



APPENDIX 2

2. ENVIRONMENTAL ASSESSMENT REPORT

Prepared by: PGV Environmental

Reference: 2015-240

Dated: 3 December 2015

PART LOT 19 SIXTY EIGHT ROAD, BALDIVIS

ENVIRONMENTAL ASSESSMENT

Prepared for: Glow Developments

Report Date: 3 December 2015

Version: 2

Report No. 2015-240



pgv
ENVIRONMENTAL

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1 INTRODUCTION

1.1 Site Location

Part Lot 19 Sixty Eight Road (the site) is located approximately 40km to the south of the Perth Central Business District in the City of Rockingham (Figure 1). The site is 6.4874ha and is bounded by undeveloped, parkland cleared land to the north, an undeveloped, vegetated lot to the east, existing urban development to the west and Sixty Eight Road to the south (Figure 2). The part of the lot not subject to the environmental assessments in this report has been designated as a High School site in the south-east corner of Lot 19 in the Subdivision Concept (Appendix 1).

1.2 Purpose

The site is zoned 'Urban Deferred' in the Metropolitan Region Scheme (MRS) and 'Development' in Development Area 35 in the City of Rockingham Town Planning Scheme No. 2 (WAPC, 2004). Glow Developments is planning to develop the site for residential purposes in accordance with the site's zoning and is currently undergoing work to lift the Urban Deferment and has prepared a draft concept plan (Appendix 1). Glow Developments has commissioned PGV Environmental to undertake environmental studies to assist in progressing the development approvals for the site. The Scope of Works for the environmental studies is listed below.

1.3 Scope

1.3.1 Preliminary Site Assessment (Non Intrusive)

Stage 1 Preliminary Site Investigation (PSI) (non-intrusive), in accordance with the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (NEPM), which encompasses non-intrusive activities (e.g. site visit and record searches). The PSI was undertaken to determine, if any, the extent of potential investigations required on the site. Full investigations are not required for the lifting of Urban Deferment but AT the subsequent subdivision stage. The following were investigated during the Stage 1 PSI:

- Historical Land Use on the site;
- Site investigation to identify any areas of concern;
- Identify potential contaminants; and
- Recommend any further investigations required.

1.3.2 Level 2 Flora and Vegetation Survey

The Level 2 Flora survey was undertaken in accordance with Guidance Statement 51: *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004a). The survey therefore included the following:

- Desktop search and review of the Department of Parks and Wildlife's (DPaW's) Declared Rare and Priority Flora database and Threatened Ecological Communities database;
- Examination of recent aerial photography and contour maps to provisionally identify vegetation types and condition;

- Field survey in spring using quadrats to record native and introduced species as well as a thorough site walkover of any areas of native vegetation;
- Field survey to search for Threatened and Priority species;
- Recording of any significant plant species using a hand-held GPS;
- Description and mapping of vegetation types and vegetation condition; and
- Compilation of a flora list.

1.3.3 Level 1 Fauna Survey

The Level 1 fauna survey was undertaken in accordance with Guidance Statement 56: *Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004b).

The survey included:

- Desktop searches and review of DPaW's Threatened Fauna database and the Commonwealth EPBC Act Listed Fauna;
- Field survey to identify fauna habitat types and quality; and
- Description of fauna habitat.

1.3.4 Black Cockatoo Habitat Assessment

The site contains Banksia woodland therefore the Level 1 Fauna Assessment included a targeted Black Cockatoo Habitat Assessment. The habitat assessment included:

- A site assessment to search for evidence of foraging;
- Inspection for any large trees on the site for evidence of roosting or breeding;
- Assessment of potential breeding habitat on the site;
- Assessment of potential roosting habitat on the site; and
- An assessment of the potential impact of the proposed Structure Plan on Black Cockatoos.

2 BACKGROUND INFORMATION

2.1 Land Use

2.1.1 Current Land Use

The current site configuration is much the same as in 1995, however the small area of market garden in the southern part of the site is no longer tended.

2.1.2 Surrounding Land Use

The surrounding land is predominately cleared or partially cleared land for 'Special Rural' Living. The Dales development lies to the immediate west of the site and is currently undergoing the later stages of construction.

2.1.3 Historic land Use

The site historically was vegetated between 1953 which is the earliest aerial photography available to 1974 as shown in Plate 1 (Landgate, 2015a). The southern part of the site was cleared between 1974 and 1977 (Landgate, 2015a) (Plate 2).

Plate 1: Aerial of the Site from 1974



Plate 2: Aerial of the Site from 1977



Additional clearing was undertaken between 1981 and 1983 to the current extent on the site (Plate 3 and 4).

Plate 3: Aerial of the Site from 1981



Plate 4: Aerial of the Site from 1983



Temporary greenhouses were utilised on the site in 2000 (Landgate, 2015a) (Plate 5) but fell into disuse by 2006 (Landgate, 2015a) (Plate 6).

Plate 5: Aerial of the Site from 2000



Plate 6: Aerial of the Site from 2006



2.2 Topography

The topography on the site is generally sloping from the north-east at 34mAHD Australian Height Datum (AHD) to the south-west at 16mAHD (DAFWA, 2015) (Figure 2).

2.3 Geology and Soils

The site is located on the Spearwood system which contains sand dunes and plains and consists of aeolian sand and limestone over sedimentary rocks. These soils overlay Tamala limestone (Bolland, 1998). The soils consist of aeolian sand and limestone over sedimentary rocks with sand dunes and plains of yellow deep sands, pale deep sands and yellow/brown shallow sands (DAFWA, 2015).

There are two soil types mapped on the site as described below (DAFWA, 2015):

- Spearwood S2a Phase (211Sp_S2a) consists of lower slopes (1-5%) of a dune ridge with moderately deep to deep siliceous yellow-brown sands or pale sands with yellow-brown subsoils and minor limestone outcrops; and
- Spearwood S1b Phase (211Sp_S1b) occur on dune ridges with slopes up to 15%. The soils are deep siliceous yellow brown sands or pale sands with yellow-brown subsoil.

The Spearwood S2a Phase soil types are mapped over most of the site with the north-eastern corner being mapped as Spearwood S1b Phase.

The Acid Sulphate Soil (ASS) risk mapping shows the site is Low (<3m from the surface) which is considered to be accurate due to the limestone substrate under the soil (Landgate, 2015b).

2.4 Hydrology

2.4.1 Groundwater

The groundwater under the site has geological formations that have been grouped into three distinct aquifers:

- Superficial Swan (unconfined);
- Leederville (confined); and
- Cattamara Coal Measures (DoW, 2015a).

The Superficial Swan overlays the Leederville aquifer which is further described as the sub area Wanneroo member under the site and consists of poorly sorted fine- to medium-grained quartz with feldspar and occasionally trace heavy minerals. This overlays the Cattamara Coal Measures (DoW, 2015a).

Groundwater flows from east to west across the site. The groundwater levels range from approximately 3.5mAHD in the east to 3mAHD in the west of the site. The depth to groundwater from the natural surface ranges from approximately 30 to 14m (DoW, 2015b).

2.4.2 Surface Water

The site is largely within the Peel Main Drain sub catchment in the Peel Estuary-Serpentine River Catchment in the Murray River Basin (Landgate, 2015b).

There are no wetlands mapped on the site in the Geomorphic Wetlands of the Swan Coastal Plain Dataset administered by the Department of Parks and Wildlife (DPaW) (Landgate, 2015b). There are no wetlands within 1km of the site.

The soils on the site are sandy and free draining and surface water run-off is expected to be minimal.

3 PRELIMINARY SITE INVESTIGATION (NON-INTRUSIVE)

3.1 Introduction

The site is not listed in the Contaminated Sites Register. The Basic Summary Record requested from the Department of Environment Regulation (DER) indicates that the site has not been registered as a known or suspected contaminated site (Appendix 2). However a market garden is a land use that is identified as being potentially contaminating.

3.2 Methodology

3.2.1 Desktop Studies

This PSI has been undertaken by reviewing on-line sources of information for the site and a review of relevant environmental policies for the region. The Preliminary Site Investigation is an initial evaluation of the risk of contamination existing on the site in accordance with NEPM. The following desktop studies in addition to the background, flora and vegetation and fauna studies undertaken for this report were included:

- Aerial photos and Certificates of Title (recent and historic).
- Previous and present owners, occupiers, industries and land use, including adjacent property uses and zoning.
- Current and past uses by current occupants (and predecessors).
- Whether the site has been or is being used by other parties, and the nature of those activities.
- Adjacent property uses and zoning.
- Proximity to sensitive land uses, environmentally sensitive areas and buffer zones.
- Previous and current buildings, storage tanks, infrastructure, materials, chemicals and hydrocarbons stored on-site.
- Wastes produced and disposal locations of wastes.
- Discharges to land and water including spills and accidents (e.g. fires).
- Location of underground services, as provided.
- Differences between the present conditions and the information obtained from the site history review.
- Search of public databases, where reasonably available (Department of Water, Landgate, DPaW, Local Government, Power Utility, Water Utility, Department of Mines and Petroleum, etc).
- Ascertain as to whether the site is listed or has been nominated onto a State or Local Government contaminated sites register.
- Contaminated site reporting/disclosure in accordance with State regulatory requirements.
- A search of the Heritage Council WA State Register of Heritage Places (Heritage WA Act 1990) to confirm that the site is not of heritage significance (Heritage Council of WA, 2010). In addition, a search of the Department of Aboriginal Affairs database for indigenous ethnographic and archaeologically significant sites (pursuant to Aboriginal Heritage Act 1972).
- Known native title issues.
- A search of the Australian Heritage Database.

3.2.2 Site Walkover

A site walkover was undertaken on 22 October 2015 to inspect the site for:

- Areas of discoloured soil, affected plant growth and significant odours;
- Location and condition of visible features including foundations, tanks, pits, wells and bores;
- Chemical storage and transfer areas, including the presence of waste or chemical containers;
- Obvious evidence of hazardous materials (pits, ponding, stressed vegetation, etc);
- Presence of waste;
- Discharges to land and water including spills and accidents (e.g. fires); and
- The presence of any stockpiled material, imported soil or fill such as industrial or chemical waste as well as signs of settlement, subsidence and disturbed ground.

3.3 Heritage

3.3.1 Aboriginal Heritage

A search of the Department of Aboriginal Affairs Aboriginal Heritage Inquiry System (DAA, 2015) showed no recorded Aboriginal Heritage Sites or Places are located on the site or in the immediate area (Appendix 3). Two surveys have been completed on the site (Appendix 3).

The site is freehold and as such Native Title is extinguished on the site.

3.3.2 European Heritage

Heritage sites can be listed under the following lists/registers:

- World Heritage Sites;
- National Heritage Sites;
- Commonwealth Heritage Sites;
- Sites on the register of the National Estate;
- Sites on the Western Australian Heritage Council Register; and
- Sites listed in the City of Rockingham Municipal Heritage Inventory List.

There are no listed Heritage Sites or Interim Heritage Sites on the site (Landgate, 2015b; Heritage Council of Western Australia, 2015; DoE, 2015a).

3.4 Historical Tenure

Part Lot 19 was once part of a broader parcel of land that was granted as a conditional lease 3127/898 by King George the Sixth in 1951 to Farmer and Engineer, Fred Levitt Barrett (Appendix 4). In 1965 the title was transferred to Mr. Barrett. The land was then sold in 1967 to Barry Page Dry, Thelma Lee Dry, Horace John Rex Growden and Mollie Juliet Louise Growden. The land was transferred to Thomas Victor Tomich, a Minister for Religion, in February 1972 and then in 2015 was transferred to the current owners. The Certificate of Title search did not show that the land has been utilised for any purposes other than rural (Appendix 4).

3.5 Services

There is no gas infrastructure located on, or near the boundary of the site. There are no Water Corporation, National Broadband network (NBN) or ATCO Gas assets on the site. There is a LV cable located to the south of the site on the opposite side of Sixty Eight Road (Appendix 5). The dwelling outside of the site boundary is likely to be attached to septic tanks which are outside of the investigation area.

3.6 Site Walkover

During the site walkover, in the northern, vegetated part of the site, no visible features such as foundations, tanks, pits, wells and bores were identified and there was no evidence of the presence of any stockpiled material, imported soil or fill such as industrial or chemical waste or of any settlement or subsidence. There was also no evidence of chemical storage or the storage of waste products such as staining or redundant bunding. No potentially asbestos-containing material was observed during the site visit however if any is located during construction, it will have to be removed appropriately by a qualified asbestos removalist. The vegetated portion of the site had some dumping of rubbish (Plate 7) that generally appears to be rusted iron, white goods and other common refuse that are not likely to cause contamination.

Plate 7: Rubbish Dumped on the Site.



In the northern part there was a small shed (Figure 3) present for which the use is unknown and further investigation is required prior to dismantling the structure.

The southern part of the site still shows recent evidence of crops being planted on the site as a working market garden indicating operations had ceased a short time ago. A bore located outside of the study area pumped water to a holding tank in the southern part of the site that was then reticulated through PVC Pipes onto the market garden.

There were no areas of discoloured soil, structures other than the temporary hothouses, old reticulation equipment and holding tank (Figure 3). There was no stockpiled material, imported soil or fill such as industrial or chemical waste or of any settlement or subsidence. There was also no evidence of chemical storage or the storage of waste products such as staining or redundant bunding. No potentially asbestos-containing material was observed during the site visit in this area.

3.7 Potential Contamination

The small area that was used as part of the market gardening has a small potential for contamination. Common contaminants include:

- Metals (e.g. aluminium, arsenic, cadmium, copper, lead, mercury, magnesium, iron);
- Organochlorine pesticides (e.g. DDT, Dieldrin, Endosulfan);
- Organophosphate pesticides (e.g. Azinphos ethyl, Diazinon, Fenthion);
- Carbamates;
- Petroleum hydrocarbon (fuel); and
- Monocyclic aromatic hydrocarbons (e.g. Benzene, toluene, ethylbenzene and xylenes, otherwise known as BTEX).

The use of Organochlorine Pesticides (OCPs) took over from treatments such as lead arsenate in the 1960's (Stuckey and Vallely, 1998). The market garden was not established until between 1974 and 1977 with additional land being cleared between 1981 and 1983 (Landgate, 2015a). Therefore it is highly unlikely that lead arsenates would have been utilised on the site.

3.8 Conclusion

The cropped area of the market garden has a requirement for further investigation, including soil testing in accordance with NEPM for the contaminants listed above. The sampling design should be done in accordance with NEPM, in consultation with DER and by a suitably qualified Contaminated Sites Consultant. Sampling and testing should be completed when the local structure plan or subdivision have been finalised to pinpoint areas which will require investigation. It is understood that the Department of Education has an agreement that they would be undertaking any investigations required for subdivision.

4 FLORA AND VEGETATION

4.1 Methodology

Desktop studies of databases and published information was conducted for the site. A flora and vegetation survey of the site was conducted by Dr Paul van der Moezel on 22 October 2015. The survey included sampling from two non-permanent 10m x 10m quadrats as well as a thorough walk through vegetated the site. Site coverage was very high due to the small size of the site and easily navigable terrain. Approximately 4ha of native vegetation occurs on the site.

4.2 Desktop Studies

4.2.1 Flora Database Searches

A search of the DPaW Databases (Appendix 6), DPaW Naturemap database (Appendix 7) and the *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (Appendix 8) identified a number of species that are listed as Endangered, Threatened or Priority have been located within a 5km radius of the site. The results from these database searches are shown in Table 1.

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

Species	Common Name	Status Under Wildlife Conservation Act 1950	Status Under EPBC Act 1999
<i>Andersonia gracilis</i>	Slender Andersonia	Threatened	Endangered
<i>Caladenia huegelii</i>	Grand Spider Orchid	Threatened	Endangered
<i>Darwinia foetida</i>	Muchea Bell	Threatened	Critically Endangered
<i>Diuris micrantha</i>	Dwarf Bee Orchid	Threatened	Endangered
<i>Diuris purdiei</i>	Purdie's Donkey Orchid	Threatened	Endangered
<i>Drakaea elastica</i>	Glossy-leaved Hammer Orchid	Threatened	Endangered
<i>Eucalyptus balanites</i> (Denoted <i>Eucalyptus x balanites</i> in DPaW Database Searches)	Cadda Road Mallee	Threatened	Endangered
<i>Lepidosperma rostratum</i>	Beaked Lepidosperma	Threatened	Endangered
<i>Synaphea stenoloba</i>	Dwellingup Synaphea	Threatened	Endangered
<i>Acacia benthamii</i>		Priority 2	
<i>Thelymitra variegata</i>	Queen of Sheba Orchid	Priority 2	
<i>Dillwynia dillwynioides</i>		Priority 3	
<i>Schoenus capillifolius</i>		Priority 3	
<i>Stylidium longitubum</i>	Jumping Jacks	Priority 3	
<i>Dodonaea hackettiana</i>	Hackett's Hopbush	Priority 4	
<i>Jacksonia sericea</i>	Waldjumi	Priority 4	

Definitions of the Conservation Codes are in Appendix 9.

4.2.2 Likely Occurrence of Significant Flora Species

Table 2 examines the preferred habitat of each species identified in the database searches and the likelihood of the species listed in Table 1 to occur on the site. Many of the species identified occur in wetland areas so have been determined as not being present on the site.

