hakea nitida* generally formed an open tall shrub layer. *Hakea denticulata*, *Hakea laurina*, *Hakea varia*, *Exocarpos sparteus*, *Agonis theiformis*, *Lambertia inermis* and *Nuytsia floribunda* were also sometimes present in the seasonally waterlogged areas fringing the sumplands. Other common shrub taxa, recorded at low density across the sampled sites were *Isopogon trilobus*, *Acacia pulchella* var. *glaberrima*, *Taxandria spathulata*, *Astartea glomerata*, *Astartea aspera*, *Beaufortia empetrifolia*, *Melaleuca concinna* and *Conothamnus aureus*. Other mid and low shrub species recorded at lower abundance included *Acacia biflora*, *Acacia luteola*, *A. subcaerulea*, *Adenanthos cuneatus*, *Banksia baueri*, *Banksia dryandroides*, *Bossiaea praetermissa*, *Daviesia inflata*, *Dryandra falcata*, *Dryandra mucronulata* subsp. *mucronulata*, *Dryandra tenuifolia* var. *tenuifolia*, *Gompholobium confertum*, *Hibbertia lineata*, *Leucopogon conostephioides*, *Melaleuca subtrigona*, *Petrophile squamata* subsp. *squamata*, *Petrophile media*, *Spyridium majoranifolium*, *Stirlingia anethifolia* and *Thomasia stelligera*. The perennial herbs *Villarsia parnassifolia*, *Anthotium humile*, *Stylidium corymbosum*, *Goodenia filiformis* and *Velleia trinervis* were abundant in the wetlands in good condition. These herbs inhabited the shallowly-inundated zone of the wetland and were most apparent when the water receded and the herbs were in flower in late summer. A dense ground layer was generally present in the seasonally waterlogged fringe of the sumplands and this was dominated by rushes and sedges including *Anarthria laevis*, *Baumea juncea*, *Gahnia ancistrophylla*, *Lepidosperma striatum*, *Schoenus laevigatus*, *Schoenus subfascicularis* and *Tricostularia compressa*. A suite of native grasses was also recorded including *Amphipogon amphipogonoides*, *Austrostipa hemipogon*, *Cyperochloa hirsuta*, *Deyeuxia quadriseta* and *Neurachne alopecuroides*. Naturalised alien grasses and herbs were prevalent in the more disturbed wetlands and these included *\*Aira caryophyllea*, *\*Cirsium vulgare*, *\*Conyza parva*, *\*Conyza sumatrensis*, *\*Hordeum leporinum*, *\*Hypochaeris glabra*, *Juncus pallidus*, *\*Lagurus ovatus*, *\*Pennisetum clandestinum*, *\*Pseudognaphalium luteoalbum*, *\*Rumex crispus*, *\*Solanum nigrum* and *\*Vulpia myuros* var. *megalura*.

## Appendix 15: Traffic Count Data – Rollond Road

### MetroCount Traffic Executive Daily Classes

#### DailyClass-172 -- English (ENA)

##### Datasets:

**Site:** [604\_000240\_000200] Rolland Road West of Highway  
**Attribute:** RURAL  
**Direction:** 8 - East bound A>B, West bound B>A. **Lane:** 0  
**Survey Duration:** 0:00 Wednesday, 6 November 2019 => 11:32 Friday, 6 December 2019,  
**Zone:**  
**File:** 604\_000240\_000200 0 2019-12-06 1131.EC0 (Plus )  
**Identifier:** GP311BX6 MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.02)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

##### Profile:

**Filter time:** 0:00 Wednesday, 6 November 2019 => 11:32 Friday, 6 December 2019  
**(30.4808)**  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = East, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 465 / 471 (98.73%)

### Daily Classes

**DailyClass-172**

**Site:** 604\_000240\_000200.0.1EW  
**Description:** Rolland Road West of Highway  
**Filter time:** 0:00 Wednesday, 6 November 2019 => 11:32 Friday, 6 December 2019  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

**Monday, 11 November 2019**

	1	2	3	4	5	6	7	8	9	10	11	12
<b>Total</b>												
<b>Mon</b> 27	10	0	1	0	0	0	0	0	5	0	11	0
(%)	37.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	18.5	0.0	40.7	0.0
<b>Tue</b> 19	4	1	1	1	0	0	0	0	4	0	8	0
(%)	21.1	5.3	5.3	5.3	0.0	0.0	0.0	0.0	21.1	0.0	42.1	0.0
<b>Wed</b> 26	7	1	3	0	0	0	0	0	2	0	13	0
(%)	26.9	3.8	11.5	0.0	0.0	0.0	0.0	0.0	7.7	0.0	50.0	0.0
<b>Thu</b> 29	8	0	5	0	0	0	0	0	0	0	16	0
(%)	27.6	0.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.2	0.0
<b>Fri</b> 12	2	0	2	1	0	0	0	0	0	0	7	0
(%)	16.7	0.0	16.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0	58.3	0.0
<b>Sat</b> 12	4	0	1	0	0	0	0	0	4	1	2	0
(%)	33.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0	33.3	8.3	16.7	0.0
<b>Sun</b> 8	5	1	1	0	0	0	0	0	0	1	0	0
(%)	62.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0

**Average daily volume**

<b>Entire week</b>	6	0	2	0	0	0	0	0	2	0	8	0
19												
(%)	30.1	2.3	10.5	1.5	0.0	0.0	0.0	0.0	11.3	1.5	42.9	0.0
<b>Weekdays</b>	6	0	2	0	0	0	0	0	2	0	11	0
23												
(%)	27.4	1.8	10.6	1.8	0.0	0.0	0.0	0.0	9.7	0.0	48.7	0.0
<b>Weekend</b>	5	1	1	0	0	0	0	0	2	1	1	0
10												
(%)	45.0	5.0	10.0	0.0	0.0	0.0	0.0	0.0	20.0	10.0	10.0	0.0

\* - Incomplete