



intelligent outcomes | respected experience

Living Lakes - Lake Yealering

NVCP Supporting Document

FINAL

Prepared for
Wheatbelt NRM
by Strategen

August 2017

Living Lakes - Lake Yealering

NVCP Supporting Document

FINAL

Strategen is a trading name of
Strategen Environmental Consultants Pty Ltd
Level 1, 50 Subiaco Square Road Subiaco WA 6008
ACN: 056 190 419

August 2017

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: Wheatbelt NRM

| Report Version | Revision No. | Purpose | Strategen author/reviewer | Submitted to Client | |
|--------------------------|--------------|----------------------|---------------------------|---------------------|------------|
| | | | | Form | Date |
| Preliminary Draft Report | Rev 1 | Client Review | T. Sleight/ T. Bowra | electronic | 8/08/2017 |
| Final Report | Rev 0 | Regulator submission | T. Sleight/ T. Bowra | electronic | 25/08/2017 |

Filename: WNR17246.01 R002 Rev0.docx - 31 August 2017

Table of contents

| | |
|--|-----------|
| 1. Introduction | 1 |
| 1.1 Purpose and scope | 1 |
| 1.2 Proposal | 1 |
| 1.2.1 Timing and clearing method | 1 |
| 1.3 Location, ownership and tenure | 1 |
| 2. Overview of existing environment | 3 |
| 2.1 Soils and topography | 3 |
| 2.2 Hydrology | 3 |
| 2.2.1 Surface water | 3 |
| 2.2.2 Ground water | 3 |
| 2.3 Climate | 3 |
| 2.4 Conservation and Environmentally Sensitive Areas | 3 |
| 2.5 Regional vegetation | 5 |
| 2.5.1 Beard (1990) | 5 |
| 2.5.2 IBRA subregion | 5 |
| 2.6 Fauna | 7 |
| 2.6.1 Conservation significant fauna | 7 |
| 3. Reconnaissance Flora and Vegetation Survey | 12 |
| 3.1 Methodology | 12 |
| 3.1.1 Desktop assessment | 12 |
| 3.1.2 Field assessment | 12 |
| 3.1.3 Data analysis and vegetation mapping | 13 |
| 3.1.4 Survey limitations and constraints | 13 |
| 3.2 Results | 14 |
| 3.2.1 Desktop assessment results | 14 |
| 3.3 Field survey results | 20 |
| 4. Assessment against the ten clearing principles | 23 |
| 5. Conclusion | 25 |
| 6. References | 26 |

List of tables

| | |
|--|----|
| Table 1: Pre-European and current extent of vegetation association occurring in the proposed clearing area | 5 |
| Table 2: Threatened and Priority fauna potentially occurring within the survey area | 8 |
| Table 3: Personnel | 12 |
| Table 4: Flora and vegetation survey potential limitations and constraints | 14 |
| Table 5: Threatened and Priority flora potentially occurring within the survey area | 16 |
| Table 6: Vegetation Types | 20 |
| Table 7: Area (ha) covered by each VT within the survey area | 21 |
| Table 8: Vegetation condition scale (Keighery 1994) | 21 |
| Table 9: Area (ha) covered by each vegetation condition category within the survey area | 21 |
| Table 10: Assessment against the ten clearing principles | 23 |

List of figures

| | |
|--|----|
| Figure 1: Proposed Clearing Area | 2 |
| Figure 2: Environmentally Sensitive Areas | 4 |
| Figure 3: Regional vegetation mapping | 6 |
| Figure 4: Location of Threatened and Priority Flora and vegetation communities | 19 |
| Figure 5: Vegetation Types and condition mapped within the survey area | 22 |

List of appendices

- Appendix 1 Conservation significant flora and ecological community definitions
- Appendix 2 Desktop assessment results (Parks and Wildlife 2007-, DEE 2017b)
- Appendix 3 Vascular plant taxa recorded from quadrats within the survey area
- Appendix 4 Certificates of Title
- Appendix 5 Landholder Authorisation

1. Introduction

1.1 Purpose and scope

This Native Vegetation Clearing Permit (NVCP) application for a purpose permit has been prepared for assessment and approval to clear native vegetation adjacent to Lake Yealering, proposed by Wheatbelt NRM. The NVCP application relates to clearing of a maximum of 1.16 ha of native vegetation proposed to facilitate the following works shown in Figure 1:

- 1.3 km isolation bund to the south, including control structures
- Lift of the existing western isolation bund
- Flow diversion control structure on Avon river to the north.

This document has been prepared to support the application for a Native Vegetation Clearing Permit (Purpose Permit) proposed by Wheatbelt NRM, for assessment under section 51 E of the *Environmental Protection Act 1986* (EP Act), including the following information:

- an overview of the existing environmental conditions of the site
- a summary of the reconnaissance flora and vegetation survey conducted in July 2017
- an evaluation of potential impacts of the vegetation clearing
- an evaluation of compliance of the proposed clearing against the 10 clearing principles listed under Schedule 5 of the EP Act
- environmental approvals and management requirements.

For the purposes of this report, the term Project Area has been used to refer to the 100 m wide corridor for both isolation bunds and flow diversion control structure area comprising 54.63 ha. The term proposed clearing area (1.16 ha) is used to refer to the section within the Project Area where clearing of native vegetation is required to facilitate construction, subject to this clearing permit application.

1.2 Proposal

To facilitate construction of the works within and adjacent to Lake Yealering, Wheatbelt NRM is proposing to clear within the Project Area, comprising 1.16 ha to cater for the construction of isolation bunds and flow diversion control structures (Figure 1). The proposed clearing area, comprises 0.28 ha of native vegetation ranging in condition from good to degraded. The remaining 0.88 ha comprises unvegetated lake bed.

1.2.1 Timing and clearing method

Wheatbelt NRM proposes to undertake the clearing in Q4 2017. Vegetation clearing will involve the stripping of vegetation and topsoil/overburden. Vegetation and topsoil/overburden material will be reapplied to the crest of the isolation bunds once construction is complete.

1.3 Location, ownership and tenure

The project area is located directly south township of Yealering, 180 km ESE of Perth. Land within the proposed clearing area is comprised of freehold, unallocated crown land and crown reserve vested with the Shire of Wickepin.

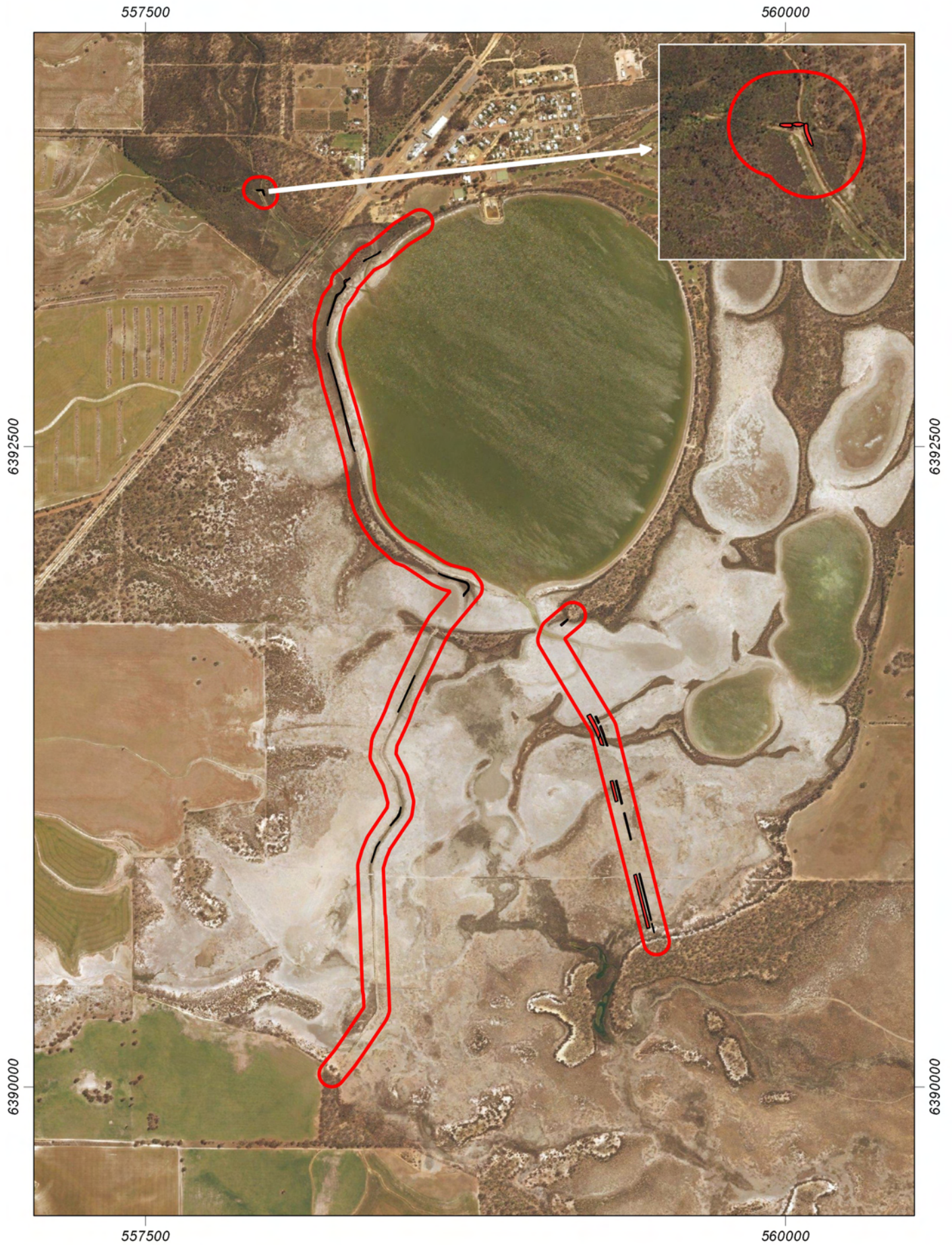


Figure 1: Proposed clearing area

Scale: 1:20,000 at A4

0 0.15 0.3 0.45 0.6 0.75 km



Legend

- Project Area
- Proposed Clearing Area

Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 03/08/2017
 Author: TSleigh
 Source: Nearmap: 2015; Cadastre: Landgate 2015.



2. Overview of existing environment

2.1 Soils and topography

The survey area is located within the Katanning subregion (AVW02) of the Avon Wheatbelt region of Western Australia (DEE 2017a). The Avon Wheatbelt is an area of active drainage dissecting a Tertiary plateau in Yilgarn Craton with a gently undulating landscape of low relief. The AVW02 subregion is an erosional surface of gently undulating rises to low hills with abrupt breakaways (Beecham 2001).

The site is situated on the Coblinine and Kukerin soil landscape subsystems. These subsystems are characterised by broad valley floors and alluvial plains with significant areas of saline wet soils, alkaline grey shallow sandy duplex soils, lunettes, dunes and swales formed from aeolian deposits originating from lakes, salt lakes and recently salinised freshwater lakes, and deep sandy and loamy gravels, shallow gravels with minor sandy duplex soils, deep sands and sandy earths (DAFWA 2017a).

2.2 Hydrology

2.2.1 Surface water

The proposed clearing area is located adjacent to and directly south of Lake Yealering. The proposed clearing area is located within the Avon River surface water area proclaimed under the *Rights in Water and Irrigation Act 1914* (RiWI Act).

2.2.2 Ground water

The Department of Water (DoW) Geographical Data Atlas (2017) did not identify any RiWI ground water areas within or near the clearing area. Groundwater salinity of the proposed clearing area is greater than 35,000 mg/L Total Dissolved Salts (TDS) (DoW 2017).

2.3 Climate

The project area experiences a dry, warm Mediterranean climate characterised by mild, wet winters and warm to hot, dry summers (Beard 1990). The nearest Bureau of Meteorology (BoM) weather stations at Yealering (Station No. 010662) and Corrigin (Station No. 010536) provides average monthly climate statistics for the project area. Average annual rainfall recorded at Yealering since 1915 is 372.8 mm (BoM 2017). Rainfall may occur at any time of year; however, most occurs in winter in association with cold fronts from the southwest. Average monthly maximums range from 15.4°C in July to 32.6°C in January (BoM 2017).

2.4 Conservation and Environmentally Sensitive Areas

The proposed clearing area is located 200m west of an un-named Nature Reserve (R 25708), while a second un-named Nature Reserve (R 14694) lies 1.3 km north east of the proposed clearing area (Figure 2). The proposed clearing area is situated within part of an ESA which is related to the Lake Yealering system, listed as a nationally important wetland.