Table 2: Likelihood of Identified Significant Flora Species occurring on the Site

Scientific Name	Preferred Habitat*	Likelihood to occur on the entire site
<i>Andersonia gracilis</i>	White/grey sand, sandy clay, gravelly loam. Winter-wet areas, near swamps	Highly Unlikely – no wetlands on the site
<i>Caladenia huegelii</i>	Sand or clay loam. Does not survive in disturbed areas.	Highly Unlikely – the site is disturbed
<i>Darwinia foetida</i>	Grey-white sand on swampy, seasonally wet sites	Highly Unlikely – known from a small number of populations near Muchea
<i>Diuris micrantha</i>	Dark, grey to blackish, sandy clay-loam substrates in winter wet depressions or swamps	Highly Unlikely – there are no winter wet areas on the site
<i>Diuris purdiei</i>	Grey-black sand, moist. Winter-wet swamps	Highly Unlikely – there are no winter wet areas on the site
<i>Drakaea elastica</i>	Low-lying situations adjoining winter-wet swamps. Does not survive in disturbed areas	Highly Unlikely – there are no winter wet areas on the site
<i>Eucalyptus balanites</i> (Denoted <i>Eucalyptus</i> x <i>balanites</i> in DPaW Database Searches)	Sandy soils with lateritic gravel, Plain with gravelly brown sandy loam.	Highly Unlikely – no lateritic soils on the site
<i>Lepidosperma rostratum</i>	Peaty sand, clay	Highly Unlikely – soils are too sandy
<i>Synaphea stenoloba</i>	Sandy or sandy clay soils. Winter-wet flats, granite	Highly Unlikely – there are no winter wet areas on the site
<i>Acacia benthamii</i>	Sand. Typically on limestone breakaways and thought to be restricted to Kings Park and Subiaco areas of Perth, Wanneroo and near Yanchep.	Highly Unlikely – there are no limestone breakaways on the site on the site
<i>Thelymitra variegata</i>	Sandy clay, sand, laterite.	Possible on sandy soils.
<i>Dillwynia dillwynioides</i>	Sandy soils. Winter-wet depressions	Highly Unlikely due to the absence of winter-wet depressions.
<i>Schoenus capillifolius</i>	Brown mud. Claypans.	Highly Unlikely due to absence of mud and clay.
<i>Stylidium longitubum</i>	Sandy clay, clay. Seasonal wetlands.	Highly Unlikely due to the absence of suitable soil types.
<i>Dodonaea hackettiana</i>	Sand. Outcropping limestone	Possible
<i>Jacksonia sericea</i>	Calcareous and sandy soils	Possible

* sourced from Florabase (DPaW, 2014), DoE SPRAT Database (DoE, 2014) as well as the DPaW database searches.

4.2.3 TEC/PEC Database Searches

The Protected Matters Search Tool report (Appendix 8) and a search of the DPaW database for Threatened and Priority Ecological Communities (TECs and PECs) (DPaW, 21-0915EC) (Appendix 10) indicated that two Critically Endangered and three PECs have been recorded in the vicinity of the site. These are outlined in Table 3.

Table 3: TEC and PEC Database Search Results

Community ID	Community Name	Status Under Wildlife Conservation Act 1950	Status Under EPBC Act 1999
SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	Endangered
SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	Endangered
Walyungup Microbial	Microbial community of a coastal saline lake (Lake Walyungup)	Priority 1	
SCP21c	Low lying <i>Banksia attenuata</i> woodlands or shrublands	Priority 3	
SCP25	Southern <i>Eucalyptus gomphocephala</i> - <i>Agonis flexuosa</i> woodlands	Priority 3	

Definitions of the Conservation Codes are in Appendix 9

4.3 Survey Results

4.3.1 Survey Conditions

The conditions that the survey was undertaken in are presented in Table 4 in order to assess the adequacy of the survey. In summary, there were few constraints to the survey.

Table 4: Statement of Botanical Survey Conditions

Issue	Constraints (Y/N)*	Comment
Competency/experience of the consultant conducting the survey	No constraints	Dr Paul van der Moezel has extensive botanical survey experience in the South-west.
Proportion of the flora identified^	Low constraints	The timing of the survey in mid-late October should have identified most of the native species on the site but was past the peak spring period for 2015.
Sources of information (historic/recent or new data)	No constraints	The flora of the Swan Coastal Plain is relatively well documented.
Proportion of the task achieved and further work that may need to be undertaken	No constraints	No follow-up survey required.

Issue	Constraints (Y/N)*	Comment
Timing/weather/season/cycle	No constraints	Seasonal conditions were verified prior to commencement and deemed to be suitable.
Disturbances (Fire)	No Constraint	The site had not been burnt recently.
Intensity of survey (e.g. In retrospect was the intensity adequate)	No constraints	The small site and ease of access made for a full coverage. Approximately 4 hours spent on site.
Completeness (e.g. was relevant area fully surveyed)	No constraints	
Resources (e.g. degree of expertise available for plant identification)	No constraints	Experienced botanist undertook plant identifications mostly on site with some identification off-site using standard reference material.
Remoteness and/or access problems	No constraints	Easily accessible site in the Perth Metropolitan Region.
Availability of contextual (e.g. bioregional) information for the study area.	No constraints	Bush Forever documents.

*Constraints have been rated as Significant, Moderate, Low or No constraints

^Fungi and nonvascular flora (e.g. algae, mosses and liverworts) were not specifically surveyed for during the survey.

4.3.2 Flora

A total of 73 plant species were recorded during the 2015 flora survey (Appendix 11). This total consisted of 44 native species and 29 introduced species. The number of native species is considered low for an area of around 4ha of native vegetation. The low number of native species and the high proportion (40%) of introduced species reflected the overall poor condition of the vegetation.

The plant Families with the highest representation of species are shown in Table 5.

Table 5: Dominant Plant Families in the Survey Area

FAMILY	Native Species	Introduced Species	Total Species
Fabaceae (wattles and peas)	5	5	10
Poaceae (grasses)	2	8	10
Asparagaceae (lilies)	5	0	5
Asteraceae (daisies)	0	5	5

The absence of the Myrtaceae and Proteaceae from the list of top Families is also an indication of the disturbed nature of the understorey vegetation.

No Threatened (Declared Rare) or Priority listed flora species were recorded on the site. While the timing of the survey was considered slightly late for some orchid species in 2015 the poor condition of the site meant that it was highly unlikely that any conservation significant orchid species would occur on the site. A follow-up survey is not considered necessary for any conservation significant species.

The quadrat data are shown in Appendix 6. The total species recorded in the two 10m x 10m quadrats ranged from 12 - 27. The percentage of introduced species in the quadrat with Completely Degraded vegetation was very high (10 out of 12 species) while the percentage in the quadrat with Degraded vegetation was lower (6 out of 27 species).

4.3.3 Vegetation Complexes

The vegetation on the site is part of the Karrakatta - Central and South Complex. The Karrakatta - Central and South Complex is described as “open forest of *Eucalyptus gomphocephala*, *Eucalyptus marginata*, *Corymbia calophylla* and woodland of *Eucalyptus marginata* and *Banksia* species” (Hedde *et al.*, 1980). This general description is considered to be reasonably accurate and describes the vegetation on the site.

4.3.4 Vegetation Types

Two similar vegetation types were described and mapped on the site (Figure 4) as follows:

EgEmAfBa *Eucalyptus gomphocephala* (Tuart)/ *E. marginata* (Jarrah)/*Allocasuarina fraseriana*/*Banksia attenuata* Woodland over *Hibbertia hypericoides*/*Mesomelaena pseudostygia* Low Shrubland

This vegetation type occurred in the northern part of the site. Tuart trees were up to 15m high while Jarrah, Sheoak (*Allocasuarina fraseriana*) and *Banksia attenuata* were 5-6m high. The understorey was low and open with *Hibbertia hypericoides* and *Mesomelaena pseudostygia* the most common species and less than 1m high. Dominant weed species included Veldtgrass (*Ehrharta calycina*), *Briza maxima* and *Ursinia anthemoides*. The soils were yellow-grey sands. Quadrat SE1 is representative of this vegetation type.

EgEmBa *Eucalyptus gomphocephala* (Tuart) Woodland over *Banksia attenuata* Low Open Woodland over weeds

This vegetation type occurred in the southern part of the site and had a similar tree structure to the EgEmAfBa vegetation type except for the complete absence of any Sheoak trees. The understorey was also very sparse and considered mostly of weed species, particularly Veldtgrass. The soils were yellow-grey sand. Quadrat SE2 is representative of this vegetation type.

4.3.5 Floristic Community Types

Floristic Community Types (FCTs) are identified by the composition of the whole flora, including trees, shrubs, sedges and herbs (Gibson *et al.*, 1994). The understorey vegetation on the site is considered too degraded to be assigned to a particular FCT. If it were in better condition the vegetation is probably most similar to FCT 28 ‘Spearwood *Banksia attenuata* or *B. attenuata* – *Eucalyptus* woodlands’.

4.3.6 Vegetation Condition

The condition of the vegetation was assessed according to the system devised by Keighery and described in Bush Forever (Government of Western Australia, 2000) (Table 6).

Table 6: Vegetation Condition Rating Scale

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
Very Good	Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Source: Government of Western Australia, 2000.

The vegetation in the northern part of the site was rated as being in Good to Degraded condition while the vegetation in the southern part was all in Completely Degraded condition and consisted of parkland cleared trees over weeds. The two areas were separated by a fence. While the fence is now broken down and there is no stock on the site the presence of the fence in the past is likely to partially explain the different conditions of the vegetation.

A lot of dead Banksia trees were observed in the northern part of the site. The dead trees were probably the result of a past fire rather than any indication of Dieback disease on the site.

4.4 Conservation Significance of Flora and Vegetation

4.4.1 Flora

None of the plant species recorded is a Declared Rare or Priority listed flora. No other plant species of local significance were recorded according to the list of species in Bush Forever identified as being significant in the Perth Metropolitan Region.

4.4.2 Vegetation

There are two main methods used to describe the regional significance of vegetation on the Swan Coastal Plain: the Vegetation Complexes of Heddle *et al.* (1980) and the Floristic Community Types (FCTs) of Gibson *et al.* (1994).

Vegetation complexes are described based on the underlying soil and landform types. Floristic Community Types are described based on the composition of the plant species. While there is some

consistency for certain FCTs to occur in specific soil and landform types many others occur over a range of soil types and landforms.

Both classifications are referred to because vegetation complexes are used to determine the degree to which broad scale vegetation units have been cleared and therefore the conservation significance of remaining areas of vegetation whereas the FCT level of vegetation description is used to identify Threatened and Priority Ecological Communities (TECs and PECs).

The status of the vegetation complex found within the study area, according to *EPA Guidance Statement 10* (EPA, 2006), is shown in Table 7.

Table 7: Extent Remaining of Heddle Vegetation Complex on the Southern Swan Coastal Plain.

Vegetation Complex	Pre-European Extent	Remaining on southern Swan Coastal Plain		Remaining in Secure Tenure	
	Area (ha)	Area (ha)	% Original Area	Area (ha)	% Original Area
Karrakatta Central and South	49,912	14,729	29.5	1,254	2.5

The Karrakatta Central and South complex has been cleared below the threshold level of 30% (EPA, 2000 & 2008). Less than 30% remaining may indicate a presumption against clearing (EPA 2000 and 2008). Within the Perth Metropolitan Region the threshold for identifying vegetation complexes at risk is 10% as the Metropolitan Region is considered a 'constrained area'. The Karrakatta Central and South complex is below the 10% criterion for protection.

The Bush Forever process used the 10% criterion to identify areas of regional significance. All areas of vegetation containing vegetation complexes with less than 10% remaining were considered regionally significant. For vegetation complexes with more than 10% remaining the aim of Bush Forever was to achieve a 10% protection status. Areas were chosen based on floristics and other criteria such as the presence of wetlands. The Karrakatta Central and South vegetation complex has more than 10% remaining but less than 10% protected.

The vegetation on the site is considered too degraded to be a good representative example of the Karrakatta - Central and South vegetation complex. Therefore, retention of any vegetation for this purpose is not recommended.

The vegetation on the site is considered to be too disturbed to assign a Floristic Community Type. In better condition the vegetation may have been representative of FCT28 which is neither a Threatened nor a Priority Ecological Community. The retention of any vegetation on the site as an example of a particular FCT is not recommended.

The trees on the site have some value for avifauna (birds and bats) but due to its degraded understorey has limited value for ground-dwelling fauna. The site is not part of a local or regional ecological linkage.

5 FAUNA

5.1 Methodology

Desktop studies of databases and published information was conducted for the site. A reconnaissance site inspection was undertaken on 22 October 2015 which was a thorough walk through the site. Site coverage was high due to the size of the site and easily navigable terrain.

5.2 Database Search Results

A search of DPaW Database (Appendix 13) the Protected Matters Search Tool (Appendix 8) and Naturemap database search (Appendix 7) identified the species in Table 8 as being recorded in the vicinity of the site.

Table 8: List of Fauna Species Identified from Database Searches

Scientific Name	Common Name	Status under Wildlife Cons. Act	Status under EPBC Act
<i>Bettongia penicillata</i> subsp. <i>ogilbyi</i>	Woylie	Schedule 1	Endangered
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Schedule 1	Endangered
<i>Calidris ferruginea</i>	Curlew Sandpiper	Schedule 1	Critically Endangered/ Migratory/Marine
<i>Calyptorhynchus banksii</i> subsp. <i>naso</i>	Forest Red-tailed Black-Cockatoo	Schedule 1	Vulnerable
<i>Calyptorhynchus latirostris</i>	Carnaby's Black Cockatoo (short-billed black-cockatoo)	Schedule 1	Endangered
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	Schedule 1	Vulnerable
<i>Leipoa ocellata</i>	Malleefowl	Schedule 1	Vulnerable
<i>Numenius madagascariensis</i>	Eastern Curlew	Schedule 1	
<i>Phascogale tapoatafa</i> subsp. <i>tapoatafa</i>	Brush-tailed Phascogale, Wambenger	Schedule 1	
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	Schedule 1	Vulnerable
<i>Setonix brachyurus</i>	Quokka	Schedule 1	Vulnerable
<i>Rostratula benghalensis</i>	Painted Snipe	Schedule 1	Vulnerable
<i>Actitis hypoleucos</i>	Common Sandpiper	Schedule 3	Migratory/ Wetland
<i>Apus pacificus</i>	Fork-tailed Swift	Schedule 3	Migratory
<i>Ardea alba (modesta)</i>	Great Eastern Egret, White Egret	Schedule 3	Migratory/ Wetland
<i>Ardea ibis</i> (Also listed as <i>Ardea ibis</i> subsp. <i>coromanda</i>)	Cattle Egret	Schedule 3	Migratory/ Wetland
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Schedule 3	Migratory/Marine
<i>Calidris ruficollis</i>	Red-necked Stint	Schedule 3	Migratory/Marine
<i>Calidris subminuta</i>	Long-toed Stint	Schedule 3	Migratory/Marine

Scientific Name	Common Name	Status under Wildlife Cons. Act	Status under EPBC Act
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	Schedule 3	Migratory
<i>Limosa lapponica</i>	Bar-tailed Godwit	Schedule 3	Migratory/Marine
<i>Merops ornatus</i>	Rainbow Bee-eater	Schedule 3	Migratory
<i>Motacilla cinerea</i>	Grey Wagtail	Schedule 3	Marine/Migratory
<i>Pandion haliaetus</i> (also listed as <i>Pandion cristatus</i>)	Osprey		Marine/Migratory
<i>Plegadis falcinellus</i>	Glossy Ibis	Schedule 3	
<i>Pluvialis squatarola</i>	Grey Plover	Schedule 3	Marine/ Migratory
<i>Puffinus carneipes</i>	Flesh-footed Shearwater	Priority 4	Migratory/Marine
<i>Rostratula australis</i>	Australian Painted Snipe	Schedule 3	Endangered
<i>Sterna dougallii</i>	Roseate Tern	Schedule 3	Vulnerable
<i>Tringa glareola</i>	Wood Sandpiper	Schedule 3	Migratory/Marine
<i>Tringa nebularia</i>	Common Greenshank	Schedule 3	
<i>Westralunio carteri</i>	Carter's Freshwater Mussel	Schedule 3	
<i>Falco peregrinus</i>	Peregrine Falcon	Schedule 4	Marine/Migratory
<i>Morelia spilota</i> subsp. <i>imbricata</i>	Carpet Python	Schedule 4	
<i>Ctenotus gemmula</i>	Jewelled south-west Ctenotus	Priority 3	
<i>Lerista lineata</i>	Perth Slider, Lined Skink	Priority 3	
<i>Ixobrychus minutus</i>	Little Bittern	Priority 4	
<i>Oxyura australis</i>	Blue-billed Duck	Priority 4	
<i>Synemon gratiosa</i>	Graceful Sun-moth	Priority 4	
<i>Thinornis rubricollis</i> (also listed as <i>Charadrius rubricollis</i>)	Hooded Plover	Priority 4	Marine
<i>Isodon obesulus</i> subsp. <i>fusciventer</i>	Southern Brown Bandicoot	Priority 5	

DPaW classifies fauna under five different Priority codes and rare and endangered fauna are classified under the *Wildlife Conservation (Specially Protected Fauna) Notice 2008* into four schedules of taxa. These are outlined in Appendix 9.

5.3 Fauna Habitat

The majority of the site, is weedy with very little intact understorey. The habitat on the site is described as

- Jarrah/Sheoak/Banksia Open Woodland (Plate 8);
- Tuart Open Woodland (Plate 9); and
- Open Cropland (Plate 10)

Plate 8: Jarrah/Sheoak/Banksia Open Woodland Plate 9: Tuart Open Woodland



Plate 10: Open Cropland



Fauna habitat can be assessed using a number of factors including, the size of the habitat, the level of habitat connectivity, availability of specific resources (e.g. tree hollows) and overall vegetation quality. The habitat was assessed according to the following categories:

High quality fauna habitat – These areas closely approximate the vegetation mix and quality that would have been in the area prior to any disturbance. The habitat has connectivity with other habitats and is likely to contain the most natural vertebrate fauna assemblage.

Very good fauna habitat - These areas show minimal signs of disturbance (e.g. grazing, clearing, fragmentation, weeds) and generally retain many of the characteristics of the habitat if it had not been disturbed. The habitat has connectivity with other habitats and fauna assemblages in these areas are likely to be minimally affected by disturbance.

Good fauna habitat – These areas showed signs of disturbance (e.g. grazing, clearing, fragmentation, weeds) but generally retain many of the characteristics of the habitat if it had not been disturbed. The habitat has connectivity with other habitats and fauna assemblages in these areas are likely to be affected by disturbance.

Disturbed fauna habitat – These areas showed signs of significant disturbance. Many of the trees, shrubs and undergrowth are cleared. These areas may be in the early succession and regeneration stages. Areas may show signs of significant grazing, contain weeds or have been damaged by vehicle or machinery. Habitats are fragmented or have limited connectivity with other fauna habitats. Fauna assemblages in these areas are likely to differ significantly from what might be expected in the area had the disturbance not occurred.

Highly degraded fauna habitat – These areas often have a significant loss of vegetation, an abundance of weeds, and a large number of vehicle tracks or are completely cleared. Limited or no fauna habitat connectivity. Faunal assemblages in these areas are likely to be significantly different to what might have been in the area pre-disturbance (Coffey Environments, 2009).

The northern part of the site is considered to be Disturbed fauna habitat as the vegetation is Degraded and has very limited connectivity. The southern part of the site is Completely Degraded and is considered to be Highly degraded fauna habitat.

5.4 Likely Occurrence of Significant Fauna Species

Outlined below is a short description of each of the species that were identified in the DPaW database searches and Protected Matters Search Tool search in Table 5. The preferred habitat has been compared to the habitats on the site described above and the likelihood of each species to be present on the site (Table 9).

Table 9: Likelihood of Conservation Significant species being present on the site

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Bettongia penicillata ogilbyi</i>	Woylie	The Woylie habitat types ranged from forest to grassland, coastal and inland. During the day the Woylie shelters under patches of dense undergrowth, logs and rock-cavities and occasionally in burrows.	Highly Unlikely – due to disturbance and lack of understorey
<i>Botaurus poiciloptilus</i>	Australasian Bittern	The Australasian Bittern occurs mainly in densely vegetated freshwater wetlands and, rarely, in estuaries or tidal wetlands.	No – There is no wetland habitat
<i>Calidris ferruginea</i>	Curlew Sandpiper	Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms.	No – suitable habitat not present

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Calyptorhynchus banksii</i> subsp. <i>naso</i>	Forest Red-tailed Black-Cockatoo	Forest Red-tailed Black Cockatoos nests in tree hollows in predominately Marri (<i>Corymbia calophylla</i>), Jarrah (<i>Eucalyptus marginata</i>) and Karri (<i>E. diversicolor</i>) and it feeds primarily on the seeds of Marri.	Possible – There was no evidence of breeding and limited foraging habitat so is likely to be an intermittent visitor
<i>Calyptorhynchus latirostris</i>	Carnaby's Black Cockatoo (short-billed black-cockatoo)	Carnaby's Black Cockatoo has a preference for feeding on the seeds of <i>Banksia</i> , <i>Dryandra</i> , <i>Hakea</i> , <i>Eucalyptus</i> , <i>Grevillea</i> , <i>Pinus</i> and <i>Allocasuarina</i> spp. It breeds in tree hollows (SEWPaC, 2012b)	Highly Likely as suitable habitat on the site
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	The Chuditch have been known to occupy a wide range of habitats including woodlands, dry sclerophyll forests and riparian vegetation. They prefer a dense understorey for protection against predation. They are opportunistic feeders, and forage on the ground at night, feeding on invertebrates, small mammals, birds and reptiles.	Unlikely – the site is too disturbed.
<i>Leipoa ocellata</i>	Malleefowl	Malleefowl have been found in Mallee regions of southern Australia from approximately the 26th parallel of latitude southwards in Mallee bushland.	No – there is no Mallee habitat on the site
<i>Numenius madagascariensis</i>	Eastern Curlew	The Eastern Curlew is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets.	No – suitable habitat not present
<i>Phascogale tapoatafa</i> subsp. <i>tapoatafa</i>	Brush-tailed Phascogale, Wambenger	Southern Brush-tailed Phascogales are arboreal marsupials which require tree hollows in suitable woodland or forest and rely on abundant invertebrate prey to sustain populations (Pescott, 2012).	Highly Unlikely - proximity of human habitation
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	The Western Ringtail Possum is a medium sized nocturnal marsupial. This species occurs in and near coastal Peppermint Tree (<i>Agonis flexuosa</i>) forest and Tuart (<i>Eucalyptus gomphocephala</i>) dominated forest with a Peppermint Tree understorey.	No – the habitat on the site is not preferred by this species

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Setonix brachyurus</i>	Quokka	Quokkas were originally very common on the Swan Coastal Plain, however, their distribution is now limited to Rottnest Island and a few isolated areas in the south-west of WA. On the mainland, they prefer densely vegetated areas around wetlands and streams, whereas on Rottnest Island they inhabit low scrubby coastal vegetation where water is not readily available year-round.	No – this species is thought to be locally extinct
<i>Rostratula benghalensis</i>	Painted Snipe	The Painted Snipe predominately occurs on the eastern coast of Australia and inhabits inland and coastal shallow ephemeral and permanent freshwater wetlands particularly where there is a cover of vegetation, including grasses.	No – There is no suitable wetland habitat
<i>Actitis hypoleucos</i>	Common Sandpiper	The Common Sandpiper is mostly found around muddy margins or rocky shores. Generally the species forages in shallow water and on bare soft mud at the edges of wetlands.	No – There is no suitable wetland habitat
<i>Apus pacificus</i>	Fork-tailed Swift	The Fork-tailed Swift is almost exclusively aerial and is not known to breed in Australia. They are seen in inland plains but sometimes above foothills or in coastal areas. They often occur over cliffs and beaches and also over islands and sometimes well out to sea. They also occur over settled areas, including towns, urban areas and cities.	Highly Unlikely – may fly over the site but unlikely to land
<i>Ardea alba (modesta)</i>	Great Eastern Egret, White Egret	The Eastern Great Egret has been reported in a wide range of wetland habitats and usually frequents shallow waters. This species feeds on fish, insects, crustaceans, molluscs, frogs, lizards, snakes and small birds and mammals.	No – There is no suitable wetland habitat
<i>Ardea ibis</i> (Also listed as <i>Ardea ibis</i> subsp. <i>coromanda</i>)	Cattle Egret	The Cattle Egret occurs in tropical and temperate grasslands, wooded lands and terrestrial wetlands with breeding in Western Australia recorded in the far north in Wyndham in colonies in wooded swamps such as mangrove forest. This species forages away from water on low lying grasslands, improved pastures and croplands generally in areas that have livestock eating insects, frog, lizards and small mammals.	Possible – may be an intermittent visitor
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	The Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	No – There is no suitable wetland habitat

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Calidris ruficollis</i>	Red-necked Stint	The Red-necked Stint is mostly found in coastal areas, including in sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores.	No – There is no suitable habitat
<i>Calidris subminuta</i>	Long-toed Stint	The Long-toed Stint prefers shallow freshwater or brackish wetlands including lakes, swamps, river floodplains, streams, lagoons and sewage ponds. The species is also fond of areas of muddy shoreline, growths of short grass, weeds, sedges, low or floating aquatic vegetation, reeds, rushes and occasionally stunted samphire.	No – There is no suitable habitat
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	The White-bellied Sea-Eagle is found in coastal habitats with large areas of open water, especially those close to the sea-shore. This species feeds opportunistically on a variety of fish, birds, reptiles, mammals and crustaceans, and on carrion and offal.	No – There is no suitable habitat
<i>Limosa lapponica</i>	Bar-tailed Godwit	The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays.	No – There is no suitable habitat
<i>Merops ornatus</i>	Rainbow Bee-eater	Populations that breed in northern Australia are considered to be resident, and in many northern localities the Rainbow Bee-eater is present throughout the year. The Rainbow Bee-eater nests in a burrow dug in the ground. It is found across the better-watered parts of WA including islands preferring lightly wooded, sandy country near water.	Possible – may be an intermittent visitor to the site but unlikely to rely on it for survival
<i>Motacilla cinerea</i>	Grey Wagtail	The Grey Wagtail is mostly recorded in coastal areas in Western Australia (ALA, 2015) however is widespread.	Highly Unlikely – No coastal habitat
<i>Pandion haliaetus</i> (also listed as <i>Pandion cristatus</i>)	Osprey	Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They feed on fish, especially mullet where available, and rarely take molluscs, crustaceans, insects, reptiles, birds and mammals.	No – the site does not have the preferred habitat of this species
<i>Plegadis falcinellus</i>	Glossy Ibis	The Glossy Ibis is the smallest ibis known in Australia. This species preferred habitat for foraging and breeding are fresh water marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation.	No – There is no suitable wetland habitat

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Pluvialis squatarola</i>	Grey Plover	Grey Plovers occur almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts with wave-cut platforms or reef-flats, or on reefs within muddy lagoons. They mostly eat molluscs (especially gastropods), insects and their larvae, crustaceans (especially crabs) and polychaete worms	No – There is no suitable coastal habitat
<i>Puffinus carneipes</i>	Flesh-footed Shearwater	The Flesh-footed Shearwater mainly occurs in the subtropics over continental shelves and slopes and occasionally inshore waters. Burrows are situated in areas that provide a clear flight-path for birds to enter and exit their colonies.	No – There is no suitable coastal habitat
<i>Rostratula australis</i>	Australian Painted Snipe	The Australian Painted Snipe is a stocky wading bird that generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans.	No – There is no suitable wetland habitat
<i>Sterna dougallii</i>	Roseate Tern	The Roseate Tern is a migratory coastal seabird that feeds by plunge diving. This species breeds in sites surrounded by walls and rocks or in the shelter of vegetation (in temperate regions) (Birdlife International, 2014a).	No – May fly over the site
<i>Tringa glareola</i>	Wood Sandpiper	The Wood Sandpiper uses well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools and waterholes. They are typically associated with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reeds, shrubs, or dead or live trees, especially Melaleuca and River Red Gums Eucalyptus camaldulensis and often with fallen timber.	No – There is no suitable wetland habitat
<i>Tringa nebularia</i>	Common Greenshank	The Common Greenshank is a wader and does not breed in Australia. This species can be found in many types of wetlands and has the widest distribution of any shorebird in Australia. This species typically feeds on molluscs, crustaceans, insects, and occasionally fish and frogs.	No – There is no suitable wetland habitat
<i>Westralunio carteri</i>	Carter's Freshwater Mussel	Carter's Freshwater Mussel occurs in freshwater streams, rivers, reservoirs and lakes (ICUN, 2015b)	No – there is no permanent water on the site

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Falco peregrinus</i>	Peregrine Falcon	The Peregrine Falcon is found in a variety of habitats but nests on high cliff ledges or artificial structures. It feeds primarily on small-medium sized birds, but occasionally taking insects, such as moths, cicadas and locusts (Birdlife Australia, 2012).	Highly Unlikely – may fly over the site but unlikely to be present of any length of time
<i>Morelia spilota</i> subsp. <i>imbricata</i>	Carpet Python	The Carpet Python is a large snake recorded from semi-arid coastal and inland habitats, Banksia woodland, Eucalypt woodlands and grasslands (AROD, 2013).	Highly Unlikely – The site is too disturbed for this species
<i>Ctenotus gemmula</i>	Jewelled south-west Ctenotus	The Jewelled south-west Ctenotus inhabits sand plains with heaths. It is also found in Banksia or Mallee woodlands (ICUN, 2015a).	Highly Unlikely – The site is too disturbed for this species
<i>Lerista lineata</i>	Lined Skink	The Lined Skink is a burrowing species that occurs in pale sandy soils with coastal heath and shrubland areas in isolated populations in the south-west and mid-west coast of Western Australia. It feeds on termites and other small insects (Wilson and Swan, 2008).	Highly Unlikely – no understorey
<i>Ixobrychus minutus</i>	Little Bittern	Little Bitterns frequent terrestrial freshwater wetlands that have dense emergent vegetation but can also use artificial wetlands, even in built-up areas. Little Bitterns eat small, aquatic invertebrates and tadpoles, and nest in dense vegetation over water (Garnett <i>et al.</i> , 2000).	No – There is no suitable wetland habitat
<i>Oxyura australis</i>	Blue-billed Duck	The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation and is almost completely aquatic (NSW OEH, 2015)	No – There is no deep permanent water on the site
<i>Synemon gratiosa</i>	Graceful Sun-moth	The Graceful Sun-moth is a diurnal moth with dull coloured brown to black forewings and brightly coloured orange hind wings. The larvae burrow into the rhizomes of <i>Lomandra maritima</i> and <i>Lomandra hermaphrodita</i> exclusively and therefore require the presence of one or both of these species to be present in an area (Bishop <i>et al.</i> , 2011).	No – <i>Lomandra maritima</i> and <i>Lomandra hermaphrodita</i> do not occur on the site
<i>Thinornis rubricollis</i> (also listed as <i>Charadrius rubricollis</i>)	Hooded Plover	The Hooded Plover primarily inhabits sandy, ocean beaches, with the highest densities on beaches with large amounts of beach-washed seaweed that are backed by extensive open dunes. In Western Australia the species also inhabits inland and coastal salt lakes (Birdlife International 2014b)	No – There is no suitable coastal habitat

Scientific Name	Common Name	Habitat*	Likelihood to occur on the site
<i>Isoodon obesulus</i> subsp. <i>fusciventer</i>	Quenda, Southern Brown Bandicoot	Southern Brown Bandicoots are small grey marsupials that prefer dense scrub (up to one metre high), often in or near swampy vegetation. Their diet includes invertebrates (including earthworms, adult beetles and their larvae), underground fungi, subterranean plant material, and very occasionally, small vertebrates (DEC, 2012)	Possible, however no conical diggings typical to this species were observed on the site.

* Habitat descriptions from DoE SPRAT Database unless otherwise specified

Species identified in the database searches possibly present on the site were:

- *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo);
- *Calyptorhynchus latirostris* (Carnaby's Black Cockatoo (short-billed black-cockatoo));
- *Ardea ibis* (Also listed as *Ardea ibis* subsp. *coromanda*) (Cattle Egret);
- *Merops ornatus* (Rainbow Bee-eater); and
- *Isoodon obesulus* subsp. *fusciventer* (Quenda, Southern Brown Bandicoot).

Carnaby's Black Cockatoos and Forest Red-tailed Black Cockatoos have been recorded during other fauna surveys in the general area however no evidence was observed on the site showing Jarrah nuts, Banksia cones or Sheoak nuts with chew marks typical to those made by Carnaby's Black Cockatoos. These species are listed as Endangered and Vulnerable and are discussed in the following section.

The Cattle Egret may be a visitor to the cultivated part of the site but is highly unlikely to rely on the site for survival. The Rainbow Bee-eater is a migratory species and it is possible that Rainbow Bee-eaters occur on the site during late spring-early summer. They are likely to be intermittent visitors and not rely on the site for survival as there is no open water nearby. Inspections prior to clearing in September to December should be undertaken to avoid impacting on Rainbow Bee-eaters.

There was no evidence of Bandicoots on the site in the form of conical diggings typical to the species and as a Priority 5 species their presence does not restrict development, however if evidence of the species is recorded on the site a trapping and relocation program is likely to be required prior to clearing.

5.5 Biodiversity Value

The EPA's (2002) *Terrestrial Biological Surveys as an Element of Biodiversity Protection Position Statement No. 3* indicated an ecological assessment of a site must consider its biodiversity value at the genetic, species and ecosystem levels; and its ecological functional value at the ecosystem level.

From a fauna perspective, the vegetation within the site is considered to be mostly Disturbed Fauna Habitat as the vegetation has been largely cleared and the native vegetation on the site has limited connectivity to significant areas of native vegetation. The Jarrah and Tuarts on the site may provide breeding habitat for some avifauna species. However, there is likely to be a paucity of native mammals and reptiles present as a result of the lack of linkage and the likely prevalence of introduced feral

species such as foxes and rabbits. Domestic predators such as cats in the area would also impact on the fauna assemblage on the site.

It is not possible to assess the biodiversity value at a genetic level based on the information available, however due to the lack of large isolated high quality habitat the biodiversity value at the genetic level is highly unlikely to be impacted as a result of the proposed development.

6 TARGETED BLACK COCKATOO HABITAT SURVEY

6.1 Black Cockatoo Species

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

Carnaby's Black Cockatoo is found in the south-west of Australia from Kalbarri through to Ravensthorpe. It has a preference for feeding on the seeds of *Banksia*, *Dryandra*, *Hakea*, *Eucalyptus*, *Grevillea*, *Pinus* and *Allocasuarina* spp. It is nomadic, often moving toward the coast after breeding. It breeds in tree hollows that are 2.5 – 12m above the ground and have an entrance of 23-30cm with a depth of 1-2.5m. Nesting mostly occurs in smooth-barked trees (e.g. Salmon Gum, Wandoo, Red Morrell). Eggs are laid from July to October, with incubation lasting 29 days (DoE, 2014).