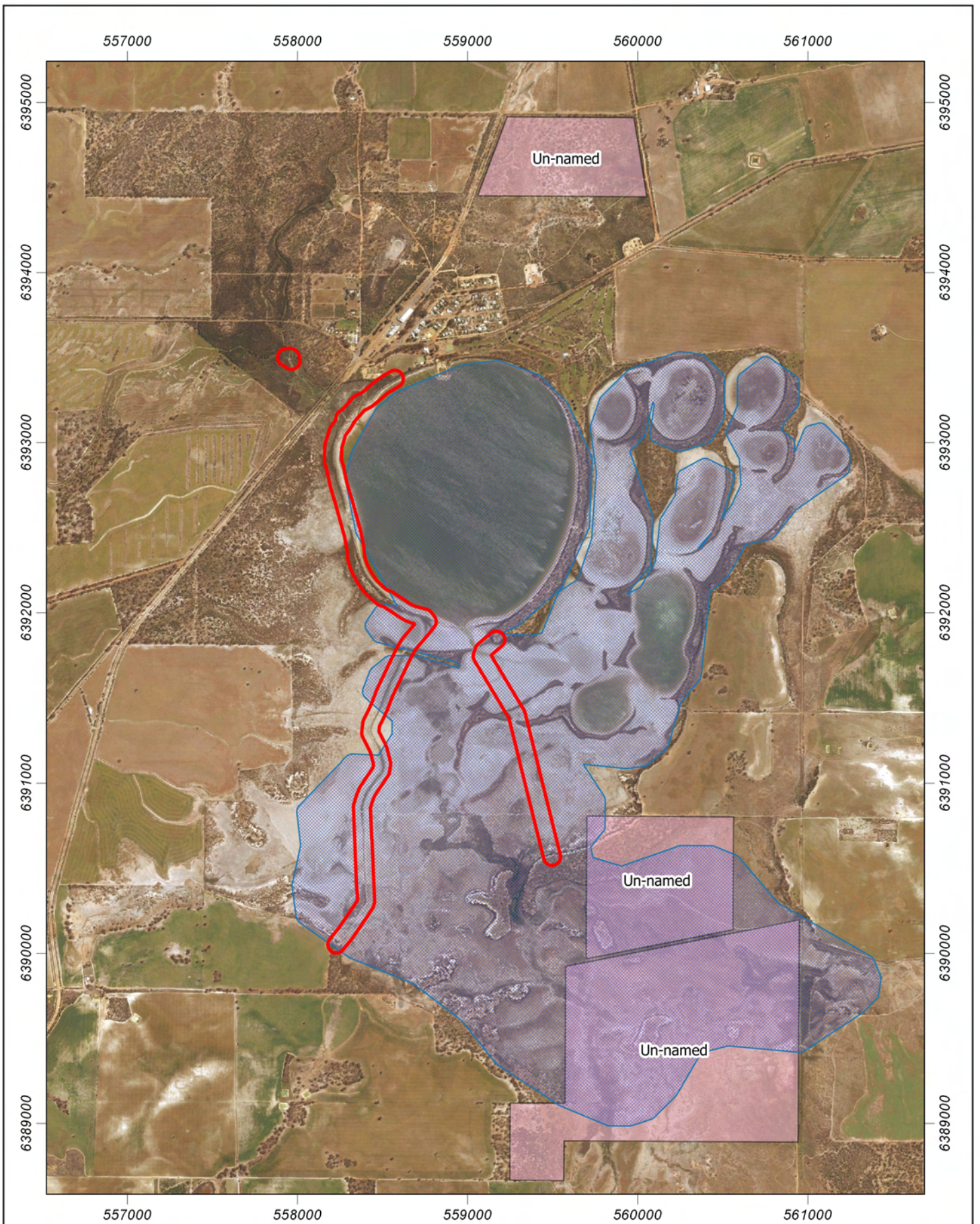


Figure 2: Environmentally Sensitive Areas

Scale: 1:30,000 at A4

0 0.25 0.5 0.75 1 1.25 km

Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 03/08/2017
 Author: TSleigh
 Source: Nearmap: 2015; Cadastre: Landgate 2015.

Legend

- Project Area
- DPAW Managed Lands
- Environmentally Sensitive Areas



2.5 Regional vegetation

Vegetation occurring within the region was initially mapped at a broad scale (1:1 000 000) by Beard during the 1970s. This dataset has formed the basis of several regional mapping systems, including physiographic regions defined by Beard which led to the delineation of botanical districts as described in Beard (1990) and the biogeographical region dataset (Interim Biogeographic Regionalisation for Australia, IBRA) for Western Australia (DEE 2017a).

2.5.1 Beard (1990)

The survey area occurs within the Avon Botanical District which is characterised by scrub-heath on sandplains, Acacia-Casuarina thickets on ironstone gravels, York gum-salmon gum-wandoo woodlands on loams and halophytes on saline soils (Beard 1990).

The proposed clearing area is characterised by the following Beard (1990) vegetation associations (Figure 3):

- Shrublands; teatree thicket (37)
- Succulent steppe with thicket; teatree over samphire(953)
- Medium woodland; York gum, wandoo & salmon gum (*Eucalyptus salmonophloia*) (1023).

The percentage of the pre-European extent of the regional vegetation associations remaining is presented in Table 1. All three vegetation associations have less than 30% of the pre-European extent remaining.

Table 1: Pre-European and current extent of vegetation association occurring in the proposed clearing area

| Beard vegetation association | Scale | Pre-European extent (ha) | Current extent (ha) | % remaining | Amount proposed to be cleared for project (ha) | Current extent protected for conservation (ha) | % current extent protected for conservation |
|------------------------------|----------------|--------------------------|---------------------|-------------|--|--|---|
| 37 | IBRA subregion | 2,425.81 | 583.13 | 24.04 | 0.85 | 176.51 | 7.28 |
| 953 | IBRA subregion | 1,514.81 | 406.92 | 26.86 | 0.29 | 128.99 | 8.52 |
| 1023 | IBRA subregion | 259,057.57 | 21,667.97 | 8.36 | 0.02 | 1,381.45 | 0.53 |

2.5.2 IBRA subregion

IBRA describes a system of 85 'biogeographic regions' (bioregions) and 403 subregions covering the entirety of the Australian continent (Thackway & Cresswell 1995). Bioregions are defined on the basis of climate, geology, landforms, vegetation and fauna.

The survey area occurs within the Avon Wheatbelt 2 IBRA subregion which is dominated by woodland of Wandoo, York Gum and Salmon Gum with Jam and Casuarina (Beecham 2001).

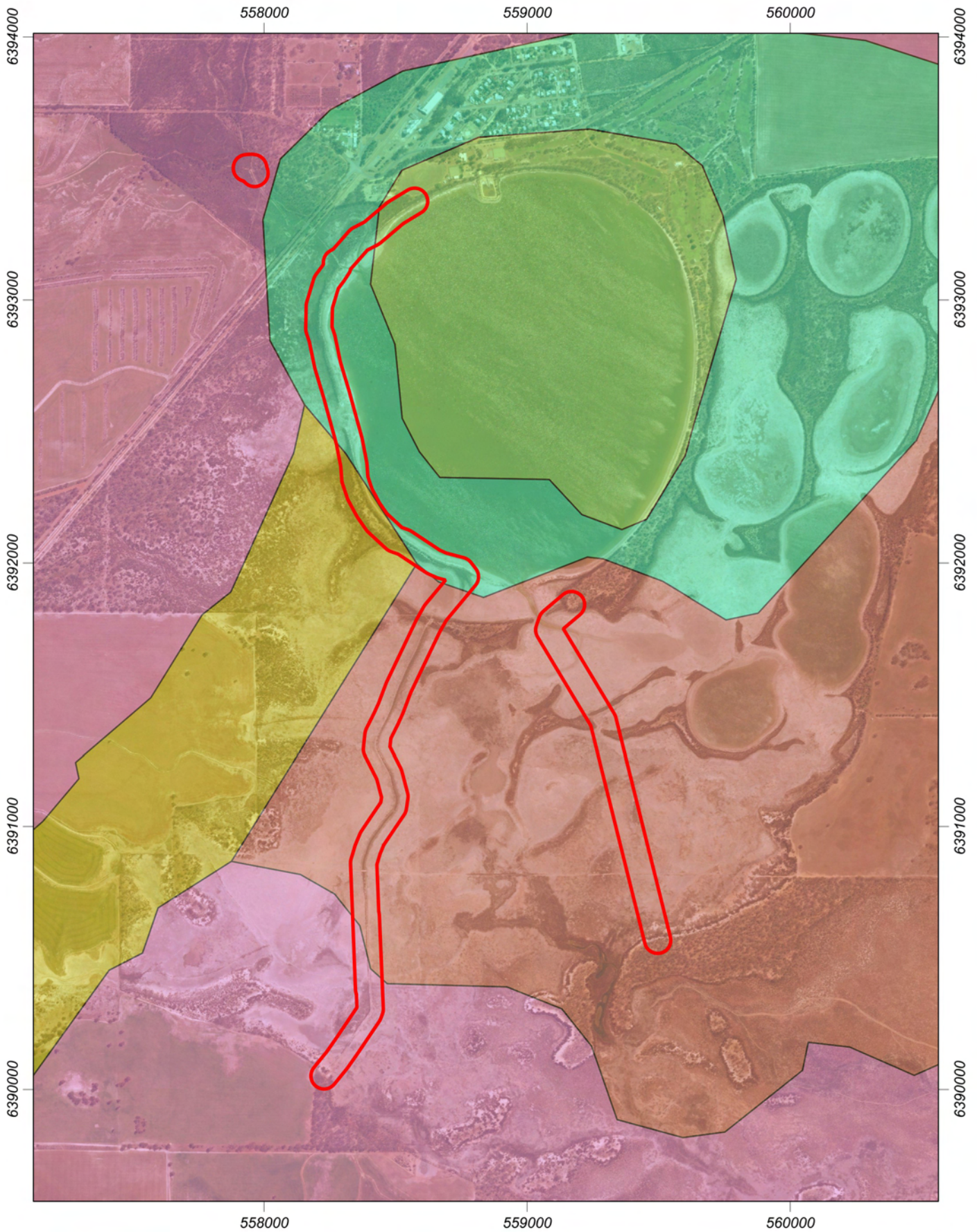


Figure 3: Regional vegetation mapping

Scale: 1:20,000 at A4

0 0.15 0.3 0.45 0.6 0.75 km



Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 03/08/2017
 Author: TSleigh
 Source: ESRI: 2015; Cadastre: Landgate 2015.

Legend

Project Area

Pre-European Vegetation

37

125

949

953

1023

2.6 Fauna

2.6.1 Conservation significant fauna

A search of the EPBC Act Protected Matters Search Tool and NatureMap database were undertaken in July 2017 including a 10 km buffer of the project area to determine the likelihood of any Threatened or Priority fauna species occurring (Appendix 2). A search was also undertaken of the DBCA Threatened fauna database within a 50 km buffer of the project area. A list of the species identified in the database searches, habitat requirements and their likelihood of occurrence is summarised below in Table 2.

Table 2: Threatened and Priority fauna potentially occurring within the survey area

| Species | Conservation status | | Habitat requirements | Potential to occur |
|--|---------------------|--------|---|---|
| | EPBC Act | WC Act | | |
| <i>Bettongia penicillata ogilbyi</i> woylie, brush-tailed bettong | EN | CR | Habitat for this species is open forest and woodland with a low understorey of tussock grasses or woody scrub. | Unlikely Habitat requirements are not present within the project area. |
| <i>Calidris ferruginea</i> curlew sandpiper | CR | CR | This species is migratory. Known habitat includes intertidal mudflats in sheltered coastal areas, such as estuaries and non-tidal swamps and lakes near the coast. The species has been recorded less often inland around lakes, dams and bore drains with bare edges of mud or sand. The distribution of the species is limited by land clearing and disturbance at roost and feeding sites. | Unlikely Habitat requirements are not present within the project area due to high level of disturbance. |
| <i>Pseudocheirus occidentalis</i> western ringtail possum | CR | CR | Habitat for this species is generally within areas of forest or woodland containing Peppermint trees; <i>Agonis flexuosa</i> | Highly unlikely Project area is not within known species distribution and habitat requirements are not present |
| <i>Calyptorhynchus baudinii</i> Baudin's cockatoo | VU | EN | This species mainly occurs in eucalypt forests, especially jarrah, marri and karri forest. The species is less frequently in woodlands of wandoo (<i>E. wandoo</i>), blackbutt (<i>E. patens</i>), flooded gum (<i>E. rudis</i>), yate (<i>E. cornuta</i>), partly cleared farmlands and urban areas, including roadside trees and house gardens. This cockatoo forages at all levels of the forest, from the canopy to the ground, often feeding in the understorey on proteaceous trees and shrubs, especially Banksias, and in orchards | Unlikely Habitat requirements are present within the project area however the current known distribution does not extend to the project area. |
| <i>Calyptorhynchus latirostris</i> Carnaby's cockatoo | EN | EN | Known habitat includes remnant eucalypt woodlands, and shrubland or Kwongan heathland dominated by proteaceous species. The species is also known from the Perth metropolitan area and in remnant patches of native vegetation on land cleared for agriculture. Known to utilise <i>C. calophylla</i> , * <i>C. citriodora</i> , <i>E. patens</i> , <i>E. marginata</i> , <i>X. preissii</i> , <i>A. fraseriana</i> as a foraging plant, <i>C. calophylla</i> as breeding habitat and <i>C. calophylla</i> and <i>E. marginata</i> as roosting habitat. | Possible Habitat requirements are present and current distribution includes the project area. |
| <i>Myrmecobius fasciatus</i> numbat | VU | T | The species habitat is generally dominated by eucalypts that provide hollow logs and branches for shelter and termites for food. Its current range is restricted to jarrah (<i>Eucalyptus marginata</i>) forest and wandoo (<i>Eucalyptus wandoo</i>) woodland. | Unlikely Habitat requirements are not present within the project area. |
| <i>Pezoporus occidentalis</i> night parrot | EN | T | Most habitat records are of <i>Triodia</i> grasslands and/or chenopod shrublands in the arid and semi-arid zones. | Unlikely Habitat requirements are not present within the project area. |

| Species | Conservation status | | Habitat requirements | Potential to occur |
|--|---------------------|--------|--|---|
| | EPBC Act | WC Act | | |
| <i>Dasyurus geoffroi</i> Chuditch, Western Quoll | VU | T | Current habitat largely restricted to the southwest forests. The distribution of the species is limited by land clearing and predation by feral cats and foxes. | Unlikely Current habitat does not extend to the project area. |
| <i>Bettongia lesueur graii</i> burrowing bettong (inland) | EX | EX | The habitat of the Burrowing Bettong (inland) ranges from open eucalypt or acacia woodland with a grass and shrub understorey to sand ridge desert with spinifex hummocks and sparse shrubs. | Highly unlikely Species thought to be extinct |
| <i>Onychogalea lunata</i> crescent nailtail wallaby | EX | EX | Unknown | Highly unlikely Species thought to be extinct |
| <i>Actitis hypoleucos</i> Common Sandpiper | Migratory | IA | The species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. | Possible Habitat requirements are present within the project area. |
| <i>Apus pacificus pacificus</i> fork-tailed Swift | Migratory | IA | This species is almost exclusively aerial. They are most common over inland plains but sometimes over foothills in coastal areas. It is thought they roost aerially but are occasionally observed to land. There is one record of them roosting in a tree, using a bare exposed branch emergent above the foliage | Unlikely Aerial species unlikely to use lake vegetation as habitat. |
| <i>Ardea modesta</i> great egret, white egret | Migratory | IA | This species has been reported in a wide range of wetland (inland, coastal, saline, freshwater etc.), swamp and marsh habitats. They prefer shallow waters and may retreat to permanent wetlands or coastal areas when other wetlands are dry. | Possible Habitat requirements are present within the project area. |
| <i>Merops ornatus</i> rainbow bee-eater | Migratory | IA | The Rainbow Bee-eater occurs mainly in open forests and woodlands, shrublands, and in various cleared or semi-cleared habitats, including farmland and areas of human habitation. It usually occurs in open, cleared or lightly-timbered areas that are often, but not always, located in close proximity to permanent water. | Possible Habitat requirements are present within the project area. |
| <i>Calidris acuminata</i> sharp-tailed sandpiper | Migratory | IA | This species is migratory. Known habitat includes intertidal mudflats in sheltered coastal areas, such as estuaries and non-tidal swamps and lakes near the coast. The species has been recorded less often inland around lakes, dams and bore drains with bare edges of mud or sand. The distribution of the species is limited by land clearing and disturbance at roost and feeding sites | Unlikely Habitat requirements are not present within the project area due to high level of disturbance. |
| <i>Calidris melanotos</i> pectoral sandpiper | Migratory | IA | The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. | Possible Habitat requirements are present within the project area. |