The site is within the modelled distribution for Carnaby's Black Cockatoos, however it is outside of the predicted breeding range (SEWPaC, 2012).

6.1.2 Baudin's Black Cockatoo (*Calyptorhynchus baudinii*)

Baudin's Black Cockatoo is most common in the far south-west of Western Australia. It is known to breed from the southern forests north to Collie and east to near Kojonup. Baudin's Black Cockatoo is typically found in vagrant flocks and utilises the taller, more open Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) woodlands where it feeds mainly on Marri seeds and various Proteaceous species (Johnstone and Kirkby, 2011).

The site is outside the modelled distribution for Baudin's Black Cockatoos (SEWPaC, 2012). Therefore habitat specific to this species has not been investigated further in this assessment.

6.1.3 Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)

Forest Red-tailed Black Cockatoos are endemic to the humid to sub-humid south-west of Western Australia (SEWPaC, 2012). The range of Forest Red-tailed Black Cockatoos is bound by Gingin in the north to Mt Helena, Christmas Tree Well, West Dale, North Bannister, Mt Saddleback, Kojonup, Rocky Gully, upper King River and Green Range (east of Albany) (SEWPaC, 2012; DoE, 2014). It nests in tree hollows with a depth of 1-5m, that are predominately Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*) and Karri (*Eucalyptus diversicolor*) and it feeds primarily on the seeds of Marri and Jarrah (Johnstone and Kirkby, 2011).

The site is within the modelled distribution for Forest Red-tailed Black Cockatoos (SEWPaC, 2012).

6.2 Methodology of Targeted Search

PGV Environmental undertook the Black Cockatoo Habitat Assessment in accordance with the *EPBC Act referral guidelines for three threatened Black Cockatoo species: Carnaby's cockatoo (endangered) Calyptorhynchus latirostris Baudin's cockatoo (vulnerable) Calyptorhynchus baudinii Forest red-tailed Black Cockatoo (vulnerable) Calyptorhynchus banksii naso* (SEWPaC, 2012) (Black Cockatoo Referral Guidelines) and the methodology that is outlined in the SPRAT Database for each of the Black Cockatoo species for Black Cockatoo Habitat Assessments.

A site visit was undertaken by PGV Environmental on 22 October 2015. The site was traversed on foot and information on Black Cockatoo foraging, roosting and breeding habitat was assessed.

The quality of the vegetation was determined in the context of foraging habitat for Black Cockatoos. During the site visit a search for feeding signs or feeding debris such as 'chewed' Banksia cones and Jarrah Nuts was undertaken.

The site was also searched for evidence of roosting including areas of droppings, moulted feathers, feather down or clippings from branches under trees.

Breeding habitat is defined in the Black Cockatoo Referral Guidelines as trees of species known to support breeding within the range of the Black Cockatoo species which either have a suitable nest hollow OR are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species the suitable DBH is 500mm. Tuart and Jarrah are species known to support breeding for Black Cockatoo species. A Significant Tree Survey assessment was undertaken to identify trees within the site that have a DBH of 500mm or greater. The location, species, tree trunk DBH and any other important descriptive information about each suitable tree located within the site was recorded. The presence of hollows or spouts was also recorded. Any hollows or spouts found were assessed from the ground and therefore those deemed suitable for breeding by Black Cockatoos may not be suitable upon closer inspection.

The survey was undertaken in Spring which is Black Cockatoo breeding season. The survey also looked for signs of birds in the hollows during the day or on the trees exhibiting typical breeding activity.

6.3 Black Cockatoo Habitat

6.3.1 Habitat definitions

'Foraging habitat' for Black Cockatoos is determined from the plant species that are present on the site and evidence of feeding such as direct observation of birds or by chewed nuts and cones. 'Roosting habitat' is usually evident due to the presence of Black Cockatoos on the site in the evening and early morning and of scat under the roosting area. 'Breeding habitat' is defined as trees of species known to support breeding within the range of the species which either have a suitable nest hollow OR have a DBH of 500mm or greater.

6.3.2 Foraging

The native species that are recognised as foraging habitat for Black Cockatoos that were recorded on the site during the flora survey consisted of:

- Tuart (*Eucalyptus gomphocephala*);
- Sheoak (*Allocasuarina fraseriana*);
- Jarrah (*Eucalyptus marginata*);
- Candle Stick Banksia (*Banksia attenuata*); and
- Honeybush (*Hakea lissocarpha*).

Tuarts are not a primary food source of Forest Red-tailed Black Cockatoos (Johnstone and Kirkby, 2011), however Carnaby's Black Cockatoos may occasionally feed on the flowers (Valentine and Stock, 2008). Carnaby's Black Cockatoos and Forest Red-tailed Black Cockatoos both feed on Sheoak and

Jarrah seeds (Johnstone and Kirkby, 2011; Valentine and Stock, 2008). Carnaby's Black Cockatoos will feed on the seeds, flowers and nectar of *Banksia* species, including Candle Stick Banksia present on the site, while this is not a food source for Forest Red-tailed Black Cockatoos (SEWPaC, 2012). Carnaby's Black Cockatoos have been observed eating the seeds from Honeybush (Higgins, 1999; Saunders, 1980).

There was no evidence found of foraging by Black Cockatoos on the site during the site visit by PGV Environmental.

The Black Cockatoo Referral Guidelines refer to the quality of the foraging habitat as an important characteristic in determining the significance of the impact. However, there is no guidance as to how the quality is determined in the Black Cockatoo Referral Guidelines other than specifying that 'quality' foraging habitat refers to the use of the habitat by Black Cockatoos rather than the overall quality of the vegetation which would normally be described using understorey as well as tree canopy. In the absence of any guidance on determining foraging habitat quality PGV Environmental developed a foraging habitat matrix that rates the quality on the basis of the energy resource of the vegetation types, the condition of the vegetation and whether or not foraging has been observed in each vegetation type on the site (Table 10). PGV Environmental has used the matrix in several assessments previously and in referrals under the EPBC Act.

Table 10: Foraging Value Rating Matrix

Vegetation Type	Vegetation Condition	Foraging Observed	Foraging Value
High Resource eg. Banksia woodland Marri Woodland mixed Jarrah/Banksia mixed Jarrah/Marri	VG-E	Y	Excellent
		N	Very Good
	G	Y	Very Good
		N	Good
	D-CD	Y	Good
		N	Good
Medium Resource eg. Jarrah woodland Parrot Bush Heath	VG-E	Y	Very Good
		N	Good
	G	Y	Good
		N	Poor
	D-CD	Y	Good
		N	Poor
Low Resource eg. Mixed Tuart/Jarrah Woodland Tuart woodland	VG-E	Y	Good
		N	Poor
	G	Y	Good
		N	Poor
	D-CD	Y	Good
		N	Poor

According to the Foraging Value Rating Matrix the mixed Tuart and Jarrah woodland with some Banksia located on the site is rated as a Medium Resource vegetation type for foraging by Black Cockatoos. Applying the vegetation conditions on the site and the fact that no foraging evidence was

observed the Foraging Value is Poor across the Tuart and Jarrah woodland on the site. Therefore the site contains approximately 5.4ha of Poor Foraging Value Habitat for Black Cockatoos.

6.3.3 Roosting

The site does not contain a known roosting site for Carnaby's Black Cockatoos (DoP, 2011). No evidence of the site being utilised as roosting habitat by Black Cockatoos was observed during the site visit.

6.3.4 Breeding

Black Cockatoos are known to breed in hollows of large eucalypts, including Tuart and Jarrah trees. The site is on the edge of the breeding/non-breeding habitat for Carnaby's Cockatoos but has not been recorded as a breeding site for Carnaby's Black Cockatoos (DoP, 2011).

The Black Cockatoo Referral Guidelines define trees of certain species with a DBH of 500mm or greater as breeding habitat regardless of the presence or not of hollows. The theory behind this definition is the concept that while the trees may not currently contain hollows they are mature enough that in the next 50 years or so a hollow might form and be of use to Black Cockatoos for the purposes of breeding.

The PGV Environmental survey recorded 67 trees that are classified as potential breeding habitat. These trees consisted of 45 Tuarts, 16 Jarrahs and six Standing Dead Trees (Table 11; Appendix 14). Within the Black Cockatoo Referral Guidelines both Tuart and Jarrah trees are considered breeding habitat for Carnaby's Black Cockatoos, however Tuarts are not considered breeding habitat for Forest Red-tailed Black Cockatoos.

PGV Environmental recorded six of the 67 trees on the site with hollows and/or spouts and five with potential hollows and/or spouts. Three of these trees were Tuarts, two Jarrah and four Standing Dead Trees (SDT). The five additional trees with potential hollows and spouts consisted of two Tuart, one Jarrah and two SDT (Table 11). No evidence of breeding by Black Cockatoos was observed in these trees by PGV Environmental in October 2015.

Table 11: Significant Trees on the site

Species	Total Number of Trees	Trees with Hollows/spouts	Trees with Potential Hollows/spouts
Tuart	45	3	2
Jarrah	16	2	1
SDT	6	4	2
Total	67	9	5

The details of the significant trees on the site are in Appendix 14 and are shown on Figure 5.

6.4 Regional Context

To assist in determining the significance of any impact on Black Cockatoo habitat on the site an assessment of Black Cockatoo habitat within the vicinity of the site was undertaken.

There are nine Bush Forever sites that occur within 5km of the site containing vegetation considered to be habitat for Black Cockatoos. The total area of the upland vegetation containing habitat for Black Cockatoos in the Bush Forever sites is 1219.9ha. The sites are described below in Table 12 (Government of Western Australia, 2000).

Table 12: Bush Forever Sites within 5km that contain Black Cockatoo Habitat

Bush Forever Site	Area (ha) of Bushland	Proximity to the Site	The Vegetation Types within the Bush Forever Sites that Consist of Black Cockatoo Habitat	Potential Foraging and/or Breeding Habitat
Lake Cooloongup, Lake Walyungup and Adjacent Bushland, Hillman to Port Kennedy Site 356	793.1 – not including wetlands	3.1km to the east	1) <i>Banksia attenuata</i> and <i>B. menziesii</i> Low Woodland; 2) <i>Eucalyptus gomphocephala</i> , <i>E. marginata</i> and <i>Banksia attenuata</i> Open Forest; 3) <i>Grevillea vestita</i> Closed Heath; 4) <i>Eucalyptus gomphocephala</i> Woodland to Forest; and 5) <i>Banksia littoralis</i> Low Woodland.	Foraging, Breeding and Roosting
Cassia Drive Bushland, Karnup Site 278	53.6	App. 4.5km south-west of the site	1) <i>Eucalyptus gomphocephala</i> Woodland 2) <i>Eucalyptus gomphocephala</i> and, <i>E. marginata</i> Open Woodland to Closed Forest 3) <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>Allocasuarina fraseriana</i> Low Open Woodland to Low Woodland	Foraging, Breeding and Roosting
Stakehill Swamp, Baldivis Site 275	138.6 – not including wetlands	App. 1.4km south-south-west of the site	1) Upland Vegetation consist of Tuart (<i>Eucalyptus gomphocephala</i>), some Marri (<i>Corymbia calophylla</i>) and Jarrah (<i>Eucalyptus marginata</i>) trees. 2) Scattered Flooded Gum (<i>Eucalyptus rudis</i>) closer to the wetland	Foraging, Breeding and Roosting
Baldivis Road Bushland, Baldivis Site 376	App. 100ha – not including wetlands	0.9km south west of the site	1) <i>Eucalyptus marginata</i> , <i>Banksia attenuata</i> and <i>B. menziesii</i> Low Woodland; 2) <i>Eucalyptus gomphocephala</i> Open Woodland over <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>B. grandis</i> Low Woodland; and 3) Scattered <i>Eucalyptus marginata</i> over Mixed Open Forest of <i>Corymbia calophylla</i> , <i>Allocasuarina fraseriana</i> , <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>B. grandis</i> ; 4) <i>Corymbia calophylla</i> Low Open Forest over <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>Allocasuarina fraseriana</i> ; 5) Scattered <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>Allocasuarina fraseriana</i> Low Open Forest; and 6) <i>Eucalyptus gomphocephala</i> Open Woodland.	Foraging, Breeding and Roosting

Bush Forever Site	Area (ha) of Bushland	Proximity to the Site	The Vegetation Types within the Bush Forever Sites that Consist of Black Cockatoo Habitat	Potential Foraging and/or Breeding Habitat
Lowlands Bushland – Western Block (Hymus Swamp), Peel Estate Site 372	19ha – not including wetlands	App. 3.2km east of the site	1) <i>Banksia attenuata</i> and <i>B. menziesii</i> Woodland over <i>Kunzea glabrescens</i> Closed Tall Scrub; 2) <i>Banksia attenuata</i> and <i>B. menziesii</i> Woodlands to Forest with scattered emergent <i>Corymbia calophylla</i> ; 3) <i>Banksia attenuata</i> , <i>B. ilicifolia</i> , <i>Nuytsia floribunda</i> Low Open Forest; and 4) Areas of <i>Eucalyptus gomphocephala</i> , <i>E. rudis</i> and <i>Corymbia calophylla</i> Forest to Woodland.	Foraging, Breeding and Roosting
Churcher Swamp, Baldivis Site 75	13ha – not including wetland	App. 2.2km south-west of the site	1) <i>Eucalyptus gomphocephala</i> Very Open Woodland 2) Mixed <i>Banksia menziesii</i> , <i>Banksia attenuata</i> , <i>Banksia ilicifolia</i> and <i>Allocasuarina fraseriana</i> Low Woodlands	Foraging, Breeding and Roosting
Doghill Road Bushland, Baldivis Site 369	58.8ha	App. 3.6km north-west of the site	1) <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>Allocasuarina fraseriana</i> Low Woodland; 2) Scattered <i>Eucalyptus marginata</i> and/or <i>Eucalyptus gomphocephala</i> over <i>Banksia</i> species Low Woodland.	Foraging, Breeding and Roosting
River; Stakehill and Harvey Roads Bushland, Karnup Site 277	27ha	App. 3.3km south-west of the site	1) <i>Eucalyptus rudis</i> Woodland (Interpreted Vegetation Type)	Breeding and Roosting
Folly Pool, Baldivis Site 418	8.6ha – not including wetland	App. 2km north-east of the site	1) <i>Eucalyptus rudis</i> Woodland over <i>Melaleuca raphiophylla</i> Low Forest	Breeding and Roosting
Maramup Pool, Baldivis Site 419	8.2ha – not including wetland	App 3.25km south-east of the site	1) <i>Eucalyptus rudis</i> Woodland (Interpreted Vegetation Type)	Breeding and Roosting

6.5 Significance of Impact

According to the EPBC Act Significant Impact Guidelines 1.1 (SEWPaC, 2012a), the significance of the impact on Black Cockatoos depends on the sensitivity, value and quality of the environment and the intensity, duration, magnitude and geographic extent of the impacts. The category of listing (for example; Endangered, Vulnerable or Migratory) determines the significant impact criteria for listed flora and fauna species and ecological communities.

A proposed Subdivision Concept Plan for the site prepared by The Spatial Group (Appendix 6) indicates that there will be some Public Open Space (POS) located on the site with the balance developed for housing and roads. The landscaping treatment of these POS areas is not known and a Local Structure Plan has not been finalised. Therefore this Assessment assumes all of the foraging and potential

breeding trees on the site would be cleared for residential development. Using this assumption the clearing would result in approximately 5.4ha of Poor Foraging Value Habitat and 67 potential breeding trees being cleared.

The following assessment of the significance of the potential clearing of habitat for Carnaby's and Forest Red-tailed Black Cockatoos is provided below.

Carnaby's Black Cockatoo (Endangered)

The impact of clearing on Carnaby's Black Cockatoos has been assessed against the criteria set out in the Significant Impact Guidelines 1.1 for the impact on an Endangered species and is shown below:

- *Lead to a long-term decrease in the size of a population*

There was no evidence that the site supports breeding or roosting of Carnaby's Black Cockatoos and there are large areas of Bush Forever sites within 5km consisting of foraging and potential breeding habitat, therefore clearing of the site will not result in this outcome.

- *Reduce the area of occupancy of the species*

Clearing of the site will not result in a reduction of any known breeding and roosting habitat and the 5.4ha of foraging habitat that will be cleared consists only of Poor Value Foraging Habitat. There is also approximately 1219.9ha of Black Cockatoo habitat within 5km of the site located in Bush Forever sites and therefore clearing of the site will not result in this outcome.

- *Fragment an existing population into two or more populations*

Clearing of the site is unlikely to fragment a population of Carnaby's Black Cockatoos into sub-populations due to the Bush Forever sites in the area providing linkages consisting of large areas of Black Cockatoo habitat. Carnaby's Black Cockatoos can fly large distances between foraging areas. Clearing of the site will therefore not result in this outcome.

- *Adversely affect habitat critical to the survival of a species*

There was no evidence of breeding or roosting by Carnaby's Black Cockatoos on the site. The two trees that contained potentially suitable hollows and the approximate 5.4ha of Poor Value Foraging Habitat is not considered to be critical to the survival of the species due to the large amount of foraging and potential breeding habitat within 5km of the site, therefore clearing of the site would not result in this outcome.

- *Disrupt the breeding cycle of a population*

The site contained no evidence of breeding and there were only two trees that contained potentially suitable hollows therefore clearing of the site would not result in this outcome.

- *Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline*

Clearing of the site will not result in this outcome due to the large extent of Black Cockatoo habitat reserved in Bush Forever sites within 5km of the site.

- *Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat*

Clearing of the site will not result in the establishment of an invasive species harmful to Carnaby's Black Cockatoos.

- *Introduce disease that may cause the species to decline*

Clearing of the site will not cause disease to be introduced therefore will not result in this outcome.

- *Interfere with the recovery of the species*

The Carnaby's Black Cockatoos that would utilise the site have access to approximately 1219.9ha of Black Cockatoo habitat within 5km reserved in Bush Forever sites. Therefore any clearing of habitat on the site would not interfere substantially with the recovery of the species.

The conclusion of this assessment in accordance with the criteria set out in the Significant Impact Guidelines 1.1 is that residential development on Part Lot 19 Sixty Eight Road, Baldivis would not have a significant impact on Carnaby's Black Cockatoos.

Forest Red-tailed Black Cockatoo (Vulnerable)

The impact on Forest Red-tailed Black Cockatoos from clearing the Black Cockatoo habitat on the site has been assessed against the criteria set out in the Significant Impact Guidelines 1.1 for the impact on a Vulnerable species and is shown below:

- *Lead to a long-term decrease in the size of an important population of a species*

In the Significant Impact Guidelines 1.1 an important population is defined as "a population that is necessary for a species' long-term survival and recovery" and may be "key source populations either for breeding or dispersal, populations that are necessary for maintaining genetic diversity, and/or populations that are near the limit of the species' range".

There were 45 tuarts, 16 Jarrahs and six SDTs located on the site with a DBH of 500mm or greater, providing potential breeding habitat for Forest Red-tailed Black Cockatoos, and there was no evidence of breeding occurring on the site. Additionally the surrounding area contains a number of Bush Forever sites providing large areas of foraging and breeding habitat for Cockatoos that utilise the site. Development of the site would therefore not result in this outcome.

- *Reduce the area of occupancy of an important population*

There was no evidence found of Forest Red-tailed Black Cockatoos breeding or roosting on the site. Clearing of the site will not significantly reduce the area of foraging available to Forest Red-tailed Black Cockatoos due to the small number of Jarrahs on the site and there is approximately 1219.9ha of habitat within 5km of the site in Bush Forever sites. Therefore clearing of the site would not result in this outcome.

- *Fragment an existing important population into two or more populations*

There are large areas of Bush Forever sites within 5km of the site that provide foraging and potential breeding habitat. Forest Red-tailed Black Cockatoos can fly large distances between foraging areas. Additionally the site does not provide significant habitat for Forest Red-tailed Black Cockatoos. Therefore clearing of the site would not result in this outcome.

- *Adversely affect habitat critical to the survival of a species*

There was no evidence that Forest Red-tailed Black Cockatoos breed on the site and the site contains limited foraging habitat for this species while there are large areas of foraging habitat within 5km of the site, as Bush Forever sites. Therefore the site is not considered critical to the survival of the species.

- *Disrupt the breeding cycle of an important population*

There was no evidence that Forest Red-tailed Black Cockatoos breed on the site. There were only two trees on the site that contained potentially suitable hollows five were Tuarts and they are not preferred breeding trees for this species. Therefore clearing of the site would not result in this outcome.

- *Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline*

The site provides limited habitat for Forest Red-tailed Black Cockatoos and the large areas of foraging and breeding habitat located in the Bush Forever sites within 5km of the site would prevent the population from declining as a result of clearing of the site.

- *Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat*

Clearing the site will not result in invasive species being introduced, therefore would not result in this outcome.

- *Introduce disease that may cause the species to decline*

Clearing the site will not result in disease being introduced, therefore would not result in this outcome.

- *Interfere substantially with the recovery of the species*

The site provides limited habitat for Forest Red-tailed Black Cockatoos and those that may utilise the site have access to approximately 1219.9ha of Black Cockatoo habitat within 5km reserved in Bush Forever sites. Therefore clearing the site would not interfere substantially with the recovery of the species.

In accordance with the criteria set out in the Significant Impact Guidelines 1.1 the conclusion of this assessment is that residential development at Part Lot 19 Sixty Eight Road in Baldivis would not have a significant impact on Forest Red-tailed Black Cockatoos.

6.6 Black Cockatoo Referral Guidelines

The EPBC Act referral guidelines for three threatened Black Cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris* Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii* Forest red-tailed Black Cockatoo (vulnerable) *Calyptorhynchus banksii naso* (SEWPaC, 2012b) (Black Cockatoo Referral Guidelines) contain several steps to determine whether or not a referral is required.

These steps are:

1. The definition of habitat (breeding, roosting and foraging – Table 1 in the Black Cockatoo Referral Guidelines);
2. A description of the type of action that may have a high or low risk of being a significant impact and therefore require referral (Table 3 in the Black Cockatoo Referral Guidelines);
3. Formulation of a mitigation strategy to reduce the scale of impact; and
4. A flowchart to assist in decision making on whether or not an action should be referred.

Step 1 Black Cockatoo Habitat

As outlined previously there is approximately 5.4ha of Poor Value Foraging Habitat on the site with no evidence of foraging and also 67 trees that are considered to be potential breeding trees under the definition provided by the Department of the Environment. There is however no recorded breeding or roosting on the site or evidence of such.

Step 2 Level of Impact

Foraging

According to Table 3 in the Black Cockatoo Referral Guidelines the clearing of more than 1ha of quality foraging habitat has a high risk of causing a significant impact, quality referring specifically to Black Cockatoo use of the habitat rather than the condition of the vegetation. Degradation of more than 1ha of quality habitat by things such as altered hydrology or fire regimes has an uncertain risk. The significance of degradation depends on the type of degradation and the quality of the habitat.

The site contained approximately 5.4ha of Poor Value Foraging Habitat for Black Cockatoos. Therefore clearing of the site will not lead to the loss of more than 1ha of quality foraging habitat and the risk of a significant impact on quality foraging habitat is considered to be low.

Roosting

The Black Cockatoo Referral Guidelines consider the clearing or degradation of a known roosting site as a high risk of being a significant impact. The site is not mapped as having a known Carnaby's Black Cockatoo roosting site by the Department of Planning mapping of January 2011 (DoP, 2011). There were no roosting sites recorded during the Significant Tree Survey and the risk of a significant impact on a known roosting site is considered to be low.

Breeding

According to Table 3 in the Black Cockatoo Referral Guidelines the clearing of any known nesting tree has a high risk of being a significant impact. A known nesting tree is defined in the Black Cockatoo

Referral Guidelines as any existing tree in which breeding has been recorded or suspected. There are no known nesting trees that occur on the site and therefore there is no risk of a significant impact on known breeding habitat of Black Cockatoos.

The Black Cockatoo Referral Guidelines also consider that the clearing of any part or degradation of breeding habitat is likely to have a high risk of a significant impact. In Table 1 of the Black Cockatoo Referral Guidelines breeding habitat is defined as woodlands, forests or isolated trees that contain or consist of live or dead trees of certain species with either a DBH of or greater than 500mm or the presence of suitable nest hollows.

The Black Cockatoo Referral Guidelines state that breeding habitat predominantly applies to those areas within the breeding range of the Black Cockatoo species as shown in the maps attached to the Black Cockatoo Referral Guidelines. The site is outside the breeding range of Carnaby's Black Cockatoos. The breeding range of Forest Red-tailed Black Cockatoos is not specified within the map attached to the Black Cockatoo Referral Guidelines, however the site is within the distribution range.

Table 11: Significant Trees on the site

Species	Total Number of Trees	Trees with Hollows/spouts	Trees with Potential Hollows/spouts
Tuart	45	3	2
Jarrah	16	2	1
SDT	6	4	2
Total	67	9	5

According to the Black Cockatoo Referral Guidelines, the definition of breeding habitat outside of the known breeding range still applies unless proven otherwise. A tree consists of breeding habitat if it is a suitable species, identified in Table 1 of the Black Cockatoo Referral Guidelines, and contains a hollow large enough for a Black Cockatoo to enter and form a nest or has a DBH of or greater than 500mm. The site contained 16 Jarrah trees with a DBH of or greater than 500mm, two of which contained hollows potentially suitable for Black Cockatoos and one may have had a hollow present; six SDTs with a DBH of or greater than 500mm, four of which contained hollows potentially suitable for Black Cockatoos; and 45 Tuart trees with a DBH of or greater than 500mm of which three contained hollows and/or spouts and two contained a potential spout.

According to Table 1 of the Black Cockatoo Referral Guidelines Jarrah is a species suitable for breeding by Carnaby's Black Cockatoos and Forest Red-tailed Black Cockatoos, while Tuarts are suitable for breeding by Carnaby's Black Cockatoos but not Forest Red-tailed Black Cockatoos. In accordance with the Black Cockatoo Referral Guidelines the risk of a significant impact on breeding habitat of Forest Red-tailed Black Cockatoos is considered to be high due to the 16 Jarrah and six SDTs on the site. The risk of a significant impact on breeding habitat of Carnaby's and Forest Red-tailed Black Cockatoos is considered to be low for the 53 trees that do not contain a hollow suitable for breeding. For the nine trees with potentially suitable hollows for breeding, or the five trees with potential hollows, no evidence of breeding was observed. Therefore the risk of a significant impact on breeding habitat of Carnaby's and Forest Red-tailed Black Cockatoos is considered to be low.

Surrounding Habitat

According to the Black Cockatoo Referral Guidelines clearing of vegetation that results in a gap of greater than 4km between patches of Black Cockatoo habitat (foraging, roosting or breeding) has a high risk of having a significant impact. As listed in Table 5 there are three Bush Forever sites within 4km of the site that provide Black Cockatoo habitat. Therefore the risk of creating a gap of greater than 4km between areas of Black Cockatoo habitat is considered to be low.

Step 3 Mitigation

The consideration of a mitigation strategy during the determination of the level of impact and requirement to refer is allowed by the Black Cockatoo Referral Guidelines and setting in place the best practice mitigation strategy may reduce the level of impact and in turn the risk of a significant impact. Mitigation strategies include avoiding impact, managing impact so that there is no net decline in habitat and monitoring the effectiveness of mitigation.

This assessment is based on all 67 potential breeding trees being cleared.

Step 4 Referral Advice

The Decision Making flowchart in Figure 1 of the Black Cockatoo Referral Guidelines was applied to the site without consideration of mitigation strategies and is shown in sequence below:

- 1 Could the impacts of your action occur within the modelled distribution of the black cockatoos? – YES (Forest Red-tailed Black Cockatoos and Carnaby's Black Cockatoos)
- 2 Could the impacts of your action affect any black cockatoo habitat or individuals? - YES
- 3 Have you surveyed for black cockatoo habitat using the recommended methods? – YES
- 4 Could your action have an impact on black cockatoos or their habitat? – NO
- 5 Is your impact mitigation best practice so that it may reduce the significance of your impacts on black cockatoos? Prioritise impact avoidance over impact minimisation - NO

RESULT – Low risk of resulting in significant impact: Referral May Not be Required.

It is understood that no trees will be retained in the proposed development.

7 SUMMARY AND CONCLUSIONS

7.1 Preliminary Site Investigation (Non-intrusive)

The Preliminary Site Investigation (Non-intrusive) has determined the northern part of the site has a very low potential to be contaminated. There is no further investigation recommended for most of this area unless during earthworks there is some material unearthed that is not currently visible. The shed in the northern part of the site requires further investigation.

The southern part of the site has been used for a market garden in the past. There was no evidence in historical aerial photography or in other records that there have been any structures on the site other than the domed hothouses. The cropped area of the market garden has a requirement for further investigation, including soil testing in accordance with NEPM. Sampling and testing should be completed when the local structure plan or subdivision have been finalised to pinpoint areas which will require investigation.

It is understood that the Department of Education has an agreement that they would be undertaking any investigations required for subdivision.

7.2 Flora and Vegetation

A summary of the results of the Flora and Vegetation Survey are as follows:

- Native vegetation occurs on approximately 4ha of the site. Two woodland vegetation types were recorded with Tuart, Jarrah, Sheoak (*Allocasuarina fraseriana*) and *Banksia attenuata* the dominant species. Native understorey was low and sparse to absent.
- The condition of the vegetation was rated as Good – Degraded in the northern portion and Completely Degraded (parkland cleared) in the southern portion.
- A total of 73 plant species were recorded on the site including 44 native and 29 introduced species. The low number of native species and high proportion of introduced species (40%) reflected the poor condition of the understorey vegetation;
- No Threatened (Declared Rare), Priority or other conservation significant species were recorded on the site;
- The vegetation is part of the Karrakatta – Central and South vegetation complex but is considered too degraded to be a good example of this vegetation complex;
- The vegetation is too degraded to be assigned to a Floristic Community Type;
- The trees provide some habitat value to avifauna (birds and bats) but the understorey is too open and degraded to have much value for ground-dwelling fauna; and
- The vegetation is not part of any local or regional linkage.

7.3 Fauna

The Level 1 Fauna Survey on Part Lot 19 Sixty Eight Road, Baldivis has identified following fauna values:

- The site is almost completely vegetated with native and weed species in the northern part but the vegetation is Degraded;
- The southern part of the site is completely cleared and has limited fauna habitat values;

- The site consists of Disturbed fauna habitat in the northern part due to the vegetation condition and limited connectivity and Highly degraded fauna habitat in the southern part that is completely cleared;
- The biodiversity value of the site, from a fauna perspective, is considered to be low. Feral species such as cats, foxes and rabbits are also likely to be present due to the surrounding residential development;
- Five fauna species of conservation significance could possibly use the site as habitat:
 - Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)
 - Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*)
 - Cattle Egret (*Ardea ibis* - Also listed as *Ardea ibis* subsp. *coromanda*);
 - Rainbow Bee-eater (*Merops ornatus*)
 - Southern Brown Bandicoot (*Isodon obesulus fusciventer*)
- Development of the site will not have a significant impact on the Rainbow Bee-eater or Cattle Egret as they would be intermittent visitors that do not rely on the site for survival;
- Southern Brown Bandicoots are unlikely to occur on the site due to the disturbed understorey. However if evidence of bandicoots is recorded on the site a trapping and relocation program may be required prior to clearing;

7.4 Targeted Search

The results of the Targeted Search for Black Cockatoo habitat are summarised below:

- The site contains habitat for Carnaby's Black Cockatoo and Forrest Red-tailed Black Cockatoos;
- The site contains approximately 5.4ha of foraging habitat which was classified as Poor Quality Foraging Habitat. Evidence of foraging was not observed on the site. There is a very low risk of a significant impact on quality foraging habitat;
- The site does not contain a known roosting site and no evidence of roosting was observed;
- The site contains potential breeding habitat;
- According to the Significant Impact Guidelines 1.1 development of the site would not lead to a significant impact on Black Cockatoos;
- The surrounding Bush Forever sites provide a large amount of foraging and potential breeding habitat in close vicinity of the site and are likely to lower the impact that clearing of the site would have on Black Cockatoos;
- Referral to the Department of the Environment under the EPBC Act could be required due to the impact on 67 potential breeding habitat trees;
- Implementing avoidance and mitigation strategies such as retaining some trees will reduce any offsets required if it is deemed a controlled action; and
- If a proposal to clear the vegetated part of the site for the development was to be referred under the EPBC Act PGV Environmental considers there would be a strong likelihood that the plan would not need to be fully assessed based on the results of EPBC Act Referrals involving impacts on Black Cockatoos in the last 2 years.