| Species | Conservation status | | Habitat requirements | Potential to occur |
|--|---------------------|--------|--|--|
| | EPBC Act | WC Act | | |
| <i>Motacilla cinerea</i> grey wagtail | Migratory | IA | Outside of the breeding season this species is found in a greater variety of habitats, including farmlands, forested tracks, plantations and even town centres. | Possible Habitat requirements are present within the project area. |
| <i>Leipoa ocellata</i> malleefowl | VU | VU | The malleefowl occurs in semi-arid and arid zones of temperate Australia, where it occupies shrublands and low woodlands that are dominated by mallee vegetation. It also occurs in other habitat types including eucalypt or native pine <i>Callitris</i> woodlands, acacia shrublands, Broombush <i>Melaleuca uncinata</i> vegetation or coastal heathlands. | Unlikely Habitat requirements are not present within the project area. |
| <i>Macrotis lagotis</i> bilby | VU | VU | The remaining populations of the greater bilby occupy three main habitats: open tussock grassland on uplands and hills, <i>Acacia aneura</i> (mulga) woodland/shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas | Unlikely Habitat requirements not present within Project area |
| <i>Perameles bougainville bougainville</i> western barred bandicoot | EN | VU | Habitats for mainland animals include a variety of fairly open vegetation types in semi-arid and arid parts of southern Australia, such as the base of elevated dunes, dense scrub including thickets of <i>Allocasuarina</i> seedlings, open bluebush and saltbush plains and stony hills bordering scrub | Possible Habitat requirements are present within the project area. |
| <i>Pseudomys shortridgei</i> heath mouse | EN | VU | This species occurs in species-rich heath but also in mixed scrub and mallee. The species has not been located in vegetation less than 10 years post-fire and it has been known to attain high densities in heath 30 years post-fire. | Possible Habitat requirements are present within the project area. |
| <i>Charadrius rubricollis</i> hooded plover | | P4 | This species occurs in freshwater lakes, freshwater marshes, coastal saline lagoons, and sandy beaches | Unlikely Habitat requirements not present within Project area. |
| <i>Isodon obesulus fusciventer</i> quenda, southern brown bandicoot | | P4 | Known habitat is swampy and/or scrubby vegetation with dense cover, often feeds in adjacent forests and woodland that is burnt on a regular basis. The species will thrive in open habitat in the absence of introduced predators | Possible Habitat requirements are present within the project area. |
| <i>Macropus eugenii derbianus</i> tammar wallaby | | P4 | This species inhabits coastal scrub, heath, dry sclerophyll forest and thickets in mallee and woodland. | Unlikely Habitat requirements not present within Project area. |
| <i>Macropus irma</i> western brush wallaby | | P4 | This species occurs in open forest or woodland, particularly favouring open, seasonally-wet flats with low grasses and open scrubby thickets. It is also found in some areas of mallee and heath-land, and is uncommon in karri forest. | Possible Habitat requirements are present within the project area. |
| <i>Oxyura australis</i> blue-billed duck | | P4 | This species occurs in deep water in large permanent wetlands and swamps with dense aquatic vegetation. The species is completely aquatic, swimming low in the water along the edge of dense cover. | Unlikely Habitat requirements not present within Project area. |

| Species | Conservation status | | Habitat requirements | Potential to occur |
|--|---------------------|--------|--|--|
| | EPBC Act | WC Act | | |
| <i>Platycercus icterotis xanthogenys</i> Western Rosella (inland) | | P4 | This species occurs in in eucalypt and sheoak woodlands and scrubs, especially those containing wandoo (<i>E. wandoo</i>), flooded gum, salmon gum (<i>E. salmonophloia</i>), tall mallee and rock sheoak (<i>Allocasuarina huegeliana</i>). | Possible Habitat requirements are present within the project area. |
| <i>Phascogale calura</i> red-tailed phascogale | VU | CD | This species preferred habitats are <i>Allocasuarina</i> woodlands with hollow-containing eucalypts (e.g. <i>Eucalyptus wandoo</i>) and <i>Gastrolobium spp.</i> | Unlikely Habitat requirements not present within Project area.. |
| <i>Phascogale tapoatafa wambenger</i> south-western brush-tailed phascogale, wambenger | | CD | This species occurs in dry sclerophyll forests and open woodlands that contain hollow-bearing trees. | Possible Habitat requirements are present within the project area. |
| <i>Falco peregrinus</i> peregrine falcon | | OS | This species is found in 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. | Possible Habitat requirements are present within the project area. |

3. Reconnaissance Flora and Vegetation Survey

3.1 Methodology

3.1.1 Desktop assessment

A desktop assessment was conducted using FloraBase, Parks and Wildlife, and Department of the Environment and Energy (DEE) databases to identify the possible occurrence of TECs, PECs and Threatened and Priority flora potentially occurring within the survey area. Reports that document regional flora, vegetation and fauna within the surrounds of the survey area were also reviewed prior to the field assessment.

A database search request was also submitted to the Threatened Communities Branch of Parks and Wildlife to identify any potential TECs or PECs within 10 km of the survey area.

3.1.2 Field assessment

The field survey was conducted according to standards set out in the Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016). The assessment of flora and vegetation within the survey area was undertaken by one ecologist from Strategen, with assistance provided by Wheatbelt NRM staff on, 20 July 2017. Table 3 identifies staff involved in the field surveys, their role and qualifications.

Table 3: Personnel

| Name | Role | Flora collection permit |
|--|---|-------------------------|
| Mr. T. Sleight Strategen (Associate) | Planning, fieldwork, plant identification, data interpretation and report preparation | SL012160 |
| Ms. M. McGregor Wheatbelt NRM | Fieldwork assistance | N/A |

The survey area was traversed on foot to record changes in vegetation structure and type. Six relevés were surveyed to identify vegetation types. Site selection for vegetation mapping was determined from aerial photographs and based on differences in structure and species composition of the communities present within the survey area.

Flora and vegetation was described and sampled systematically at each relevé and additional opportunistic collecting was undertaken wherever previously unrecorded plants were observed. At each site the following floristic and environmental parameters were noted:

- GPS location
- topography
- soil type and colour
- outcropping rocks and their type
- percentage cover and average height of each vegetation stratum.

For each vascular plant species, the average height, percent cover was recorded.

All plant specimens collected during the field surveys were identified using appropriate reference material or through comparisons with pressed specimens housed at the Western Australian Herbarium where necessary. Nomenclature of the species recorded is in accordance with Western Australian Herbarium (1998-).

3.1.3 Data analysis and vegetation mapping

Due to the degraded nature of vegetation within the survey area quadrat data were grouped into a species by site matrix to delineate individual vegetation communities (VCs) present within the survey area. Aerial photography interpretation and field notes taken during the survey were then used to develop VC mapping polygon boundaries over the survey area. These polygon boundaries were then digitised using Geographic Information System (GIS) software.

VC descriptions have been adapted from the National Vegetation Information System (NVIS) Australian Vegetation Attribute Manual Version 6.0 (ESCAVI 2003), a system of describing structural vegetation units (based on dominant taxa). This model follows nationally-agreed guidelines to describe and represent vegetation types, so that comparable and consistent data is produced nation-wide. For the purposes of this report, a VT is considered equivalent to a NVIS sub-association as described in ESCAVI (2003).

Vegetation condition was recorded at all relevés, and also opportunistically within the survey area during the field assessment where required. Vegetation condition was described using the vegetation condition scale for the South West Botanical Province (Keighery 1994). Vegetation condition polygon boundaries were developed using this information in conjunction with aerial photography interpretation, and were digitised as for vegetation type mapping polygon boundaries.

3.1.4 Survey limitations and constraints

Table 4 displays the evaluation of the flora and vegetation assessment against a range of potential limitations that may have an effect on that assessment. Based on this evaluation, the assessment has been subject to constraints that may affect the thoroughness of the assessment and the conclusions reached. However, given the nature of the clearing proposed, and the locations within the landscape, it is unlikely that the limitation and constraints of the survey will cause an impact to conservation significant species or communities.

Table 4: Flora and vegetation survey potential limitations and constraints

| Potential limitation | Impact on assessment | Comment |
|---|-------------------------------|---|
| Sources of information and availability of contextual information (i.e. pre-existing background versus new material). | Not a constraint. | The survey has been undertaken in the Avon Botanical District which has been well studied and documented with ample literature available (Beard 1990). |
| Scope (i.e. what life forms, etc., were sampled). | Not a constraint. | Due to the degraded nature and uniform distribution of vegetation within the survey area most life forms are likely to have been sampled adequately during the time of the survey. |
| Proportion of flora/fauna collected and identified (based on sampling, timing and intensity). | Possibly a constraint. | The survey area was traversed on foot. Access to vegetation in the south and west of the survey area was not possible due to surface water. |
| Completeness and further work which might be needed (i.e. was the relevant survey area fully surveyed). | Not a constraint | The information collected during the survey was sufficient to assess the vegetation that was present during the time of the survey. |
| Mapping reliability. | Possibly a constraint. | Aerial photography of a suitable scale was used to map the survey area and identify potential fauna habitat. Sites were chosen from these aerials to reflect changes in community structure. Opportunistic sites were also used if differences were observed during on ground reconnaissance. Vegetation types were assigned to each site based on topography, soil type and presence/absence and percent foliage cover of vegetation. Access to vegetation in the south and west of the survey area was not possible due to surface water. Vegetation mapping in these areas was conducted using aerial photographic interpretation and past vegetation surveys. |
| Timing, weather, season, cycle. | Not a constraint. | Flora and vegetation surveys are normally conducted following winter rainfall in the South-West Province, ideally during spring (EPA 2004). Although the survey was conducted in winter, due to the high level of disturbance, this is not considered to be a limitation within the survey area. |
| Disturbances (fire flood, accidental human intervention, etc.). | Not a constraint. | The survey area and regional surrounds have been subject to disturbance over a significant period of time. Given the wide range of this disturbance, this is not considered to be a limitation within the survey area. |
| Intensity (in retrospect, was the intensity adequate). | Possibly a constraint. | The survey area was traversed on foot. Access to vegetation in the south and west of the survey area was not possible due to surface water. |
| Resources (i.e. were there adequate resources to complete the survey to the required standard). | Not a constraint. | The available resources were adequate to complete the survey. |
| Access problems (i.e. ability to access survey area). | Constraint. | The survey area was traversed on foot. Access to vegetation in the south and west of the survey area was not possible due to surface water. |
| Experience levels (e.g. degree of expertise in species identification to taxon level). | Not a constraint. | All survey personnel have the appropriate training in sampling and identifying the flora of the region. |

3.2 Results

3.2.1 Desktop assessment results

A total of 146 native vascular plant taxa have the potential to occur within the survey area (Parks and Wildlife 2007-; DEE 2017c). The majority of taxa were from within the Myrtaceae (19 taxa) and Poaceae (18 taxa) families

Threatened and Priority flora

A desktop survey for Threatened and Priority flora that may potentially occur within the survey area was undertaken using NatureMap (Parks and Wildlife 2007-), the Western Australian Herbarium (Western Australian Herbarium 1998-), and the DEE Protected Matters Search Tool (DEE 2017b).

Flora within Western Australia that is considered to be under threat may be classed as either Threatened flora or Priority flora. Where flora has been gazetted as Threatened flora under the WC Act, the taking of such flora without the written consent of the Minister is an offence. The WC Act defines “to take” flora as to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means. Parks and Wildlife (2017) contains the current list of Threatened flora in Western Australia.

Priority flora are considered to be species which are potentially under threat, but for which there is insufficient information available concerning their distribution and/or populations to make a proper evaluation of their conservation status. Parks and Wildlife categorises Priority flora according to their conservation priority using five categories, P1 (highest conservation significance) to P4 (lowest conservation significance), to denote the conservation priority status of such species. Priority flora species are regularly reviewed and may have their priority status changed when more information on the species becomes available. Appendix 3 defines levels of Threatened and Priority flora (Western Australian Herbarium 1998-).

At the national level, the EPBC Act lists Threatened species as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or conservation dependent. Appendix 3 defines each of these categories of Threatened species. The EPBC Act prohibits an action that has or will have a significant impact on a listed Threatened species without approval from the Australian Government Minister for the Environment. The current EPBC Act list of Threatened flora may be found on the DEE (2017c) website.

Table 5 shows the Threatened and Priority flora potentially occurring within the survey area. The desktop assessment identified six Threatened flora and 12 Priority flora species that have been recorded in the regional area. Of these, based on specific habitat requirements, one Threatened flora species and three Priority flora species were considered to have the potential to occur within the survey area.