8 REFERENCES

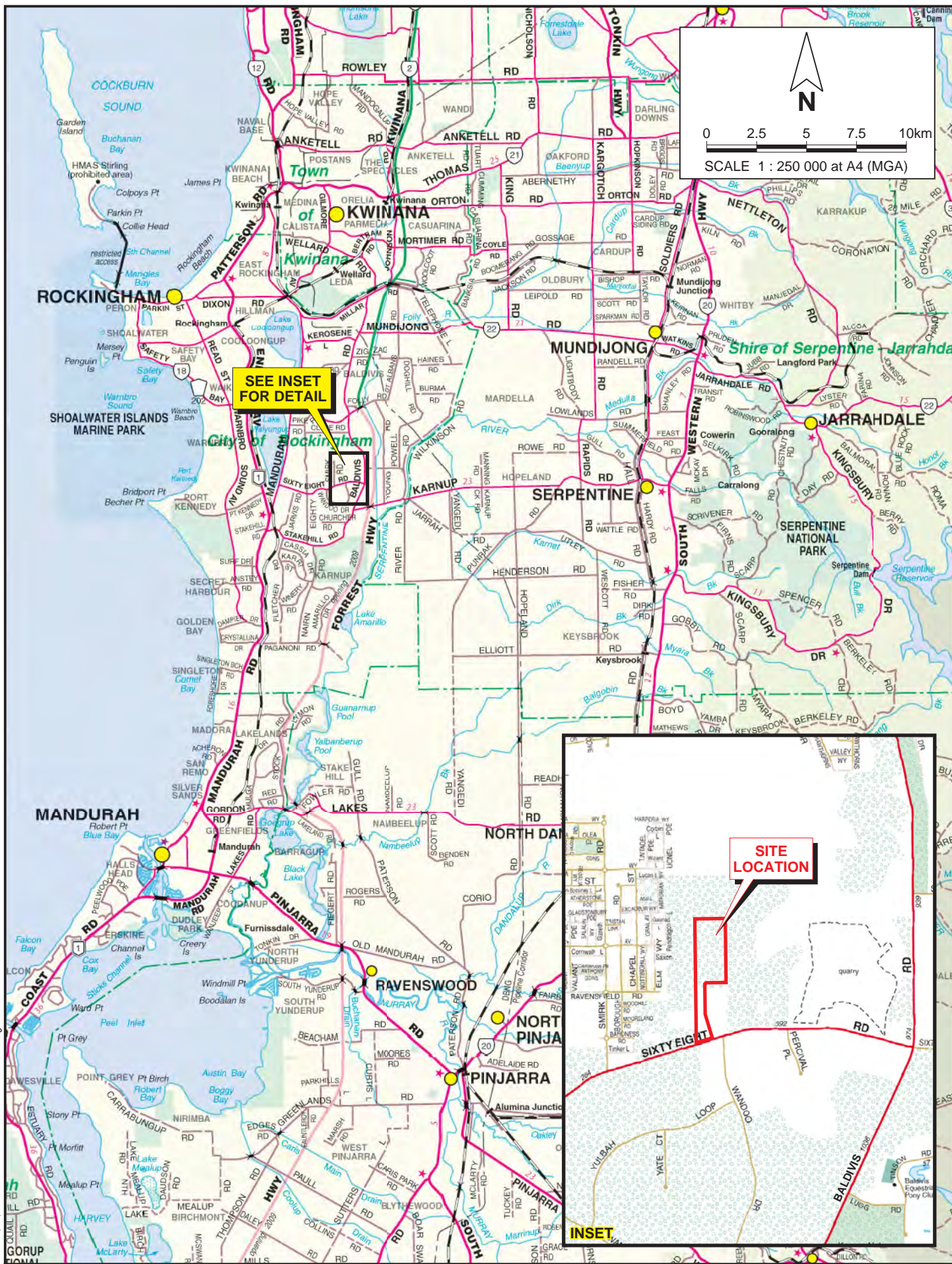
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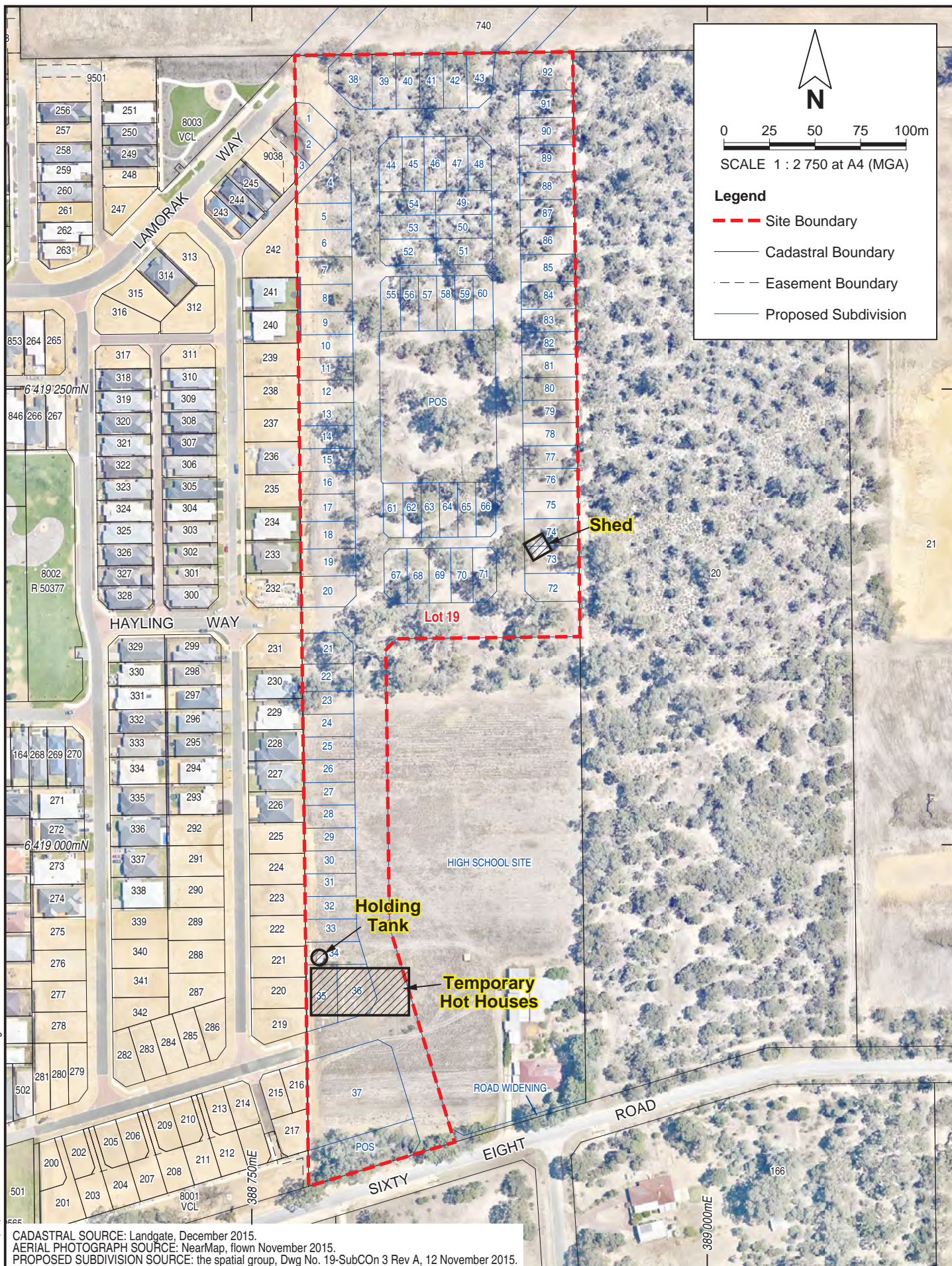
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FIGURES





CADASTRAL SOURCE: Landgate, December 2015.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown November 2015.
PROPOSED SUBDIVISION SOURCE: the spatial group, Dwg No. 19-SubCO3 on 3 Rev A, 12 November 2015.

pgv
ENVIRONMENTAL

Glow Developments
ENVIRONMENTAL ASSESSMENT
PART LOT 19 SIXTY EIGHT ROAD, BALDIVIS

Drawn: J. Cabot

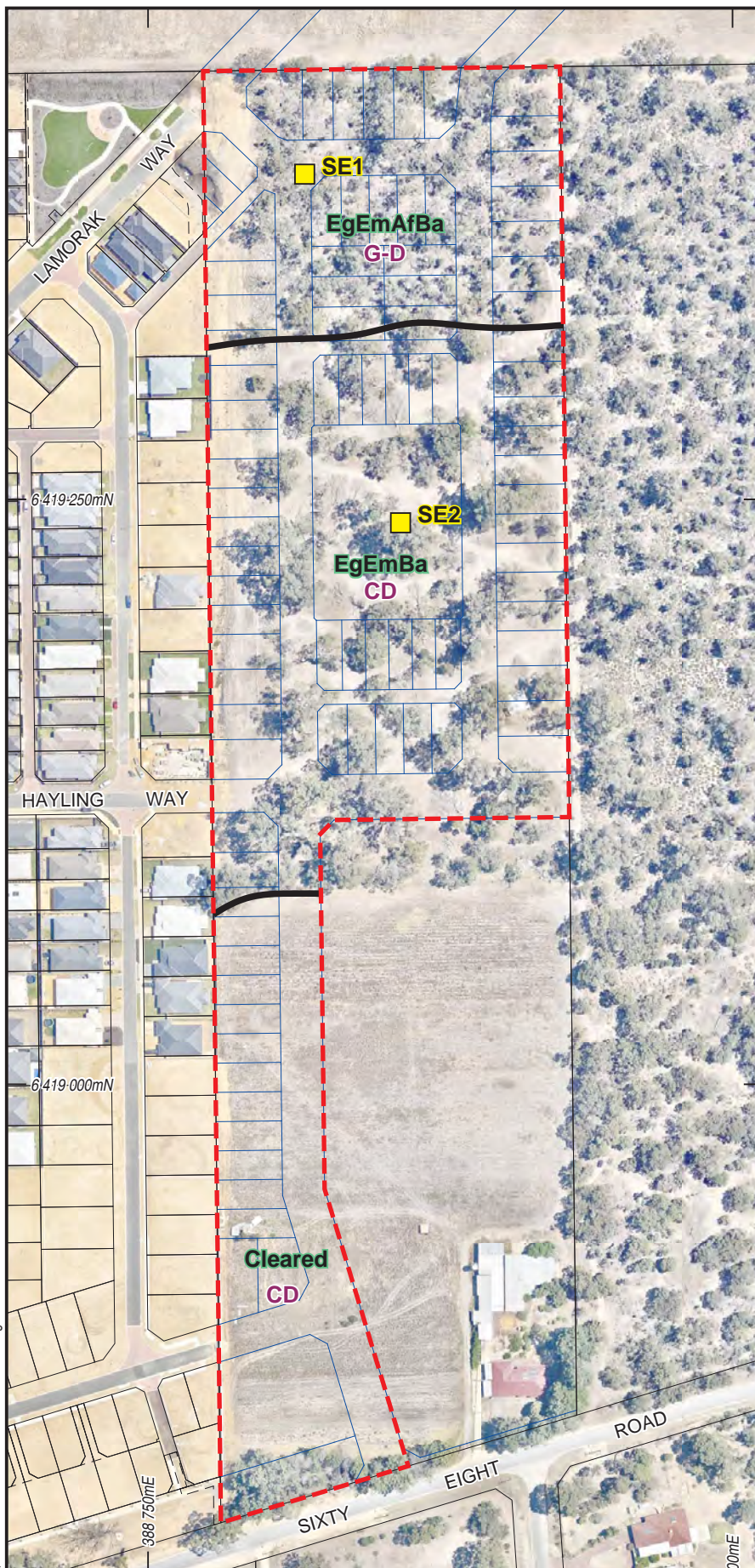
Date: 3 Dec 2015

Job: 10241 Rpt: 2015-240

Revision: A

PRELIMINARY SITE INVESTIGATION

Figure 3



Legend

- Site Boundary
- Cadastral Boundary
- Easement Boundary
- Proposed Subdivision
- Quadrat Location
- Vegetation Boundary
- EgEm Vegetation Type
- CD Vegetation Condition

Vegetation Types

EgEmAfBa

Eucalyptus gomphocephala (Tuart) Woodland over *E. marginata* (Jarrah)/*Allocasuarina fraseriana*/ *Banksia attenuata* Low Woodland over *Hibbertia hypericoides*/ *Mesomelaena pseudostygia* Low Shrubland

EgEmBa

Eucalyptus gomphocephala (Tuart) Woodland over *E. marginata* (Jarrah)/ *Banksia attenuata* Low Open Woodland over weeds

Vegetation Condition

(SOURCE: Bush Forever, Govt. of W.A., 2000)

P - Pristine

Pristine or nearly so, no obvious signs of disturbance.

Ex - Excellent

Vegetation structure intact, disturbance affecting individual species and weeds are non aggressive species.

VG - Very Good

Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.

G - Good

Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.

D - Degraded

Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.

CD - Completely Degraded

The structure of the vegetation is no longer intact and the areas is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora composing weed or crop species with isolated native trees or shrubs.

CI - Cleared

No native vegetation remaining.

CADASTRAL SOURCE: Landgate, December 2015.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown November 2015.
PROPOSED SUBDIVISION SOURCE: the spatial group, Dwg No. 19-SubCO3 on 3 Rev A, 12 November 2015.

pgv
ENVIRONMENTAL

Glow Developments
ENVIRONMENTAL ASSESSMENT
PART LOT 19 SIXTY EIGHT ROAD, BALDIVIS

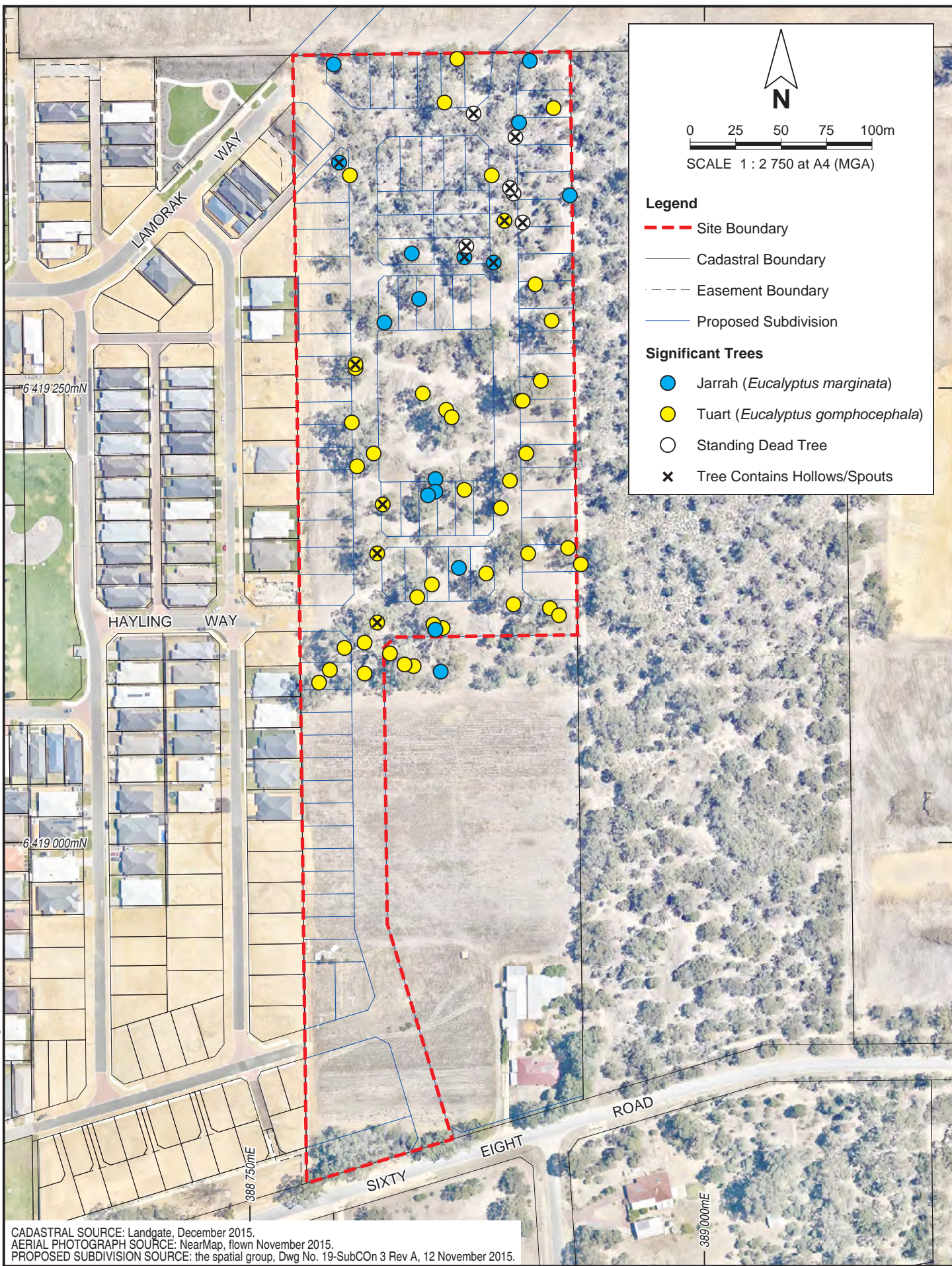
Drawn: J. Cabot

Date: 3 Dec 2015

Job: 10241 Rpt: 2015-240

Revision: A

VEGETATION TYPE AND CONDITION



PINPOINT CARTOGRAPHICS (08) 9562 7136 2015-240-105.dgn

<p>pgv ENVIRONMENTAL</p>	
Drawn: J. Cabot	Date: 3 Dec 2015
Job: 10241 Rpt: 2015-240	Revision: A

Glow Developments
 ENVIRONMENTAL ASSESSMENT
 PART LOT 19 SIXTY EIGHT ROAD, BALDIVIS