Table 5: Threatened and Priority flora potentially occurring within the survey area

| Species | Conservation status | | Description | Potential to occur |
|---|---------------------|--------|--|--|
| | EPBC Act | WC Act | | |
| <i>Banksia oligantha</i> | EN | T | Non-lignotuberous shrub, to 3m high. Red and cream, orange and brown flowers in October and November. Occurs on yellow or yellow brown sand. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Boronia capitata</i> subsp. <i>capitata</i> | EN | T | Slender shrub to 1.3m high. Fink flowers in August to December and February. Occurs in sand over laterite on sandplains. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Grevillea dryandroides</i> subsp. <i>hirsuta</i> | EN | T | Prostrate, suckering shrub, to 0.3m high. Pink and red flowers in May or September to November. Occurs in white or yellow sand over laterite. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Grevillea scapigera</i> | EN | T | Suckering, prostrate to weakly ascending shrub to 0.4m high. White/yellow/green flowers in February and October to November. Occurs on sandy or gravelly lateritic soils. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Roycea pycnophylloides</i> | EN | T | Perennial herb forming densely branched mats to 1m wide. Flowers in September. Occurs in sandy soils and clay, on saline flats. | Possible – Preferred soil type/habitat occurs within the survey area. |
| <i>Symonanthus bancroftii</i> | EN | T | Shrub to 0.25m high. White flowers in September. Occurs un disturbed shallow granitic soils, prone to hard setting. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Banksia rufa</i> subsp. <i>magna</i> | | P1 | Non-lignotuberous shrub, to 1.5 m high. Occur on yellow-grey sandy gravel over laterite or gravelly loam. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Hibbertia sejuncta</i> | | P2 | Low growing shrub to 0.25m high. Yellow flowers. Occurs in winter-damp areas on gentle slopes adjacent to minor drainage lines and run-on areas, in grey sand beneath low, open jarrah forest. | Unlikely – Preferred habitat does not occur within the survey area. |
| <i>Acacia deflexa</i> | | P3 | Prostrate to straggling or erect shrub to 2m high. Yellow flowers in August to September. Occurs on yellow and gravelly lateritic sand, gravelly sandy loam on plains. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Banksia fasciculata</i> | | P3 | Columnar, non-lignotuberous shrub to 2.5m high. Cream-yellow flowers in May to August. Occurs on lateritic clay and sand over laterite. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Dampiera triloba</i> | | P3 | Erect perennial her or shrub to 0.5m high. Blue flowers in August to December. | Unable to assess – No habitat information available. |
| <i>Microcorys cephalantha</i> | | P3 | Decumbent to ascending shrub to 0.45m high. Pink-white flowers in October to December. Occurs on sandy loam with lateritic gravel and sandplains. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Synaphea drummondii</i> | | P3 | Shrub. Yellow flowers in July to September. Occurs on sand over laterite. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Thysanotus tenuis</i> | | P3 | Perennial herb with tuberous roots to 0.2m high. Purple flowers in September and October. Occurs on clay, sandy clay and sand. | Possible – Preferred soil type/habitat occurs within the survey area. |
| <i>Eucalyptus loxophleba</i> x <i>wandoo</i> | | P4 | Mallee or tree to 4 (20)m high. Black-brown rough bark. Occurs on sandy clay and loams. | Possible – Preferred soil type/habitat occurs within the survey area. |
| <i>Grevillea asteriscosa</i> | | P4 | Divaricately branched shrub to 2.5m high. Red flowers in May or July to November. Occurs on gravelly or granitic soils on gravel rises and granite outcrops. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |
| <i>Lechenaultia pulvinaris</i> | | P4 | Hemispherical, procumbent shrub to 0.2m high. Blue flowers in October to December. Occurs on white/grey sands. | Possible – Preferred soil type/habitat occurs within the survey area. |

| Species | Conservation status | | Description | Potential to occur |
|------------------------------|---------------------|--------|--|--|
| | EPBC Act | WC Act | | |
| <i>Stylidium tenuicarpum</i> | | P4 | Rosetted perennial her to 0.5m high. Yellow-orange flowers in September to November. Occurs on sandy loam over laterite and granite on rock outcrops, hillslopes, breakaways in shrubland and open woodland. | Unlikely – Preferred soil type/habitat does not occur within the survey area. |

Threatened and Priority Ecological Communities

A TEC is defined under the EP Act as an ecological community listed, designated or declared under a written law or a law of the Australian Government as Threatened, Endangered or Vulnerable. There are four State categories of TECs (DEC 2010)¹:

- presumed totally destroyed (PD)
- critically endangered (CR)
- endangered (EN)
- vulnerable (VU).

A description of each of these TEC categories is presented in Appendix 3. TECs are gazetted as such (Parks and Wildlife 2016) and some Western Australian TECs listed by Parks and Wildlife (2015c) are also listed as Threatened under the EPBC Act.

Under the EPBC Act, a person must not undertake an action that has or will have a significant impact on a listed TEC without approval from the Australian Government Minister for the Environment, unless those actions are not prohibited under the EPBC Act. A description of each of these categories of TECs is presented in Appendix 3. The current EPBC Act list of TECs can be located on the DEE (2017d) website.

Ecological communities identified as Threatened, but not listed as TECs, are classified as Priority Ecological Communities (PECs). These communities are under threat, but there is insufficient information available concerning their distribution to make a proper evaluation of their conservation status. Parks and Wildlife categorises PECs according to their conservation priority, using five categories, P1 (highest conservation significance) to P5 (lowest conservation significance), to denote the conservation priority status of such ecological communities. Appendix 3 defines PECs (DEC 2010). DBCA (2017) contains a list of current PECs.

One TEC was identified within the survey area (Figure 4). The TEC identified was Eucalypt woodlands of the Western Australian Wheatbelt which is listed as Critically Endangered under the EPBC Act and is also listed as a PEC (Priority 3) by DBCA..

Figure 4 suggests that the boundaries of the TEC fall within the survey area; however it is worth noting that these mapped boundaries do not necessarily represent the actual extent of their respective communities and are rather a broad scale indication of where the communities have been previously mapped plus a buffer of 200 m.

¹The Department of Environment and Conservation is still listed as the author of all TEC and PEC databases and have been referred to as such in this document instead of the Department of Biodiversity, Conservation and Attractions (DBCA).

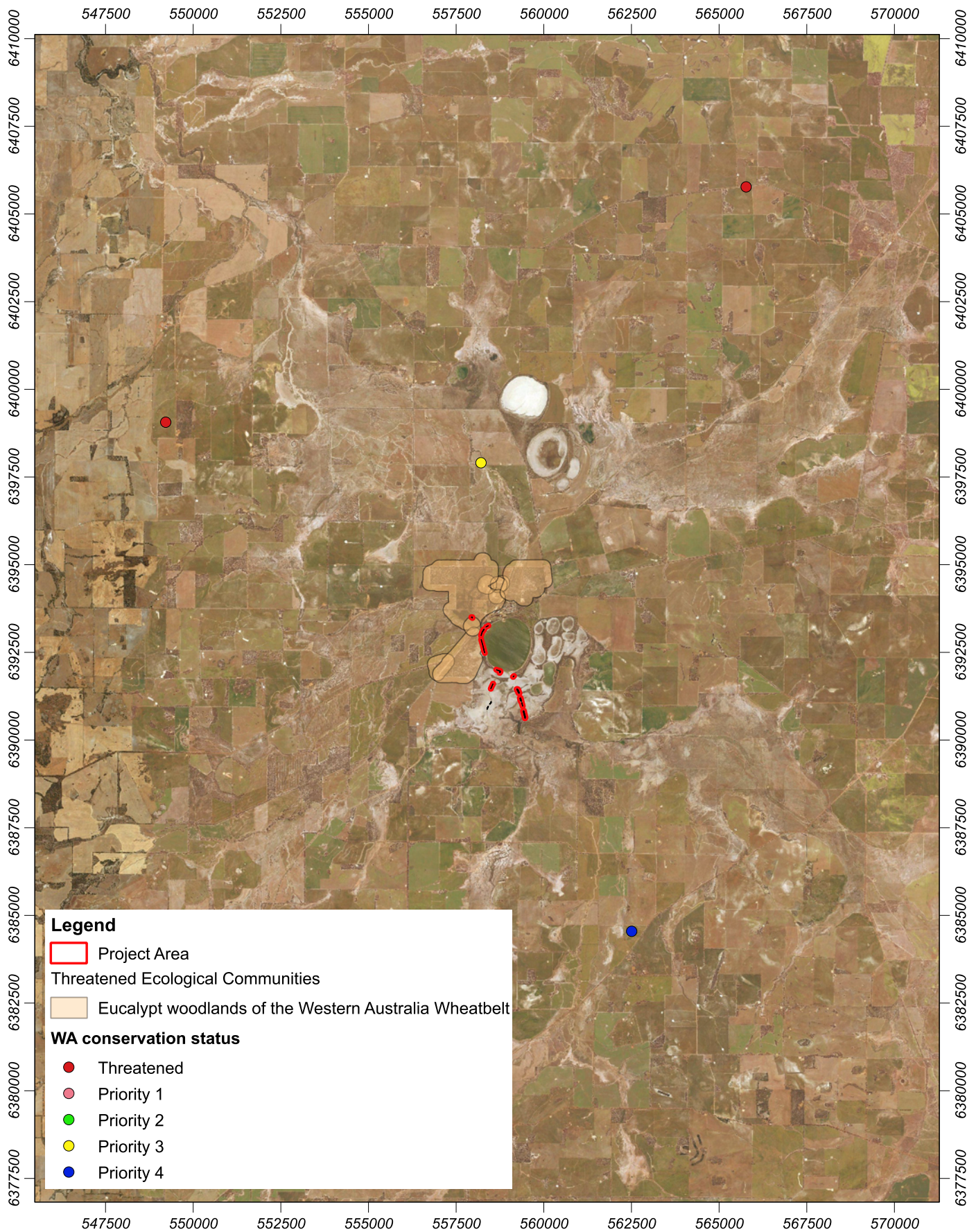


Figure 4: Locations of Threatened and Priority Flora and vegetation communities

Scale: 1:150,000 at A4

0 1 2 3 4 5 km



Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 03/08/2017
 Author: TSleigh
 Source: ESRI: 2015; Cadastre: Landgate 2015.

3.3 Field survey results

Native flora

A total of 15 native vascular plant taxa from 13 plant genera and 10 plant families were recorded from six relevés within the survey area. The majority of taxa were recorded within the Chenopodiaceae family (five taxa). The relatively low number of plant genera recorded reflects the disturbed nature of the survey area.

Threatened and Priority flora

No Threatened flora species as listed under section 178 of the EPBC Act or pursuant to Schedule 1 of the WC Act and as listed by Parks and Wildlife (2015) were recorded within the survey area. No Priority flora species as listed by Western Australian Herbarium (1998-) were recorded within the survey area.

Introduced (exotic) taxa

A total of nine introduced (exotic) taxa were recorded within the survey area):

- *Avena barbata*
- *Brassica tournefortii*
- *Ehrharta longiflora*
- *Gazania linearis*
- *Mesembryanthemum crystallinum*
- *Mesembryanthemum nodiflorum*
- *Solanum nigrum*
- *Sonchus oleraceus*
- *Ursinia anthemoides*

None of these species are Declared Plant species in Western Australia pursuant to section 22 of the *Biosecurity and Agriculture Management Act 2007* (BAM Act) according to the Western Australian Department of Agriculture and Food (DAFWA 2017).

Vegetation types

Four native vegetation types (VTs) were defined and mapped within the survey area (Figure 5) and are summarised in Table 6. A Total areas occupied within the survey area by each of the identified VTs are set out in Table 7.

Table 6: Vegetation Types

| Vegetation Type | Description |
|-----------------|---|
| 1 | <i>Banksia prionotes</i> low open woodland over * <i>Ehrharta calycina</i> low shrubland/grassland mix |
| 2 | <i>Tecticornia indica</i> and <i>Tecticornia pergranulata</i> low samphire shrubland |
| 3 | <i>Casuarina obesa</i> low woodland over <i>Tecticornia indica</i> and <i>Tecticornia pergranulata</i> low samphire shrubland |
| 4 | <i>Eucalyptus sargentii</i> low open woodland over <i>Melaleuca atroviridis</i> shrubland |

Vegetation type coverage

The total area mapped within the survey area was 54.63 ha which includes non-vegetated lake areas (Table 7). The dominant native VT within the survey area was VT2 which can be broadly described as a *Tecticornia indica* and *Tecticornia pergranulata* low samphire shrubland.

Table 7: Area (ha) covered by each VT within the survey area

| VT | Area (ha) | Percentage of the Survey area | Clearing (ha) |
|--------------|--------------|-------------------------------|---------------|
| 1 | 0.80 | 1.5 | 0.00 |
| 2 | 6.82 | 12.5 | 0.13 |
| 3 | 4.07 | 7.5 | 0.15 |
| 4 | 1.52 | 2.8 | 0.00 |
| Lake Area | 41.42 | 75.8 | 0.88 |
| TOTAL | 54.63 | | 1.16 |

Vegetation condition

The survey area shows signs of having been degraded for a long period of time. Secondary salinity and historical clearing and grazing have impacted the vegetation. As such, vegetation condition within the survey area ranged from Good to Degraded (Keighery 1994; Figure 5; Table 8).

Table 9 gives a numerical breakdown of the area occupied by each vegetation condition rating within the survey area.

Table 8: Vegetation condition scale (Keighery 1994)

| Condition rating | Description |
|-------------------------|--|
| Pristine (1) | Pristine or nearly so, no obvious sign of disturbance. |
| Excellent (2) | Vegetation structure intact, disturbance affecting individual species and 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 and grazing. |
| Good (4) | Vegetation structure significantly altered by 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 and 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. |

Table 9: Area (ha) covered by each vegetation condition category within the survey area

| Vegetation Condition | Area (ha) | Percentage of the survey area |
|----------------------|--------------|-------------------------------|
| Good | 6.29 | 11.5 |
| Degraded | 6.92 | 12.7 |
| Lake Area | 41.42 | 75.8 |
| Total | 54.63 | |



Figure 5: Vegetation types and condition mapped within the survey area

Scale: 1:20,000 at A4

0 0.15 0.3 0.45 0.6 0.75 km



Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 03/08/2017
 Author: TSleigh
 Source: Nearmap: 2015; Cadastre: Landgate 2015.

Legend

Vegetation Types

- 1
- 2

- 3
- 4
- 5

Vegetation Condition

- Degraded
- Good



4. Assessment against the ten clearing principles

An assessment of the proposed clearing against the ten clearing principles outlined in Schedule 5 of the EP Act is provided in Table 10. This assessment demonstrates that the proposed removal of 0.28 ha of native vegetation is not at variance with the any of the clearing principles. On this basis, Wheatbelt NRM anticipates that the proposed clearing of 0.28 ha of native vegetation can occur.

Table 10: Assessment against the ten clearing principles

| Principle | Assessment | Conclusion |
|--|--|---|
| Native vegetation should not be cleared if it comprises a high level of biological diversity. | <p>The vegetation associations and the area of disturbance of each within the proposed clearing area include the following:</p> <ul style="list-style-type: none"> • Shrublands; teatree thicket (0.85 ha) • Succulent steppe with thicket; teatree over samphire (0.29 ha) • Medium woodland; York gum, wandoo & salmon gum (<i>Eucalyptus salmonophloia</i>) (0.02 ha) <p>The vegetation associations to be cleared all comprise less than 30% of the pre-European extent. While these vegetation associations are restricted in the IBRA subregion, the degraded nature of the vegetation due to impacts from secondary salinity limit the level of biodiversity present.</p> <p>One TEC or was recorded within the proposed clearing area. The buffers of three known locations of the TEC 'Eucalypt woodlands of the Western Australia Wheatbelt', intersect with the proposed clearing area, no vegetation that comprises part of or is necessary for the maintenance of the TEC is proposed to be cleared.</p> | The proposed clearing is not considered to be at variance with this principle as the clearing proposed will not result in an impact to the biological diversity of the area given the limited amount of clearing proposed and the poor condition of the vegetation that is present. |
| 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. | <p>No fauna species were identified as either likely or highly likely to be present within the clearing area based on the nature of the vegetation present and the known range of the species.</p> <p>The proposed clearing of 0.28 ha of vegetation will result in some level of impact to fauna species potentially occurring in the area, however the clearing will not greatly restrict the habitat available for these species and due to the highly mobile nature of all species that may occur, any impacts are not expected to be significant.</p> | Removal of vegetation within the proposed clearing area, comprising habitat for fauna species is not considered to be at variance with this principle. |
| Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora. | No Threatened or Priority flora species were recorded within the project area. While there are recorded locations of Threatened flora species within 10 km of the project area, the preferred habitat for these species is not present within the proposed clearing area. | Removal of vegetation within the proposed clearing area is not considered to be at variance with this principle. |
| 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. | The proposed clearance area does not comprise of vegetation that comprises part of, or is necessary for the maintenance of, a TEC or PEC. While the buffers of three known locations of the TEC 'Eucalypt woodlands of the Western Australia Wheatbelt', intersect with the proposed clearing area, no vegetation that comprises part of or is necessary for the maintenance of the TEC is proposed to be cleared. | No TECs or PECs will be impacted by the proposed clearing. The proposed clearing is therefore not considered to be at variance with this principle. |
| Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared. | A total of 0.28 ha of vegetation is proposed to be cleared. The vegetation associations to be cleared all comprise less than 30% of the pre-European extent. While they are restricted within the IBRA subregion, the vegetation to be cleared has been impacted by secondary salinity and is of degraded condition; therefore, the vegetation to be cleared is not considered to be significant remnants within the local area. | Removal of vegetation within the proposed clearing area is not considered to be at variance with this principle. |
| Native vegetation should not be cleared if it is growing in, or in association with, an | The proposed clearing is to enable the construction of isolation bunds and flow control structures, increasing surface water flow to Lake Yealering. This is designed to increase the surface water quality of the lake. While the native vegetation | Removal of vegetation within the proposed clearing area is not considered to be at variance with this |

| | | |
|--|--|---|
| environment associated with a watercourse or wetland. | to be cleared is growing in and in association with the wetland, the increase in water quality should be considered beneficial to the wetland and vegetation within the project area. | principle due to the increase in water quality that is proposed as a result of the proposed works. |
| Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation. | The risk of land degradation as a result of vegetation clearing is extremely low. The majority of vegetation proposed to be cleared has been degraded by secondary salinity. The proposed clearing is to enable the construction of isolation bunds and flow control structures, increasing surface water flow to Lake Yealering. This is designed to increase the surface water quality of the lake which has the potential to improve the ecological function of the lake and surrounding areas. | Removal of vegetation within the proposed clearing area is not considered to be at variance with this principle. |
| 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 closest conservation area to the Project area is 200 m south west (Unnamed Nature Reserve – R25708) . The limited amount of clearing proposed is unlikely to impact the environmental values of this reserve. | Removal of vegetation within the proposed clearing area is not considered to be at variance with this principle. |
| Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water. | The proposed clearing is to enable the construction of isolation bunds and flow control structures, increasing surface water flow to Lake Yealering. This is designed to increase the surface water quality of the lake. | The proposed clearing area is not considered to be at variance with this principle. |
| Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding. | The proposed clearing is to enable the construction of isolation bunds and flow control structures, increasing surface water flow to Lake Yealering. This is designed to increase the amount of water entering the lake, prolonging the period of inundation within the lake. It is unlikely that the proposed clearing will increase unwanted surface water flows to other areas adjacent to the project area. | Removal of vegetation within the proposed clearing area is not considered to be at variance with this principle as the vegetation clearing proposed will not cause or exacerbate the incidence of flooding. |

5. Conclusion

The key approval to support the proposed clearing in a NVCP under section 51 E of the EP Act.

The Project proposes to clear 1.16 ha of native vegetation within the 54.63 ha Proposal Area. The majority (52%) of the vegetated area has been heavily disturbed in the past for rural purposes (i.e. cleared and part weed infested) and impacts from secondary salinity.

Clearing of vegetation within the Proposal Area will not result in a substantial decrease in the remaining area of any vegetation associations, with a loss of <1% of Vegetation Associations 37, 953 and 1023.

Implementation of industry standard practices will minimise any potential environmental and social impacts during clearing and earthworks.

The following conclusions can be made in relation to the proposed clearing of no more than 1.16 ha:

1. The proposed clearing will not impact any TECs, PECs, or Threatened or Priority flora species.
2. The vegetation types and flora species located within the Proposal Area are well represented in the local area and clearing consequently presents a low risk to flora and vegetation and fauna habitat.
3. No additional environmental impact such as loss of biodiversity, habitat loss, appreciable land degradation, negative impacts to hydrology or water quality, impact to nearby conservation areas, or impact to conservation significant species will result from the proposed clearing.
4. The proposed clearing of vegetation conforms to the 10 principles for clearing native vegetation, as described in Schedule 5 of the EP Act (Table 10).

6. References

- Beard JS 1990, *Plant Life of Western Australia*. Kangaroo Press, Kenthurst, New South Wales.
- Beecham B 2001, 'Avon Wheatbelt 2 (AW2 - Re-juvenated Drainage subregion)', in *A biodiversity audit of Western Australia's 53 Biogeographical Subregions in 2002*, eds Department of Conservation and Land Management, Perth, pp. 36-68.
- Brown A, Thomson-Dans C & Marchant N 1998, *Western Australia's Threatened Flora*, Department of Conservation and Land Management, Perth
- Bureau of Meteorology (BOM) 2017, *Climatic Statistics for Australian Locations: Monthly climate statistics*, [Online], Australian Government, Available from: <http://www.bom.gov.au/climate/averages/tables/> [15 JULY 2017].
- Chao A 2005, 'Species richness estimation', in *Encyclopaedia of Statistical Sciences*, eds N Balakrishnan, CB Read & B Vidakovic, Wiley, New York, pp. 7909-7916.
- Churchward HM & McArthur WM 1980, 'Landforms and Soils of the Darling System', in *Atlas of Natural Resources, Darling System, Western Australia*, eds Department of Conservation and Environment, Perth, pp. 25-33.
- Department of Agriculture and Food (DAFWA) 2017, *Declared Pests (s22) list*, [Online], Government of Western Australia, Available from: <http://www.biosecurity.wa.gov.au/organisms/export/PER-DP> [15 JULY 2017].
- Department of Environment and Energy (DEE) 2017a, *Interim Biogeographic Regionalisation for Australia, Version 7*, [Online], Australian Government, Available from: <http://www.environment.gov.au/topics/land/national-reserve-system/science-maps-and-data/australias-bioregions-ibra> [15 JULY 2017].
- Department of Environment and Energy (DEE) 2017b, *EPBC Act Protected Matters Search Tool*, [Online], Australian Government. Available from: <http://www.environment.gov.au/epbc/pmst/index.html> [15 JULY 2017].
- Department of Environment and Energy (DEE) 2017c, *EPBC Act List of Threatened Flora*, [Online], Australian Government, Available from: <http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora> [15 JULY 2017].
- Department of Environment and Energy (DEE) 2017d, *EPBC Act List of Threatened Ecological Communities*, [Online], Australian Government, Available from: <http://www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl> [15 JULY 2017].
- Department of Environment and Conservation (DEC) 2010, *Definitions, Categories and Criteria for Threatened and Priority Ecological Communities*, [Online], Government of Western Australia, Available from: <http://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/tecs/tec-definitions-dec2010.pdf> [15 JULY 2017].
- Department of Parks and Wildlife (Parks and Wildlife) 2007-, *Naturemap, Mapping Western Australia's Biodiversity*, [Online], Government of Western Australia, Available from: <http://naturemap.dec.wa.gov.au/default.aspx> [15 JULY 2017].
- Department of Parks and Wildlife (Parks and Wildlife) 2017, *Wildlife Conservation (Threatened Flora) Notice 2016*, [Online], Government of Western Australia, Available from: https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/flora_notice.pdf [15 JULY 2017].

- Department of Parks and Wildlife (Parks and Wildlife) 2016, *List of Threatened Ecological Communities endorsed by the Western Australian Minister for Environment (correct to October 2016)*, Government of Western Australia, Perth.
- Department of Biodiversity, Conservation and Attractions (DBCA) 2017, *Priority Ecological Communities for Western Australia Version 24 (30 June 2017)*, Government of Western Australia, Perth.
- Environmental Protection Authority (EPA) 2016, *Technical Guidance (in accordance with the Environmental Protection Act 1986) – Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia*. Government of Western Australia, Perth.
- Executive Steering Committee for Australian Vegetation Information (ESCAVI) 2003, *Australian Vegetation Attribute Manual: National Vegetation Information System, Version 6.0*, Department of the Environment and Heritage, Australian Capital Territory.
- Government of Western Australia 2017, *2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report), Current as of 2016*, Department of Parks and Wildlife, Perth.
- Keighery B 1994, *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*, Wildflower Society, Floreat.
- Thackway & Cresswell 1995, *An Interim Biogeographic Regionalisation for Australia: A framework for setting priorities in the National Reserves System Cooperative Program Version 4*, Australian Nature Conservation Agency, Canberra.
- Western Australian Herbarium 1998-, *FloraBase – the Western Australian Flora*, [Online], Government of Western Australia, Available from: <http://florabase.dpaw.wa.gov.au/> [15 JULY 2017].

Appendix 1
Conservation significant flora and
ecological community definitions

Conservation Codes for Western Australia (Western Australian Herbarium 1998-)

Under the *Wildlife Conservation Act* (1950), the Minister for the Environment may declare species of flora to be protected if they are considered to be in danger of extinction, rare or otherwise in need of special protection. Schedules 1 and 2 deal with those that are threatened and those that are presumed extinct, respectively.

T: Threatened Flora (Declared Rare Flora – Extant)

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

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

- CR: Critically Endangered – considered to be facing an extremely high risk of extinction in the wild
- EN: Endangered – considered to be facing a very high risk of extinction in the wild
- VU: Vulnerable – considered to be facing a high risk of extinction in the wild
- X: Presumed Extinct Flora (Declared Rare Flora – Extinct).

Species that have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such (Schedule 2 under the *Wildlife Conservation Act 1950*).

Priority Flora

Species that have not yet been adequately surveyed to be listed under Schedule 1 or 2 are added to the Priority Flora List under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora or fauna. Species that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Conservation Dependent species are placed in Priority 5.

Priority One: Poorly-known Species

Species that are known from one or a few collections or sight records (generally less than 5), 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. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

Priority Two: Poorly-known Species

Species 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. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

Priority Three: Poorly-known Species

Species 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. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

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

5. Rare: Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
6. Near Threatened: Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
7. Species that have been removed from the list of threatened species during the past 5 years for reasons other than taxonomy.

Definition of Threatened Ecological Communities (DEC 2010)

Presumed Totally Destroyed (PD)

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:

- records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or
- all occurrences recorded within the last 50 years have since been destroyed.

Critically Endangered (CR)

An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria:

8. The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply:
 - (a) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years)
 - (b) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.
9. Current distribution is limited, and one or more of the following apply:
 - (a) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years)
 - (b) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes
 - (c) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.
10. The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria:

11. The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply:
 - (a) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years)
 - (b) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.
12. Current distribution is limited, and one or more of the following apply”
 - (a) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years)
 - (b) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes
 - (c) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.
13. The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)

An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria:

14. The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.
15. The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.
16. The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

Definition of Priority Ecological Communities (DEC 2010)

Priority One: Poorly-known ecological communities

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. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities

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. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities

- 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
- 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
- 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 by domestic and/or feral stock, and inappropriate fire regimes.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four

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. These include:

17. Rare. Ecological communities known from few occurrences 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 communities are usually represented on conservation lands.
18. Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
19. Ecological communities that have been removed from the list of threatened communities during the past five years.