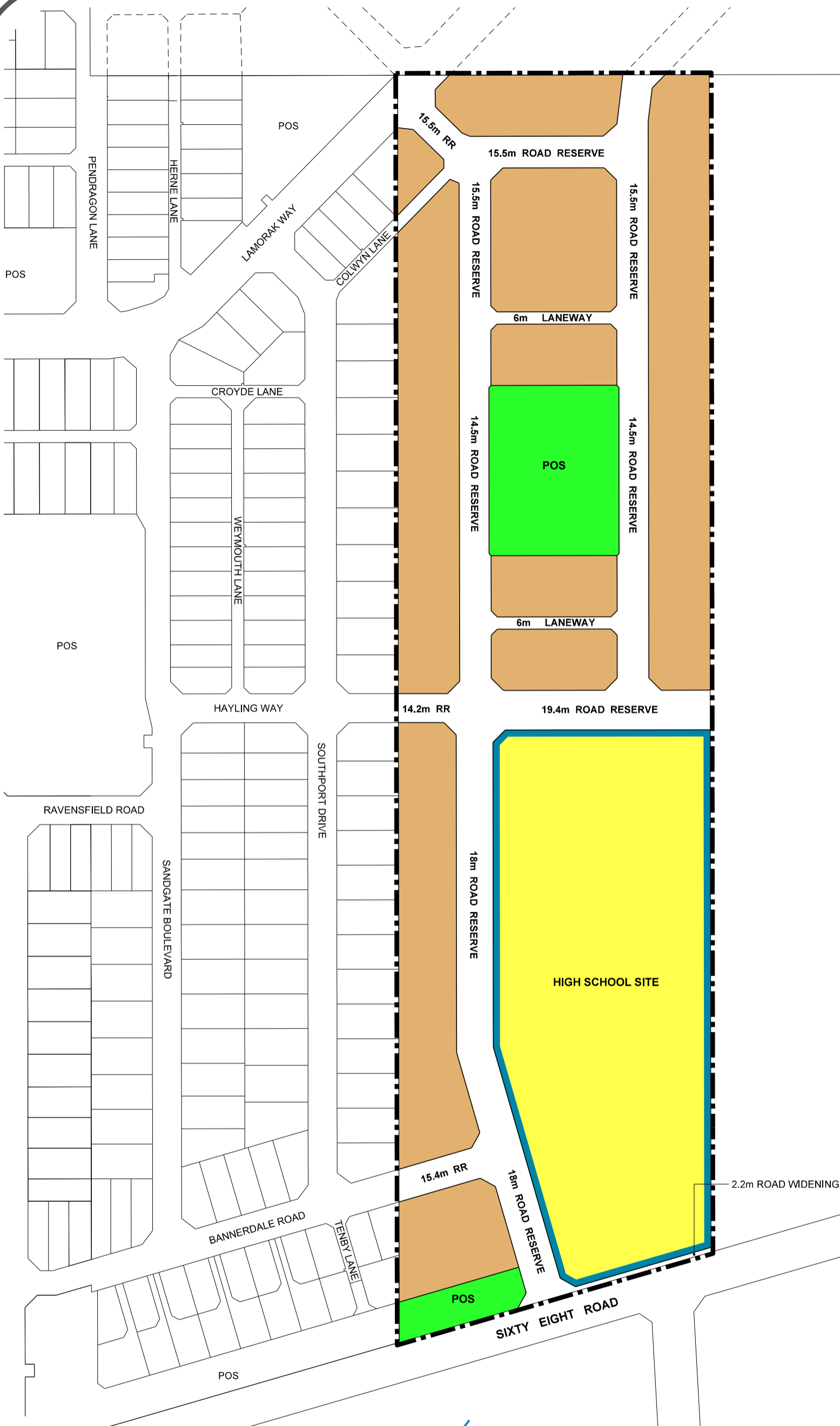
SIGNIFICANT TREES

Figure 5

APPENDIX 1

Subdivision Concept

DRAFT



LOT
20

LOT
21

LEGEND

- STRUCTURE PLAN BOUNDARY
- MEDIUM DENSITY (R25-R40)
- PUBLIC OPEN SPACE (POS)
- PUBLIC PURPOSE - EDUCATION

(the spatial group)
planning + design

Lot 19 Sixty Eight Road, Baldvis

LOCAL STRUCTURE PLAN

LEIGHTON
land development DRAFTING & VISUALS

bleighton@westnet.com.au
0408 820 001

Notes

Base data supplied by MAPS / Landgate
Projection PCG94

Areas and dimensions shown are subject to final survey calculations.
All carriageways are shown for illustrative purposes only and are subject to
detailed engineering design.

The concepts presented in this plan remain the copyright of The Spatial Group.
No copies in whole or in part may be made without The Spatial Group permission.



0 20 40 60 80
metres

Client : The Glow Development
Plan No. : Baldvis_LSP_V.0_20151202
Revision : A
Date : 4 December 2015
Drawn : BDL
Scale : 1:2,000

APPENDIX 2

Basic Record Summary – DER



Jackalyn Sue Cabot
PGV Environmental
Unit 1, 61 Guthrie St
Osborne Park WA 6017

Dear Sir/Madam

BASIC SUMMARY OF RECORDS REQUEST

Thank you for your Basic Summary of Records request for the site consisting of the following parcel(s) of land:

- LOT 19 ON PLAN 8420 as shown on certificate of title 613/69A known as 356 Sixty Eight Rd, Baldivis WA 6171

which Department of Environment Regulation (DER) received on 23/11/2015.

A search of DER's records of known and suspected contaminated sites was undertaken however, our records indicate that as of 27/11/2015 this site has not been reported to DER as a known or suspected contaminated site either prior to or after the commencement of the *Contaminated Sites Act 2003*.

For general enquiries, please contact the Registrar on 1300 762 982.

Yours sincerely

Andrew Miller, Senior Manager

CONTAMINATED SITES
Delegated Officer under section 91
of the *Contaminated Sites Act 2003*

27/11/2015

Enc. Receipt Number DER46039

APPENDIX 3

Aboriginal Heritage Inquiry System Report



Search Criteria

0 Registered Aboriginal Sites in Custom search area (2); 388730.54mE, 6418718.98mN z50 (MGA94) : 389047.94mE, 6419500.15mN z50 (MGA94)

Disclaimer

The *Aboriginal Heritage Act 1972* preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Aboriginal Affairs by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you email the details to the Department at heritageenquiries@daa.wa.gov.au and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

Your heritage enquiry is on land within the following Indigenous Land Use Agreement(s): Gnaala Karla Booja People ILUA

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

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Coordinate Accuracy

Accuracy is shown as a code in brackets following the coordinates. Map coordinates (Latitude/Longitude and Easting/Northing) are based on the GDA 94 Datum. The Easting/Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '500000mE:Z50' means Easting=500000, Zone=50.

Terminology (NB that some terminology has varied over the life of the legislation)

Place ID/Site ID: This is a unique ID assigned by the Department of Aboriginal Affairs to the place

Status:

- o **Registered Site:** The place has been assessed as meeting Section 5 of the *Aboriginal Heritage Act 1972*
- o **Other Heritage Place which includes:**
 - **Stored Data / Not a Site:** The place has been assessed as not meeting Section 5 of the *Aboriginal Heritage Act 1972*
 - **Lodged:** Information has been received in relation to the place, but an assessment has not been completed at this stage to determine if it meets Section 5 of the *Aboriginal Heritage Act 1972*

Access and Restrictions:

- o **File Restricted = No:** Availability of information (other than boundary) that the Department of Aboriginal Affairs holds in relation to the place is not restricted in any way.
- o **File Restricted = Yes:** Some of the information that the Department of Aboriginal Affairs holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the Department of Aboriginal Affairs receives written approval from the informants who provided the information. Download the [Request to Access Restricted Information](#) letter and form.
- o **Boundary Restricted = No:** place location is shown as accurately as the information lodged with the Registrar allows.
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 - **Female Access Only:** Only females can view restricted information

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List of Registered Aboriginal Sites with Map

No Results



Legend

Selected Heritage Sites

-  Registered Sites
-  Aboriginal Community Occupied
-  Aboriginal Community Unoccupied
-  Town
-  Search Area

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Search Criteria

0 Other Heritage Places in Custom search area (3); 388730.71mE, 6418723.03mN z50 (MGA94) : 389049.76mE, 6419500.17mN z50 (MGA94)

Disclaimer

The *Aboriginal Heritage Act 1972* preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Aboriginal Affairs by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you email the details to the Department at heritageenquiries@daa.wa.gov.au and we will make every effort to rectify it as soon as possible.

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Your heritage enquiry is on land within the following Indigenous Land Use Agreement(s): Gnaala Karla Booja People ILUA

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Access and Restrictions:

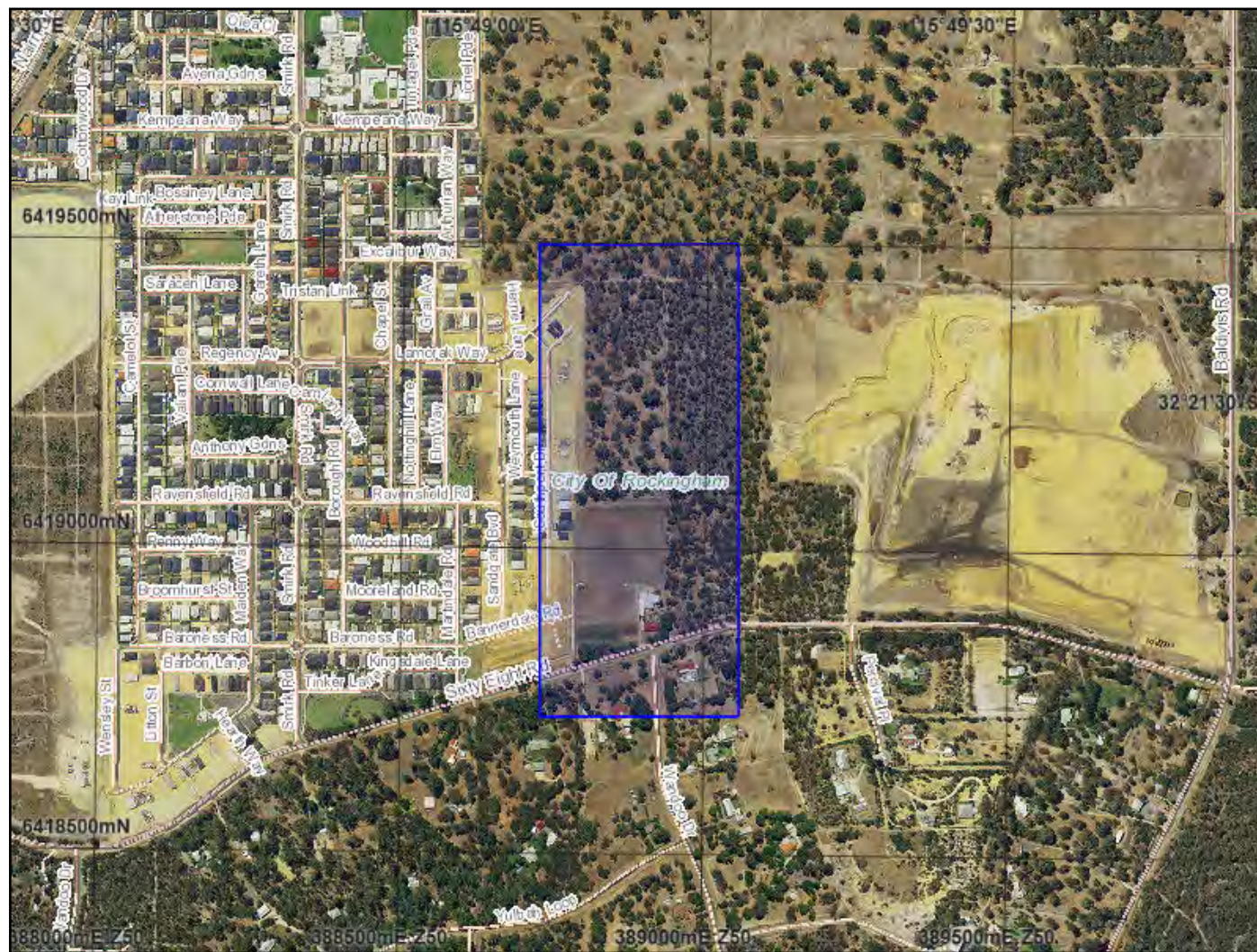
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List of Other Heritage Places with Map

No Results



Legend

Selected Heritage Places

-  Other Heritage Places
-  Aboriginal Community Occupied
-  Aboriginal Community Unoccupied
-  Town
-  Search Area

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Search Criteria

2 Survey Areas in Custom search area (4); 388732.59mE, 6418721.04mN z50 (MGA94) : 389049.89mE, 6419502.19mN z50 (MGA94)

Disclaimer

Heritage Surveys have been mapped using information from the reports and / or other relevant data sources. Heritage Surveys consisting of small discrete areas may not be visible except at large scales. Reports shown may not be held at DAA. Please consult report holder for more information. Refer to www.daa.wa.gov.au/heritage for information on requesting reports held by DAA.

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Access

Some reports are restricted.

Spatial Accuracy

The following legend strictly applies to the spatial accuracy of heritage survey boundaries as captured by DAA.

Very Good	Boundaries captured from surveyed titles, GPS (2001 onwards) submitted maps georeferenced to within 20m accuracy.
Good / Moderate	Boundaries captured from GPS (pre 2001) submitted maps georeferenced to within 250m accuracy.
Unreliable	Boundaries captured from submitted maps georeferenced to an accuracy exceeding 250m.
Indeterminate	Surveys submitted with insufficient information to allow boundary capture.



Survey Report 102670

Title Preliminary Report on the Survey of Aboriginal Areas of Significance in the Perth Metropolitan & Murray River Regions July 1985.

Authors O'Connor, R

Lead Consultant C. Bodney

Survey Types Ethnographic

Related Survey Areas for Survey Report 102670

Area Number	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
1	Ethnographic	Perth Metropolitan & Murray River Regions. A roughly triangular region, with Yanchep National Park as the Northern point, Gidgegannup as the Eastern point and Pinjarra as the Southern point.	Indeterminate	Field and Desktop



Survey Report 103564

Title An Archaeological Survey Project: The Perth Area, Western Australia. Apr 1972.
Authors University of Western Australia.
Lead Consultant University of Western Australia
Survey Types Archaeological

Related Survey Areas for Survey Report 103564

Area Number	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
1	Archaeological	The Perth Area. 103 site locations in 67 site groups were investigated.	Indeterminate	Field and Desktop
2	Archaeological	The Perth Area. Sites included id's 3350, 4404, 3846	Unreliable	Field and Desktop
3	Archaeological and Ethnographic	The Perth Area. Closed site id 2887	Indeterminate	Field and Desktop



Legend

Selected Heritage Surveys

-  Heritage Survey
-  Aboriginal Community Occupied
-  Aboriginal Community Unoccupied
-  Town
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APPENDIX 4

Historical Certificates of Title

S. 289J *Registration Fee paid.* NOTE. All dealings with this Lease must be in the forms prescribed under the Transfer of Land Act, 1893.

Lease No. { 3127
898

C.L. No. 54/1957

WESTERN



AUSTRALIA.

CONDITIONAL PURCHASE LEASE.

(Under section 127 of the Land Act, 1933, and registered under the Transfer of Land Act Amendment Act, 1909.)

George the Sixth. by the Grace of God, of Great Britain, Ireland, and the British Dominions beyond the Seas King, Defender of the Faith. To all to whom these Presents shall come, GREETING: Know Ye that Whereas..... Fred Levitt Barrett of Pike's Kiosk, 22 Mile Peg, Mandurah Road, Fremantle
Farmer and Engineer

in our State of Western Australia (hereinafter styled the Lessee) has made application under the provisions of section 127 of The Land Act, 1933: We, of our especial Grace, and in exercise of the powers in this behalf to Us given by the said Act, do by these presents demise to the Lessee, the natural surface and so much of the land as is below the natural surface to a depth of two hundred feet of ALL THAT piece or parcel of land marked and distinguished on the maps and books of the Department of Lands and Surveys of Our said State as Peel Estate lots 570, 571, 572 and 731

containing 377 acres and 18 perches, more or less, and as the same is delineated by a border of green colour on the plan hereon, together with all appurtenances thereunto belonging. To HAVE AND TO HOLD as ~~Joint Tenants as Tenants in common~~ the said land hereby demised subject to the powers, reservations, and conditions contained herein and in the said Act, and applicable to leases granted under Part V. of the said Act, and together with all the rights, powers, and privileges conferred upon the Lessee under or by virtue of these Presents and of the said Act unto the Lessee, his Executors, Administrators, and Assigns, for the term of forty years to be computed from the first day of October

One thousand nine hundred and Fifty one YIELDING AND PAYING therefor, unto Us, the following rental(s) half-yearly in advance on the first day of March and the first day of September in each and every year for the first five years of the said term a half-yearly payment of £ 6 : 3 : 0

and for the balance of the said term a half-yearly payment of £ 7 : 5 : 11 until the full purchase price of £ 245 : 0 : 0

has been paid, all such payments to be made to our Minister for Lands for our said State: PROVIDED, NEVERTHELESS, that it shall at all times be lawful for Us, Our Heirs and Successors, or for any person or persons acting in that behalf by Our or their authority, to resume and enter upon possession of any part of the said land which it may at any time by Us, Our Heirs and Successors, be deemed necessary to resume for roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour or river improvement works, drainage or irrigation works, quarries, and generally for any other works or purposes of public use, utility, or convenience, and for the purposes of exercising the power to search for minerals hereinafter reserved, and such land so resumed to hold to Us, Our Heirs and Successors, as of Our or their former estate, without making to the Lessee or any person claiming under him any compensation in respect thereof, so, nevertheless, that the lands so to be resumed shall not exceed one-twentieth part in the whole of the lands aforesaid, and that no such resumption be made of any part of the said lands upon which any buildings may have been erected, or which may be enclosed and in use as gardens or otherwise for the more convenient occupation of any such buildings, without compensation: PROVIDED ALSO, that it shall be lawful at all times for Us, Our Heirs and Successors, or for any person or persons acting in that behalf by Our or their authority, to cut and take away any such indigenous timber, and to search and dig for and carry away any stones or other materials which may be required for making or keeping in repair any roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour works, breakwaters, river improvements, drainage or irrigation works, and generally for any other works or purposes of public use, utility, or convenience, without making to the Lessee, or any person claiming

under him any compensation in respect thereof: AND we do hereby save and reserve to Us, Our Heirs and Successors, all mines of gold, silver, copper, tin, or other metals, ore, and mineral, or other substances containing metals and all gems and precious stones, and coal or mineral oil and all phosphatic substances in and under the said land, with full liberty at all times to search and dig for and carry away the same; and for that purpose enter upon the said land or any part thereof: PROVIDED FURTHER that all improvements on the land hereby demised except those which are owned by a pastoral Lessee are Our property, and shall be paid for by the Lessee at such time and

in such manner as Our Minister for Lands may direct: PROVIDED ALSO, that if the Lessee, his Executors, Administrators, or Assigns, shall, during the said term, at any time make default in payment of the rent hereby reserved, or shall fail or neglect to comply with, perform, or fulfil all or any of the conditions or provisions of the said Act,

and on his part to be observed and performed, or if the Lessee assigns or underlets the premises or any part thereof without the Minister's approval in writing, as required by the said Act, first obtained, it shall thereupon be lawful for Us, Our Heirs and Successors, into and upon the said land, or any part thereof in the name of the whole, to re-enter and the same to have again, repossess, and enjoy, together with all improvements thereon,

without making any compensation to the Lessee, his Heirs, Executors, Administrators, or Assigns: PROVIDED FURTHER, that at the expiration of the said term, and upon payment of all rent hereby reserved, and upon the due performance of all conditions prescribed by the said Act, and upon payment of the prescribed fee for a Crown Grant, or at any time during the continuance of the said term upon furnishing, after the first five years of the said term, to the satisfaction of Our Minister for Lands for Our said State the proofs required by the said Act,