Appendix 2
Desktop assessment results (Parks and
Wildlife 2007-, DEE 2017b)

NatureMap Species Report - Yealering

Created By Tristan Sleigh on 12/07/2017

Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 117° 37' 38" E, 32° 36' 12" S
Buffer 10km
Group By Kingdom

| Kingdom | Species | Records |
|--------------|------------|------------|
| Animalia | 127 | 362 |
| Fungi | 2 | 2 |
| Plantae | 130 | 202 |
| TOTAL | 259 | 566 |

| Name ID | Species Name | Naturalised | Conservation Code | Endemic To Query Area |
|---------|--|-------------|-------------------|-----------------------|
| 1. | 24559 <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater) | | | |
| 2. | 24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill) | | | |
| 3. | 24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill) | | | |
| 4. | 24265 <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill) | | | |
| 5. | 25536 <i>Accipiter fasciatus</i> (Brown Goshawk) | | | |
| 6. | 24282 <i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk) | | | |
| 7. | 41323 <i>Actitis hypoleucos</i> (Common Sandpiper) | | IA | |
| 8. | 24312 <i>Anas gracilis</i> (Grey Teal) | | | |
| 9. | 24315 <i>Anas rhynchotis</i> (Australasian Shoveler) | | | |
| 10. | 24316 <i>Anas superciliosa</i> (Pacific Black Duck) | | | |
| 11. | 24561 <i>Anthochaera carunculata</i> (Red Wattlebird) | | | |
| 12. | 24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird) | | | |
| 13. | <i>Apocyclops dengizicus</i> | | | |
| 14. | 24285 <i>Aquila audax</i> (Wedge-tailed Eagle) | | | |
| 15. | 24340 <i>Ardea novaehollandiae</i> (White-faced Heron) | | | |
| 16. | 25566 <i>Artamus cinereus</i> (Black-faced Woodswallow) | | | |
| 17. | <i>Austrochilonia subtenuis</i> | | | |
| 18. | <i>Austrolestes annulosus</i> | | | |
| 19. | 24318 <i>Aythya australis</i> (Hardhead) | | | |
| 20. | <i>Barnardius zonarius</i> | | | |
| 21. | <i>Berosus discolor</i> | | | |
| 22. | <i>Boeckella triarticulata</i> | | | |
| 23. | 24359 <i>Burhinus grallarius</i> (Bush Stone-curlew) | | | |
| 24. | 25714 <i>Cacatua pastinator</i> (Western Long-billed Corella) | | | |
| 25. | 25716 <i>Cacatua sanguinea</i> (Little Corella) | | | |
| 26. | 42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo) | | | |
| 27. | 24186 <i>Chalinobus gouldii</i> (Gould's Wattled Bat) | | | |
| 28. | 24377 <i>Charadrius ruficapillus</i> (Red-capped Plover) | | | |
| 29. | 24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck) | | | |
| 30. | <i>Chroicocephalus novaehollandiae</i> | | | |
| 31. | 24288 <i>Circus approximans</i> (Swamp Harrier) | | | |
| 32. | <i>Cladopelma curtivalva</i> | | | |
| 33. | 24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt) | | | |
| 34. | 25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush) | | | |
| 35. | 24399 <i>Columba livia</i> (Domestic Pigeon) | Y | | |
| 36. | 25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike) | | | |
| 37. | 25592 <i>Corvus coronoides</i> (Australian Raven) | | | |
| 38. | <i>Coxiella exposita</i> | | | |
| 39. | 24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird) | | | |
| 40. | 25595 <i>Cracticus tibicen</i> (Australian Magpie) | | | |
| 41. | 25596 <i>Cracticus torquatus</i> (Grey Butcherbird) | | | |
| 42. | 24322 <i>Cygnus atratus</i> (Black Swan) | | | |
| 43. | <i>Cyprinotus cingalensis</i> (ex edwardi) | | | |

| Name ID | Species Name | Naturalised | Conservation Code | ¹ Endemic To Query Area |
|---------|---|-------------|-------------------|------------------------------------|
| 44. | 30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra) | Y | | |
| 45. | <i>Daphnia queenslandensis</i> | | | |
| 46. | 25673 <i>Daphnositta chrysoptera</i> (Varied Sittella) | | | |
| 47. | 24092 <i>Dasyurus geoffroi</i> (Chuditch, Western Quoll) | | T | |
| 48. | <i>Diacypris spinosa</i> | | | |
| 49. | 25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird) | | | |
| 50. | <i>Egretta novaehollandiae</i> | | | |
| 51. | 24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite) | | | |
| 52. | 47937 <i>Elseornis melanops</i> (Black-fronted Dotterel) | | | |
| 53. | <i>Enochrus elongatulus</i> | | | |
| 54. | <i>Eolophus roseicapillus</i> | | | |
| 55. | <i>Ephydriidae</i> sp. 3 (SAP) | | | |
| 56. | 24379 <i>Erythronys cinctus</i> (Red-kneed Dotterel) | | | |
| 57. | 25621 <i>Falco berigora</i> (Brown Falcon) | | | |
| 58. | 25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel) | | | |
| 59. | 25623 <i>Falco longipennis</i> (Australian Hobby) | | | |
| 60. | 25727 <i>Fulica atra</i> (Eurasian Coot) | | | |
| 61. | 24761 <i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot) | | | |
| 62. | 34028 <i>Galaxias occidentalis</i> (Western Minnow) | | | |
| 63. | <i>Gallus gallus</i> | | | |
| 64. | 24959 <i>Gehyra variegata</i> | | | |
| 65. | 24401 <i>Geopelia cuneata</i> (Diamond Dove) | | | |
| 66. | 25530 <i>Gerygone fusca</i> (Western Gerygone) | | | |
| 67. | 24443 <i>Grallina cyanoleuca</i> (Magpie-lark) | | | |
| 68. | 24295 <i>Haliastur sphenurus</i> (Whistling Kite) | | | |
| 69. | <i>Hemianax papuensis</i> | | | |
| 70. | 25734 <i>Himantopus himantopus</i> (Black-winged Stilt) | | | |
| 71. | 24491 <i>Hirundo neoxena</i> (Welcome Swallow) | | | |
| 72. | 24511 <i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull) | | | |
| 73. | 25659 <i>Lichenostomus leucotis</i> (White-eared Honeyeater) | | | |
| 74. | 25661 <i>Lichmera indistincta</i> (Brown Honeyeater) | | | |
| 75. | 24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck) | | | |
| 76. | 24583 <i>Manorina flavigula</i> (Yellow-throated Miner) | | | |
| 77. | 24598 <i>Merops ornatus</i> (Rainbow Bee-eater) | | IA | |
| 78. | <i>Mesochra nr flava</i> | | | |
| 79. | <i>Monohalea</i> sp. 1 (SAP) | | | |
| 80. | 25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python) | | | |
| 81. | 25610 <i>Myiagra inquieta</i> (Restless Flycatcher) | | | |
| 82. | 24146 <i>Myrmecobius fasciatus</i> (Numbat, Walpurti) | | T | |
| 83. | <i>Mytilocypris ambiguosa</i> | | | |
| 84. | <i>Mytilocypris mytiloides</i> | | | |
| 85. | <i>Necterosoma penicillatus</i> | | | |
| 86. | <i>Nematoda</i> sp. | | | |
| 87. | 24738 <i>Neophema elegans</i> (Elegant Parrot) | | | |
| 88. | <i>Nitocra</i> sp. 5 (<i>nr reducta</i>) (SAP) | | | |
| 89. | 24407 <i>Ocyphaps lophotes</i> (Crested Pigeon) | | | |
| 90. | <i>Oribatida</i> sp. | | | |
| 91. | 24085 <i>Oryctolagus cuniculus</i> (Rabbit) | Y | | |
| 92. | 25680 <i>Pachycephala rufiventris</i> (Rufous Whistler) | | | |
| 93. | 25682 <i>Pardalotus striatus</i> (Striated Pardalote) | | | |
| 94. | 24674 <i>Pavo cristatus</i> (Common Peafowl, Indian Peafowl) | Y | | |
| 95. | 48061 <i>Petrochelidon nigricans</i> (Tree Martin) | | | |
| 96. | 24659 <i>Petroica goodenovii</i> (Red-capped Robin) | | | |
| 97. | 25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant) | | | |
| 98. | 24409 <i>Phaps chalcoptera</i> (Common Bronzewing) | | | |
| 99. | 24098 <i>Phascogale calura</i> (Red-tailed Phascogale, Kenngoor) | | S | |
| 100. | 48071 <i>Phylidonyris niger</i> (White-cheeked Honeyeater) | | | |
| 101. | 24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater) | | | |
| 102. | 25720 <i>Platycercus icterotis</i> (Western Rosella) | | | |
| 103. | 24746 <i>Platycercus icterotis</i> subsp. <i>xanthogenys</i> (Western Rosella (inland)) | | P4 | |
| 104. | 25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot) | | | |
| 105. | 25704 <i>Podiceps cristatus</i> (Great Crested Grebe) | | | |
| 106. | 24681 <i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe) | | | |
| 107. | 25722 <i>Polytelis anthopeplus</i> (Regent Parrot) | | | |
| 108. | 24683 <i>Pomatostomus superciliosus</i> (White-browed Babbler) | | | |
| 109. | 34013 <i>Pomatostomus superciliosus</i> subsp. <i>ashbyi</i> (White-browed Babbler (western wheatbelt)) | | | |
| 110. | <i>Procladius paludicola</i> | | | |
| 111. | 42416 <i>Pseudonaja mengdeni</i> (Western Brown Snake) | | | |
| 112. | <i>Pyralidae</i> nr. sp. 39/40 of JHH (SAP) | | | |

| Name ID | Species Name | Naturalised | Conservation Code | ¹ Endemic To Query Area |
|---------|---|-------------|-------------------|------------------------------------|
| 113. | 24278 <i>Pyrrholaemus brunneus</i> (Redthroat) | | | |
| 114. | 48096 <i>Rhipidura albiscapa</i> (Grey Fantail) | | | |
| 115. | 25614 <i>Rhipidura leucophrys</i> (Willie Wagtail) | | | |
| 116. | 25534 <i>Sericornis frontalis</i> (White-browed Scrubwren) | | | |
| 117. | 25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake) | | | |
| 118. | 30948 <i>Smicromis brevirostris</i> (Weebill) | | | |
| 119. | <i>Stratiomyidae</i> sp. | | | |
| 120. | 25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe) | | | |
| 121. | 24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck) | | | |
| 122. | <i>Tanytarsus barbitarsis</i> | | | |
| 123. | <i>Tanytarsus fuscithorax/semibarbitarsis</i> | | | |
| 124. | 25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher) | | | |
| 125. | 24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl) | | | |
| 126. | 24386 <i>Vanellus tricolor</i> (Banded Lapwing) | | | |
| 127. | 25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye) | | | |

Fungi

| | | | | |
|------|-------------------------------------|--|--|--|
| 128. | 41653 <i>Caloplaca kaernefeltii</i> | | | |
| 129. | 27748 <i>Flavoparmelia rutidota</i> | | | |

Plantae

| | | | | |
|------|---|---|----|--|
| 130. | 3200 <i>Acacia acuminata</i> (Jam, Mangard) | | | |
| 131. | 12672 <i>Acacia cupularis</i> | | | |
| 132. | 16169 <i>Acacia deficiens</i> | | | |
| 133. | 3324 <i>Acacia erinacea</i> | | | |
| 134. | 3408 <i>Acacia lasiocalyx</i> (Silver Wattle, Wilyurwur) | | | |
| 135. | 3439 <i>Acacia merinthophora</i> | | | |
| 136. | 3442 <i>Acacia microbotrya</i> (Manna Wattle, Kalyang) | | | |
| 137. | 184 <i>Aira caryophyllea</i> (Silvery Hairgrass) | Y | | |
| 138. | 13380 <i>Amphibromus nervosus</i> | | | |
| 139. | 199 <i>Amphipogon strictus</i> (Greybeard Grass) | | | |
| 140. | 7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold) | Y | | |
| 141. | 1265 <i>Arthropodium curvipes</i> | | | |
| 142. | 2475 <i>Atriplex semibaccata</i> (Berry Saltbush) | | | |
| 143. | 17237 <i>Austrostipa elegantissima</i> | | | |
| 144. | 17249 <i>Austrostipa puberula</i> | | | |
| 145. | 233 <i>Avena barbata</i> (Bearded Oat) | Y | | |
| 146. | 11868 <i>Banksia sphaerocarpa</i> var. <i>caesia</i> | | | |
| 147. | 3000 <i>Brassica tournefortii</i> (Mediterranean Turnip) | Y | | |
| 148. | 2995 <i>Brassica x napus</i> | Y | | |
| 149. | 252 <i>Bromus madritensis</i> (Madrid Brome) | Y | | |
| 150. | 253 <i>Bromus rubens</i> (Red Brome) | Y | | |
| 151. | 7413 <i>Brunonia australis</i> (Native Cornflower) | | | |
| 152. | 2846 <i>Calandrinia calyptata</i> (Pink Purslane) | | | |
| 153. | 2853 <i>Calandrinia eremaea</i> (Twining Purslane) | | | |
| 154. | 5395 <i>Callistemon phoeniceus</i> (Lesser Bottlebrush, Dubarda) | | | |
| 155. | 7903 <i>Calotis hispidula</i> (Bindy Eye) | | | |
| 156. | 1742 <i>Casuarina obesa</i> (Swamp Sheoak, Kuli) | | | |
| 157. | 1134 <i>Centrolepis polygyna</i> (Wiry Centrolepis) | | | |
| 158. | 35598 <i>Chamaelucium</i> sp. <i>Winchester</i> (C. <i>Chapman</i> s.n. PERTH 07879180) | | | |
| 159. | 16087 <i>Clematis delicata</i> | | | |
| 160. | 4555 <i>Comesperma integerrimum</i> | | | |
| 161. | 4566 <i>Comesperma volubile</i> (Love Creeper) | | | |
| 162. | 7944 <i>Cotula bipinnata</i> (Ferny Cotula) | Y | | |
| 163. | 7945 <i>Cotula coronopifolia</i> (Waterbuttons) | Y | | |
| 164. | 17701 <i>Crassula closiana</i> | | | |
| 165. | 3137 <i>Crassula colorata</i> (Dense Stonecrop) | | | |
| 166. | 3139 <i>Crassula exserta</i> | | | |
| 167. | 3142 <i>Crassula natans</i> | Y | | |
| 168. | 7451 <i>Dampiera lavandulacea</i> | | | |
| 169. | 7485 <i>Dampiera triloba</i> | | P3 | |
| 170. | 6218 <i>Daucus glochidiatus</i> (Australian Carrot) | | | |
| 171. | 1259 <i>Dianella revoluta</i> (Blueberry Lily) | | | |
| 172. | 1287 <i>Dichopogon capillipes</i> | | | |
| 173. | 32345 <i>Didymodon australasiae</i> | | | |
| 174. | 32346 <i>Didymodon torquatus</i> | | | |
| 175. | 830 <i>Eleocharis pusilla</i> | | | |
| 176. | 2511 <i>Enchylaena tomentosa</i> (Barrier Saltbush) | | | |
| 177. | 32463 <i>Entosthodon subnudus</i> var. <i>gracilis</i> | | | |
| 178. | 378 <i>Eragrostis dielsii</i> (Mallee Lovegrass) | | | |
| 179. | 4336 <i>Erodium moschatum</i> (Musky Crowfoot) | Y | | |

| Name ID | Species Name | Naturalised | Conservation Code | ¹ Endemic To Query Area |
|---------|---|-------------|-------------------|------------------------------------|
| 180. | 11978 <i>Eucalyptus celastroides</i> subsp. <i>virella</i> | | | |
| 181. | 5643 <i>Eucalyptus falcata</i> (Silver Mallet, Dulyumuk) | | | |
| 182. | 5675 <i>Eucalyptus incrassata</i> (Lerp Mallee) | | | |
| 183. | 5686 <i>Eucalyptus kondininensis</i> (Kondinin Blackbutt) | | | |
| 184. | 11295 <i>Eucalyptus loxophleba</i> subsp. <i>loxophleba</i> (York Gum) | | | |
| 185. | 20047 <i>Eucalyptus orthostemon</i> | | | |
| 186. | 12866 <i>Eucalyptus pluricaulis</i> subsp. <i>pluricaulis</i> | | | |
| 187. | 5766 <i>Eucalyptus salmonophloia</i> (Salmon Gum, Wurak) | | | |
| 188. | 13034 <i>Eucalyptus sargentii</i> subsp. <i>sargentii</i> | | | |
| 189. | 18293 <i>Eucalyptus urna</i> | | | |
| 190. | 5797 <i>Eucalyptus wandoo</i> (Wandoo, Wondou) | | | |
| 191. | 12831 <i>Frankenia pulverulenta</i> | Y | | |
| 192. | 907 <i>Gahnia trifida</i> (Coast Saw-sedge) | | | |
| 193. | 16311 <i>Gazania linearis</i> | Y | | |
| 194. | 1517 <i>Gladiolus alatus</i> | Y | | |
| 195. | 7991 <i>Gnephosis drummondii</i> | | | |
| 196. | 3951 <i>Gompholobium marginatum</i> | | | |
| 197. | 29362 <i>Goodenia coerulea</i> | | | |
| 198. | 19285 <i>Goodenia pulchella</i> subsp. <i>Wheatbelt</i> (L.W. Sage & F. Hort 795) | | | |
| 199. | 2116 <i>Grevillea uncinulata</i> (Hook-leaf Grevillea) | | | |
| 200. | 5012 <i>Guichenotia macrantha</i> (Large-flowered Guichenotia) | | | |
| 201. | 1465 <i>Haemodorum discolor</i> | | | |
| 202. | 12225 <i>Hakea brownii</i> | | | |
| 203. | 32392 <i>Hedwigidium integrifolium</i> | | | |
| 204. | 449 <i>Hordeum leporinum</i> (Barley Grass) | Y | | |
| 205. | 450 <i>Hordeum marinum</i> | Y | | |
| 206. | 8086 <i>Hypochaeris glabra</i> (Smooth Catsear) | Y | | |
| 207. | 18585 <i>Lagenophora huegelii</i> | | | |
| 208. | 5039 <i>Lasiopetalum microcardium</i> | | | |
| 209. | 3018 <i>Lepidium africanum</i> (Rubble Pepperpress) | Y | | |
| 210. | 3044 <i>Lepidium rotundum</i> (Veined Pepperpress) | | | |
| 211. | 1073 <i>Lepidobolus chaetocephalus</i> (Bristle-headed Chaff Rush) | | | |
| 212. | 120 <i>Lepilaena cylindrocarpa</i> | | | |
| 213. | 478 <i>Lolium rigidum</i> (Wimmera Ryegrass) | Y | | |
| 214. | 1226 <i>Lomandra effusa</i> (Scented Matrush) | | | |
| 215. | 18049 <i>Lyginia imberbis</i> | | | |
| 216. | 2537 <i>Maireana brevifolia</i> (Small Leaf Bluebush) | | | |
| 217. | 15063 <i>Melaleuca acuminata</i> subsp. <i>acuminata</i> | | | |
| 218. | 18527 <i>Melaleuca brophyi</i> | | | |
| 219. | 5925 <i>Melaleuca lateriflora</i> (Gorada) | | | |
| 220. | 5959 <i>Melaleuca raphiophylla</i> (Swamp Paperbark) | | | |
| 221. | 5982 <i>Melaleuca torquata</i> | | | |
| 222. | 5987 <i>Melaleuca viminea</i> (Mohan) | | | |
| 223. | 2814 <i>Mesembryanthemum nodiflorum</i> (Slender Iceplant) | Y | | |
| 224. | 492 <i>Neurachne alopecuroidea</i> (Foxtail Mulga Grass) | | | |
| 225. | 4355 <i>Oxalis perennans</i> | | | |
| 226. | 516 <i>Parapholis incurva</i> (Coast Barbgrass) | Y | | |
| 227. | 7089 <i>Parentucellia latifolia</i> (Common Bartsia) | Y | | |
| 228. | 11052 <i>Persicaria prostrata</i> | | | |
| 229. | 7304 <i>Plantago major</i> (Greater Plantain) | Y | | |
| 230. | 8188 <i>Pogonolepis stricta</i> | | | |
| 231. | 582 <i>Polypogon monspeliensis</i> (Annual Beardgrass) | Y | | |
| 232. | 115 <i>Ruppia megacarpa</i> | | | |
| 233. | 116 <i>Ruppia polycarpa</i> | | | |
| 234. | 40431 <i>Rytidosperma acerosum</i> | | | |
| 235. | 2356 <i>Santalum acuminatum</i> (Quandong, Warnga) | | | |
| 236. | 2593 <i>Sarcocornia quinqueflora</i> (Beaded Samphire) | | | |
| 237. | 7618 <i>Scaevola humifusa</i> (Procumbent Scaevola) | | | |
| 238. | 13287 <i>Schoenia filifolia</i> subsp. <i>filifolia</i> | | | |
| 239. | 993 <i>Schoenus hexandrus</i> | | | |
| 240. | 2609 <i>Sclerolaena diacantha</i> (Grey Copperburr) | | | |
| 241. | 46824 <i>Seringia velutina</i> (Velvet firebush) | | | |
| 242. | 7005 <i>Solanum elaeagnifolium</i> (White Horse Nettle, Silverleaf Nightshade) | Y | | |
| 243. | 8231 <i>Sonchus oleraceus</i> (Common Sowthistle) | Y | | |
| 244. | 8900 <i>Spergularia marina</i> | | | |
| 245. | 7804 <i>Stylidium tenuicarpum</i> | | P4 | |
| 246. | 33319 <i>Tecticornia indica</i> subsp. <i>bidens</i> | | | |
| 247. | 33297 <i>Tecticornia pergranulata</i> subsp. <i>pergranulata</i> (Blackseed Samphire) | | | |
| 248. | 4258 <i>Templetonia sulcata</i> (Centipede Bush) | | | |
| 249. | 20732 <i>Thelymitra petrophila</i> | | | |

| Name ID | Species Name | Naturalised | Conservation Code | ¹ Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 250. | 1343 <i>Thysanotus patersonii</i> | | | |
| 251. | 6268 <i>Trachymene cyanopetala</i> | | | |
| 252. | 6280 <i>Trachymene pilosa</i> (Native Parsnip) | | | |
| 253. | 15509 <i>Trifolium tomentosum</i> var. <i>tomentosum</i> | Y | | |
| 254. | 147 <i>Triglochin mucronata</i> | | | |
| 255. | 9008 <i>Urodon dasyphyllus</i> (Mop Bushpea) | | | |
| 256. | 8255 <i>Ursinia anthemoides</i> (Ursinia) | Y | | |
| 257. | 2920 <i>Vaccaria hispanica</i> (Cow Soapwort) | Y | | |
| 258. | 724 <i>Vulpia myuros</i> (Rat's Tail Fescue) | Y | | |
| 259. | <i>Vulpia</i> sp. | | | |

Conservation Codes

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

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



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

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

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

Report created: 28/06/17 19:01:25

[Summary](#)

[Details](#)

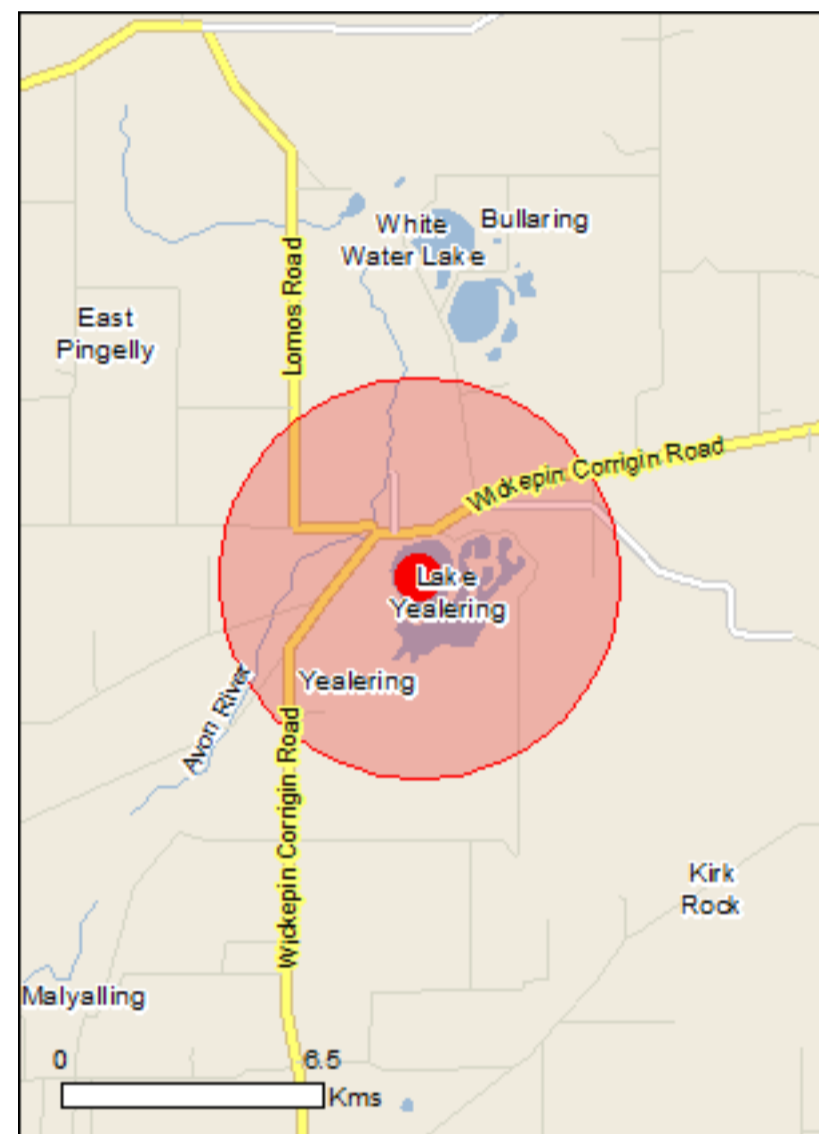
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

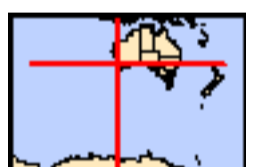
[Acknowledgements](#)



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

[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

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

| | |
|---|------|
| World Heritage Properties: | None |
| National Heritage Places: | None |
| Wetlands of International Importance: | None |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | None |
| Listed Threatened Ecological Communities: | 1 |
| Listed Threatened Species: | 11 |
| Listed Migratory Species: | 6 |

Other Matters Protected by the EPBC Act

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

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

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

| | |
|--|------|
| Commonwealth Land: | 1 |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 11 |
| Whales and Other Cetaceans: | None |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Commonwealth Reserves Marine: | None |

Extra Information

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

| | |
|--|------|
| State and Territory Reserves: | 3 |
| Regional Forest Agreements: | None |
| Invasive Species: | 14 |
| Nationally Important Wetlands: | 1 |
| Key Ecological Features (Marine) | None |

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[[Resource Information](#)]

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

| Name | Status | Type of Presence |
|--|-----------------------|---------------------------------------|
| Eucalypt Woodlands of the Western Australian Wheatbelt | Critically Endangered | Community likely to occur within area |

Listed Threatened Species

[[Resource Information](#)]

| Name | Status | Type of Presence |
|------|--------|------------------|
|------|--------|------------------|

Birds

| | | |
|---|-----------------------|--|
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area |
|---|-----------------------|--|

| | | |
|--|------------|--------------------------------------|
| Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523] | Endangered | Breeding likely to occur within area |
|--|------------|--------------------------------------|

| | | |
|---|------------|--|
| Leipoa ocellata Malleefowl [934] | Vulnerable | Species or species habitat likely to occur within area |
|---|------------|--|

| | | |
|--|------------|--|
| Pezoporus occidentalis Night Parrot [59350] | Endangered | Species or species habitat may occur within area |
|--|------------|--|

Mammals

| | | |
|---|------------|--|
| Dasyurus geoffroii Chuditch, Western Quoll [330] | Vulnerable | Species or species habitat may occur within area |
|---|------------|--|

| | | |
|--|------------|--|
| Phascogale calura Red-tailed Phascogale, Red-tailed Wambenger, Kenngoor [316] | Vulnerable | Species or species habitat likely to occur within area |
|--|------------|--|

Plants

| | | |
|--|------------|--|
| Banksia oligantha Wagin Banksia [20697] | Endangered | Species or species habitat may occur within area |
|--|------------|--|

| | | |
|--|------------|--|
| Grevillea dryandroides subsp. hirsuta Hairy Phalanx Grevillea [64577] | Endangered | Species or species habitat likely to occur within area |
|--|------------|--|

| | | |
|---|------------|--|
| Grevillea scapigera Corrigin Grevillea [12195] | Endangered | Species or species habitat may occur within area |
|---|------------|--|

| | | |
|---|------------|--|
| Roycea pycnophylloides Saltmat [21161] | Endangered | Species or species habitat likely to occur within area |
|---|------------|--|

| Name | Status | Type of Presence |
|---|------------|--|
| Symonanthus bancroftii Bancrofts Symonanthus [12837] | Endangered | Species or species habitat may occur within area |

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

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

| Name | Threatened | Type of Presence |
|------|------------|------------------|
|------|------------|------------------|

Migratory Marine Birds

| | | |
|---|--|--|
| Apus pacificus Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
|---|--|--|

Migratory Terrestrial Species

| | | |
|---|--|--|
| Motacilla cinerea Grey Wagtail [642] | | Species or species habitat may occur within area |
|---|--|--|

Migratory Wetlands Species

| | | |
|--|--|---|
| Actitis hypoleucos Common Sandpiper [59309] | | Species or species habitat known to occur within area |
|--|--|---|

| | | |
|--|--|--|
| Calidris acuminata Sharp-tailed Sandpiper [874] | | Species or species habitat may occur within area |
|--|--|--|

| | | |
|---|-----------------------|--|
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area |
|---|-----------------------|--|

| | | |
|--|--|--|
| Calidris melanotos Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
|--|--|--|

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

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

| Name |
|---------------------|
| Commonwealth Land - |

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

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

| Name | Threatened | Type of Presence |
|------|------------|------------------|
|------|------------|------------------|

Birds

| | | |
|--|--|---|
| Actitis hypoleucos Common Sandpiper [59309] | | Species or species habitat known to occur within area |
|--|--|---|

| | | |
|---|--|--|
| Apus pacificus Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
|---|--|--|

| | | |
|--|--|--|
| Ardea alba Great Egret, White Egret [59541] | | Species or species habitat likely to occur within area |
|--|--|--|

| | | |
|--|--|--|
| Ardea ibis Cattle Egret [59542] | | Species or species habitat may occur within area |
|--|--|--|

| | | |
|--|--|---|
| Calidris acuminata Sharp-tailed Sandpiper [874] | | Species or species habitat may occur within |
|--|--|---|

| Name | Threatened | Type of Presence area |
|---|-----------------------|--|
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area |
| Calidris melanotos Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
| Haliaeetus leucogaster White-bellied Sea-Eagle [943] | | Species or species habitat may occur within area |
| Merops ornatus Rainbow Bee-eater [670] | | Species or species habitat may occur within area |
| Motacilla cinerea Grey Wagtail [642] | | Species or species habitat may occur within area |
| Thinornis rubricollis Hooded Plover [59510] | | Species or species habitat may occur within area |

Extra Information

| State and Territory Reserves | [Resource Information] |
|------------------------------|--|
| Name | State |
| Nonalling | WA |
| Unnamed WA14694 | WA |
| Unnamed WA25708 | WA |

Invasive Species [[Resource Information](#)]

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

| Name | Status | Type of Presence |
|--|--------|--|
| Birds | | |
| Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803] | | Species or species habitat likely to occur within area |
| Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781] | | Species or species habitat likely to occur within area |
| Mammals | | |
| Felis catus Cat, House Cat, Domestic Cat [19] | | Species or species habitat likely to occur within area |
| Feral deer Feral deer species in Australia [85733] | | Species or species habitat likely to occur within area |
| Mus musculus House Mouse [120] | | Species or species |

| Name | Status | Type of Presence |
|--|--------|---|
| Oryctolagus cuniculus Rabbit, European Rabbit [128] | | habitat likely to occur within area Species or species habitat likely to occur within area |
| Sus scrofa Pig [6] | | Species or species habitat likely to occur within area |
| Vulpes vulpes Red Fox, Fox [18] | | Species or species habitat likely to occur within area |

Plants

| | | |
|---|--|--|
| Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473] | | Species or species habitat likely to occur within area |
| Carrichtera annua Ward's Weed [9511] | | Species or species habitat may occur within area |
| Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213] | | Species or species habitat may occur within area |
| Chrysanthemoides monilifera Bitou Bush, Boneseed [18983] | | Species or species habitat may occur within area |
| Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323] | | Species or species habitat likely to occur within area |
| Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018] | | Species or species habitat likely to occur within area |

Nationally Important Wetlands [Resource Information]

| Name | State |
|--|-------|
| Yealering Lakes System | WA |

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-32.60254 117.6281

Acknowledgements

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

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

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

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

Appendix 3
Vascular plant taxa recorded from
quadrats within the survey area

| Family | Species |
|-------------------|-----------------------------------|
| Aizoaceae | *Mesembryanthemum crystallinum |
| | *Mesembryanthemum nodiflorum |
| Asteraceae | *Asteraceae sp. |
| | *Gazania linearis |
| | *Sonchus oleraceus |
| | *Sonchus sp. |
| | *Ursinia anthemoides |
| | Podolepis lessonii |
| Brassicaceae | *Brassica tournefortii |
| Casuarinaceae | Casuarina obesa |
| Chenopodiaceae | Atriplex semibaccata |
| | Enchylaena lanata |
| | Enchylaena tomentosa |
| | Tecticornia indica |
| | Tecticornia pergranulata |
| Fabaceae | Acacia saligna |
| Goodeniaceae | Goodeniaceae sp. |
| Hemerocallidaceae | Dianella revoluta var. divaricata |
| Myrtaceae | Eucalyptus loxophleba |
| Poaceae | *Avena barbata |
| | *Ehrharta longiflora |
| | Austrostipa sp. |
| | Poaceae sp. |
| Proteaceae | Banksia prionotes |
| Rubiaceae | Opercularia vaginata |
| Solanaceae | *Solanum nigrum |

Appendix 4
Certificates of Title



| | |
|---|-------------------------------------|
| REGISTER NUMBER 19716/DP85023 | |
| DUPLICATE EDITION N/A | DATE DUPLICATE ISSUED N/A |

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2092** FOLIO **932**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 19716 ON DEPOSITED PLAN 85023

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

LEONARD JAMES BEATTIE
BERYL PHYLLIS JOYCE BEATTIE
BOTH OF POST OFFICE BOX 38, YEALERING
AS JOINT TENANTS

(T G373463) REGISTERED 15/1/1997

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2092-932 (19716/DP85023)
PREVIOUS TITLE: 1319-545
PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY: SHIRE OF WICKEPIN

NOTE 1: A000001A LAND PARCEL IDENTIFIER OF AVON LOCATION 19716 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 19716 ON DEPOSITED PLAN 85023 ON 26-SEP-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.
NOTE 2: THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.



| | |
|---|--|
| REGISTER NUMBER 17369/DP83410 | |
| DUPLICATE EDITION 3 | DATE DUPLICATE ISSUED 1/2/2011 |

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2098** FOLIO **898**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 17369 ON DEPOSITED PLAN 83410

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BENJAMIN THOMAS LALLY
LEWANNA THERESE LALLY
BOTH OF 41 SEWELL STREET, YEALERING
AS JOINT TENANTS

(T M113841) REGISTERED 26/11/2012

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE.
2. *M113842 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA REGISTERED 26/11/2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2098-898 (17369/DP83410)
 PREVIOUS TITLE: 1670-464
 PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
 LOCAL GOVERNMENT AUTHORITY: SHIRE OF WICKEPIN

NOTE 1: A000001A LAND PARCEL IDENTIFIER OF AVON LOCATION 17369 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 17369 ON DEPOSITED PLAN 83410 ON 10-MAY-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.

END OF PAGE 1 - CONTINUED OVER

RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 17369/DP83410

VOLUME/FOLIO: 2098-898

PAGE 2

NOTE 2: THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE
OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.

NOTE 3: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING
M113842

Appendix 5
Landholder Authorisation



77 Wogolin Road, PO Box 19
WICKEPIN WA 6370
Phone: 08 9888 1005
Fax: 08 9888 1074
www.wickepin.wa.gov.au

RECEIVED
2/8/17

Contact: Mark Hook
Our Ref: EM.PRG.1111

Meghan McGregor
Project Manager – Living Lakes
PO Box 311, Northam WA 6401

26 July 2017

Dear Meghan,

LIVING LAKES PROJECT FOR LAKE YEALERING:

Thank you for your letter dated 6 July 2017 requesting consent for the Wheatbelt NRM to access Lake Yealering to commence Stage 3 of the Living Lakes project.

Consent is given by the Shire of Wickepin to the Wheatbelt NRM to access Lot 29612, Lot 19893 and vested Reserve 15672 for stage 3 of the Lake Yealering Living Lakes Project.

Council also advises that it may agree to undertake the future maintenance of the engineering installed infrastructure subject to the adoption of a Maintenance and Management Plan.

Council felt that it needs to understand all the maintenance requirements and costs to the community before it agrees to take on any costs for the required maintenance.

Council understands that it will be part of the finalisation of the Maintenance and Management Plan, in consultation with the individual landowners and all the costs will be brought out in the final Maintenance and Management Plan.

If you have any queries regarding this letter please contact the undersigned.

Yours sincerely


Mark J Hook
Chief Executive Officer

Shire of Wickepin



Department of Planning,
Lands and Heritage

GOVERNMENT OF
WESTERN AUSTRALIA

REGIONAL AND METROPOLITAN SERVICES

Our ref: 00452-2017, Job No. 172646
Enquiries: Robert Baker, ph (08) 6552 4469

Wheatbelt Natural Resource Management
Post Office Box 311
NORTHAM WA 6401

Dear Meghan McGregor

SEEKING AUTHORITY TO ACCESS UNALLOCATED CROWN LAND – LAKE YEALERING - SHIRE OF WICKEPIN

Thank you for providing your written application dated 24 July 2017 seeking authority to access unallocated Crown land (UCL), being Lot 19634 on Deposited Plan 84681 as part of the Living Lakes Stage 3 implementation in Lake Yealering.

The Department of Planning, Lands and Heritage notes that we are unable to provide a section 91 LAA 1997 licence to occupy within the specified timeframe stated within your application. This Department will approve of a letter of authority to access the UCL being Lot 19634 on Deposited Plan 84681.

Accordingly this letter serves as authority to access the UCL subject to the following conditions;

1. Access is limited to UCL being Lot 19634 on Deposited Plan 84681 on the attached map;
2. The period of authority is the 5 October 2017 to 1 July 2019 on the proviso that when a section 91 LAA 1997 licence to occupy is executed by both parties, this authority will cease;
3. Confirmation being received that Wheatbelt Natural Resource Management (NRM) holds appropriate Public Indemnity Insurance;
4. Confirmation that NRM indemnifies the State, Minister for Lands and the Department of Planning, Lands and Infrastructure against all loss, damage or expense incurred directly or indirectly, from the access to the UCL and against any costs or claims for compensation;
5. Confirmation that NRM has obtained consent from other Local and State government agencies, including other adjoining landowners that may be affected by the Living Lakes Stage 3 implementation works;

6. The authority to access UCL, being Lot 19634 on Deposited Plan 84681 to commence civil construction works, these works will include an isolation bund and inlet drain, and a control structure within Lot 196345 on Deposited Plan 84681.

For further enquiries please do not hesitate to contact Robert Baker, Assistant Manager on the (08) 6552 4469.

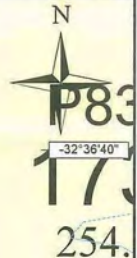
Yours sincerely



Chris Ziatas
Manager
Case Management
South West and Great Southern

10 October 2017

UCL Lot 19634 on Deposited Plan 84681



P85023
19716

207.13 ha

UCL
P84681
19634

93.573 ha

R 257

P8468

1963

64.800 ha

9678

445

19 ha

P84678
19633

130.69 ha

R 25

P84

19

174

Scale : 1:10000 (Geographical)

MGA : SW=558084.2E,6388700.6N Zone 50 / NE=560201.5E,6391893.8N Zone 50

Lat/Long : 117°37'09.329", -32°38'15.936" / 117°38'29.849", -32°36'31.834" H 271mm by W 210mm

Printed : 11:43 Tue 12/Sep/2017

© Western Australian Land Information Authority 2017

This product is for information purposes only and is not guaranteed. The information may be out of date and should not be relied upon without further verification from the original documents. Where the information is being used for legal purposes then the original documents must be searched for all legal requirements.

Date: August 11th 2017

Attention: Meghan McGregor
Wheatbelt NRM
269 Fitzgerald Street
Northam WA 6401

RE: LETTER OF AUTHORISATION – LIVING LAKES, STAGE 3

Dear Meghan

I hereby give consent for Wheatbelt NRM to access and undertake works (including clearing) on my property, being Lot 19716 on Plan 85023, for the implementation of Stage 3 of the Living Lakes project.

Wheatbelt NRM has permission to access and undertake works on my abovementioned property for Stage 3 of the Living Lakes project until 30 June 2019.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ken Beattie', written in a cursive style.

Ken Beattie

WL & KJ EVERETT

13 October, 2017

Your Will

We have prepared a draft of your will and deeds of appointment for both trusts. The deeds will enable your executor to control the trusts until your mother passes away and then transfer control of the trusts to your siblings.

We have also provided that if any of your siblings predeceases you, the trusts are to vest and the assets are to be distributed between your living siblings and any children of a sibling who predeceases you.

We enclose draft copies of those documents for your perusal. Brian Evans has already read them and indicated that he has no problem with them. If you are happy with them, please contact our office to arrange a suitable time to sign them. If you require changes or would like to discuss them, please do not hesitate to contact us.

In the meantime, we are enclosing our tax invoice in respect of our costs to date.

Yours faithfully
WL & KJ EVERETT

Encl.

WL & KJ EVERETT

Barristers and Solicitors

Liability limited by a scheme approved under Professional Standards Legislation.

A.B.N: 28 959 449 331

4 Fortune Street
Post Office Box 180
Narrogin WA 6312
Tel: (08) 9881 1600
Fax: (08) 9881 3370

PO Box 295, Subiaco WA 6904
Unit 2/ 276 Barker Road
Subiaco WA 6008
Tel: (08) 9388 6100
Fax: (08) 9388 9220

*Please reply to
Narrogin office*

13 October 2017

Our Ref: JLK:11953

Kenneth James Beattie
177 Beattie Road
YEALERING WA 6372

By post only.

Dear Ken

LJ Beattie Family Trust

We confirm that we have forwarded to the Office of State Revenue the documents to transfer the farmland to Chocolyn Farming Pty Ltd as trustee for the LJ Beattie Family Trust for assessment of duty. The duty should be nominal.

There have been significant delays at State Revenue, and we are unable to estimate how long it will take for an assessment to issue. We will notify you as soon as we receive it.

We understand that you require proof of ownership of the land for water purposes. Unfortunately, the best we can do until the transfers are finalised is provide copies of the transfer documents which show that the land is to be transferred to Chocolyn Farming Pty Ltd. Please let us know if you would like us to attend to this.

In the meantime, we note that many of the titles are the subject of 2 mortgages to the ANZ Bank. In order to effect the transfer of land once the duty has been assessed and paid, the bank may require fresh mortgages to be prepared. You should arrange with the bank to have any documents that they require prepared.

We also note that there are 2 titles which are not mortgaged and which were not in the parcel that you delivered to our office. The titles are volume 1124 folio 573 and volume 1316 folio 916. We must lodge these with the transfer of land documents.

Date: October 3rd 2017

Attention: Meghan McGregor
Wheatbelt NRM
269 Fitzgerald Street
Northam WA 6401

RE: LETTER OF AUTHORISATION

Dear Meghan

I hereby give consent for Wheatbelt NRM to access and undertake works (including clearing) on my property, being Lot 17369 on Plan 83410, for the implementation of Stage 3 of the Living Lakes project.

Wheatbelt NRM has permission to access and undertake works on my property for Stage 3 until 30 June 2019.

Yours sincerely

Ben Lally



Lewanna Lally