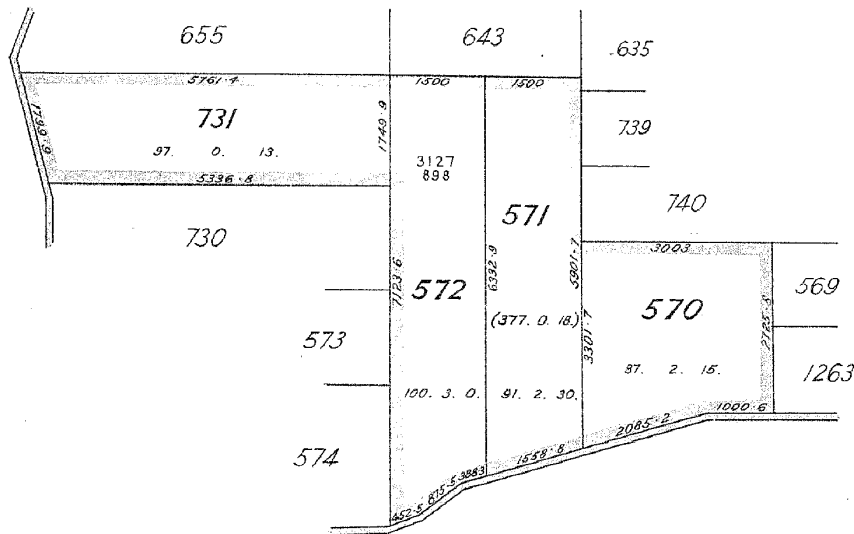
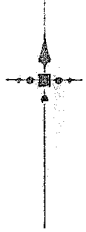
and upon payment of the full purchase money and the prescribed fee as aforesaid, the Lessee, his Executors,

42879/1/31-300 11/81

140000 [2]

Administrators, or Assigns, shall be entitled to a Crown Grant in fee simple of the lands hereby demised in the form prescribed by the said Act in the case of Rural Lands: PROVIDED LASTLY, and it is hereby agreed and declared that We, Our Heirs and Successors, shall not be liable to compensate the said Lessee his Executors, Administrators, or Assigns, for any loss or damage arising from the exercise of all or any of the powers or rights hereby reserved to Us, Our Heirs and Successors, save and except in-so-far as the same may be prescribed herein or by the said Act.

PLAN HEREIN REFERRED TO.



Scale 20 Chains to an inch. *1/6 inch*

The area and measurements on the above Plan are more or less, and a post has been placed at each corner of the Location.

IN WITNESS whereof we have caused Our said Minister for Lands to affix hereto his seal and set his hand.

Dated the first day of October, One thousand nine hundred and Fifty one

Malaguer

An Officer authorised in this behalf by the Governor.
By order of the Minister for Lands.

Registered the 18th day of January, 1951
in conformity with section 5 of Act No. 54 of 1909, and numbered

54/1951

PURCHASE PRICE PER ACRE INCLUDING INTEREST £246

PLAN 341 P/40 B4 O.P. 2751

CORR 3101/51

A/C. No. Peel 734

Asst. Registrar of Titles.

655 1799.9

731 97. 0. 13. 5336.8

730

643 1500 1500

571 3127 898 6332.9 (377. 0 18) 5901.7

572 7123.6

573 100. 3. 0. 91. 2. 30. 1558.8

574 1558.8 5388.3 1452.3

739 739

740 3003

570 3901.7 1010.6 2785.8

569 2785.8

1263 2085.2 1000.6

RECEIPTS.

13200/57 19007/57 43858/62

Lease
THIS APPLICATION is issued subject to the following Conditions.

S. 811a.

All marketable timber on the said lands is reserved to the Crown, save that the lessee may fell such timber in the ordinary course of bona fide clearing for cultivation and use any of such timber felled for his own reasonable requirements in connection with farming operations on the said lands, with full liberty to us, our heirs and successors, and persons authorised by us or by any person or corporation in whom the control of forests is for the time being vested, to enter, fell, and remove the same, and for that purpose or for the purpose of extracting timber from any other land in the locality, full liberty for us and any of the persons aforesaid to pass and re-pass over the said lands with or without workmen, machinery, horses, or cattle and to take water from any spring, stream, well, or water-hole, and to lay down and construct pipe lines for conveying such water, and to make roads and ways, and construct and maintain timber tramways on the said lands, subject however (where such road, way, tramway, or pipe line is for the purpose of extracting timber or conveying water from any other land in the locality) to no other direct and satisfactory route being available through Crown lands, reserves, or State forests, without making to the grantee his heirs and successors, will make good the actual amount of any structural damage done to any buildings, erections, or fences in the exercise of such rights, and where a fence forming part of a cattle or sheep-proof enclosure is opened, provide and maintain cattle pits and other efficient means to prevent the escape therefrom of sheep and cattle.

70521/11/53-13.

An Officer authorised in this behalf by the Governor.
By order of the Minister for Lands.

Macarthur

THIS LEASE is issued subject to the following conditions :-

No. 2.

- (1) That the lessee shall maintain the improvements to the satisfaction of the Minister for Lands.
- (2) That the Government does not guarantee a continuance of drainage maintenance.

59671/10/52-200

An Officer authorised in this behalf by the Governor.
By order of the Minister for Lands.

Macarthur

collateral to Mortgages stamped together £1
Mortgage 3989/1957 Fred Levitt Barnett to The National Bank
of Australasia Limited. Registered 11th April 1957 at 9.27.00

Macarthur

collateral to Mortgages stamped in all £1-7-6
Mortgage 6466/1957 Fred Levitt Barnett to The National Bank
of Australasia Limited. Registered 11th June 1957 at 9.31.00

Macarthur

Instrument stamped £3-5-0
Mortgage 15342/1962 Fred Levitt Barnett to The National Bank of
Australasia Limited. Registered 26th October 1962 at 3.25.00

Blackmore

ASSISTANT REGISTRAR OF TITLES

Collateral to mortgage stamped £3-5-0. Instrument stamped
£6-15-0.
Mortgage 74793/64 Fred Levitt Barnett to The National Bank
of Australasia Limited. Registered 5th November 1964 at 9.23.00

Blackmore

ASSISTANT REGISTRAR OF TITLES

Caveat 79614/64 Lodged 26.11.1964 at 9.25.00

Blackmore

ASSISTANT REGISTRAR OF TITLES

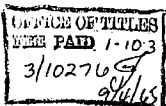
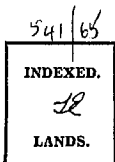
(As to Lots 570, 571 and 572 only). w.

CANCELLED

BY ISSUE OF CROWN GRANT

VOL 1293 fol 166

Blackmore
Assistant Registrar of Titles



ORIGINAL



WESTERN

AUSTRALIA

INDEXED

REGISTER BOOK

Land No. 107
Permit No. 217
Page 54/1957
Name A

Vol. 1293 Fol. 166

Plan 8420

Elizabeth the Second,

by the Grace of God, of the United Kingdom, Australia and Her other Realms and Territories, Queen, Head of the Commonwealth, Defender of the Faith. To all to whom these Presents shall come, GREETING: Know ye that We, of Our special Grace, certain knowledge, and mere motion have given and granted, and We do by these Presents, for Us, Our heirs and successors, in consideration of the payment of the sum of £246, 0, 0 ----- and the fulfilment of the prescribed conditions to the satisfaction of Our Governor of Our State of Western Australia, Give and Grant unto

Fred Levitt Barrett of Pike's Kiosk 22 Mile Peg Mandurah Road Fremantle Farmer and Engineer

(hereinafter called the Grantee), the natural surface and so much of the land as is below the natural surface to a depth of - 200 - feet of ALL THAT Tract or Parcel of Land situate and being in the District of Cockburn Sound, in Our said State, containing 377 acres and 18 perches ----- more or less, and distinguished in the

Maps and Books of the Department of Lands and Surveys of our said State as Peel Estate Lots 570, 571, 572 and 731 -----

and as the same is delineated and coloured green in the plan drawn hereon: TOGETHER with all Profits, Commodities, Hereditaments, and Appurtenances whatsoever thereunto belonging, or in anywise appertaining: TO HAVE AND TO HOLD the said Tract or Parcel of Land to the depth aforesaid, and all and singular the Premises hereby granted, with their appurtenances, unto the said Grantee, in fee simple: YIELDING AND PAYING for the same to Us, Our heirs and successors, one peppercorn of yearly rent on the twenty-fifth day of March in each year, or so soon thereafter as the same shall be lawfully demanded: PROVIDED, NEVERTHELESS, that subject to section 141 of the Land Act, 1933, it shall at all times be lawful for Us, Our heirs and successors, or for any person or persons acting in that behalf by Our or their authority, to resume and enter upon possession of any part of the said land which it may at any time be lawful for Us, Our heirs and successors, to resume for roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour or river improvement works, drainage, or irrigation works, or quarries, and generally for any other works or purposes of public use, utility, or convenience, and for the purpose of exercising the power to search for minerals hereinafter reserved, and such lands so resumed to hold to Us, Our heirs and successors, as of Our or their former estate without making to the said Grantee, or any person lawfully claiming under him, any compensation in respect thereof, so nevertheless, that the land so to be resumed shall not exceed one-twentieth part in the whole of the lands aforesaid, and that no such resumption be made of the part of any lands upon which any buildings may have been erected, or which may be in use as gardens, or otherwise, for the more convenient occupation of any such buildings, or on which any other improvements as defined by the Land Act, 1933, have been made, without compensation: AND PROVIDED, ALSO, that it shall be lawful at all times for Us, Our heirs and successors, or for any person or persons acting in that behalf, by Our or their authority, to cut and take away any such indigenous timber, and to search and dig for and carry away any stones or other materials which may be required for making or keeping in repair any roads, tramways, railways, railway stations, bridges, canals, towing paths, harbour works, breakwaters, river improvements, drainage or irrigation works, and generally for any other works or purposes of public use, utility, or convenience, without making to the said Grantee, or any person claiming under him, any compensation in respect thereof; and we do hereby save and reserve to Us, Our heirs and successors, all Mines of Gold, Silver, Copper, Tin, or other Metals, Ores, and Minerals, or other substances containing Metals, and all Gems or Precious Stones and Coal or Mineral Oil and all Phosphatic Substances in and under the said land, with full liberty at all times to search and dig for and carry away the same, and for that purpose to enter upon the said land or any part thereof; and all marketable indigenous timber including all Sandalwood and Mallee trees on the said lands is reserved to the Crown save that the Grantee may ringbark, fell or otherwise destroy any marketable indigenous timber other than Sandalwood and Mallee trees in the ordinary course of bona fide clearing and use any of the timber so felled for his own reasonable requirements in connection with farming operations on the said lands with full liberty to Us, Our heirs and successors and persons authorised by Us or by any person or corporation in whom the control of forests is for the time being vested, to enter, obtain and remove any of the marketable indigenous timber and for that purpose or for the purpose of extracting any marketable indigenous timber from any other land in the locality, full liberty for Us and any of the persons aforesaid to pass and re-pass over the said lands with or without workmen, machinery, horses and cattle and to take water from any spring, stream, well or water hole and to lay down and construct pipe lines for conveying the water and to make roads and ways and construct and maintain timber tramways on the said lands subject however (where the road, way, tramway or pipeline is for the purpose of extracting any marketable indigenous timber or conveying water from any other land in the locality) to no other direct and satisfactory route being available through Crown lands, reserves or State forests without making to the Grantee or transferee or assigns of the Grantee any compensation in respect of any of the matters aforesaid: Provided that We, Our heirs and successors will make good the actual amount of any structural damage done to any buildings, erections or fences in the exercise of those rights and waive a fence forming part of a cattle or sheep-proof enclosure is opened, provide and maintain cattle-pits and other efficient means to prevent the escape therefrom of cattle and sheep. The timber restrictions hereinbefore mentioned shall apply to the land for a period of twenty years and no longer from the date of issue of this Grant.

IN WITNESS whereof We have caused Our trusty and well-beloved HIS EXCELLENCY MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Companion of the Most Honourable Order of the Bath, Commander of the Most Excellent Order of the British Empire, Companion of the Distinguished Service Order, Governor in and over the State of Western Australia and its Dependencies in the Commonwealth of Australia, to affix to these presents the Public Seal of the said State.

Sealed this Twenty fourth day of February, One thousand nine hundred and sixty-five

Grant under the Land Act, 1933

ENTERED ON RECORD this

24th day of February

1965

Stewart Boule
Minister for Lands.

Raynor
for Minister for Lands.

CERTIFICATE OF TITLE UNDER THE TRANSFER OF LAND ACT, 1893

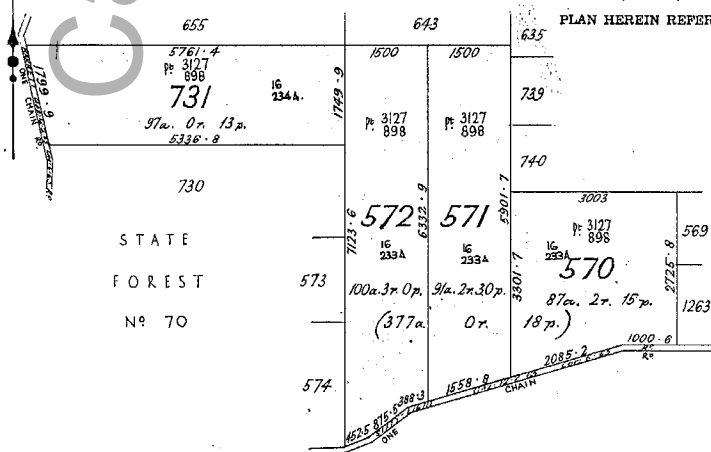
The abovenamed Grantee is now the registered proprietor of an estate in fee simple subject to the easements and encumbrances notified hereunder in all the land described in this grant. Dated the twenty fifth day of February, One thousand nine hundred and sixty-five

OS Russell
ASSISTANT REGISTRAR OF TITLES.

The area and measurements on the Plan below are more or less, and a post has been placed at each corner of the lots.

PLAN HEREIN REFERRED TO:

CT 1293 0166 F



TOTALLY CANCELLED
APPLICATION 8689/67
Registered 9th FEBRUARY 1967 at 9.15.00
BALANCE - (Lot 731)
To Vol. 16 Fol. 234 Blackmore
REGISTRAR OF TITLES

Scale: 20 chains to an inch.
Surveyed by W. F. Rudell.
Corr: 3101/11 O.P. 2751.
3419/40 S. 4. M. H. Ex'd: Stewart

Wm. H. Rudell
Surveyor General

CANCELLED

EASEMENTS AND ENCUMBRANCES REFERRED TO

Collateral to Mortgages stamped together £1.
Mortgage 3989/1957 Fred Levitt Barrett to The National Bank of Australasia Limited.
Registered 11th April 1957 at 9.270c.

Collateral to Mortgages stamped in all £117/6.
Mortgage 6466/1957 Fred Levitt Barrett to The National Bank of Australasia Limited.
Registered 11th June 1957 at 9.310c.

Instrument stamped £3/5/-
Mortgage 15347/1962 Fred Levitt Barrett to The National Bank of Australasia Limited.
Registered 26th October 1962 at 3.250c.

Collateral to Mortgage stamped £3/5/- Instrument stamped £6/15/-
Mortgage 74793/64 Fred Levitt Barrett to The National Bank of Australasia Limited.
Registered 5th November 1964 at 9.230c.

Grants Lots 570, 571 and 572 only.
Caveat 79614/64 Lodged 26.11.1964 at 9.250c. *D. Brindal*

ASSISTANT REGISTRAR OF TITLES

WITHDRAWN
To lot 3 on plan 8420 only
Caveat 46214/65 Lodged 2nd July 1965 at 12.490c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 15 on plan 8420 only
Caveat 46215/65 Lodged 1st July 1965 at 12.020c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 13 on plan 8420 only
Caveat 49290/65 Lodged 14th July 1965 at 12.120c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 17 on plan 8420 only
Caveat 49297/65 Lodged 14th July 1965 at 12.120c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 21 on plan 8420 only
Caveat 49298/65 Lodged 14th July 1965 at 12.130c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 20 on plan 8420 only
Caveat 49299/65 Lodged 14th July 1965 at 12.120c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 4 on plan 8420 only
Caveat 49300/65 Lodged 14th July 1965 at 12.120c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 2 on plan 8420 only
Caveat 49301/65 Lodged 14th July 1965 at 12.130c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 18 on plan 8420 only
Caveat 49302/65 Lodged 14th July 1965 at 12.120c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 6 on plan 8420 only
Caveat 55992/65 Lodged 10th August 1965 at 11.080c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 9 on plan 8420 only
Caveat 63250/65 Lodged 10th September 1965 at 9.270c.

Blackmore
REGISTRAR OF TITLES

To lots 570, 571 & 572 only.
Discharge 78412/65 of Mortgages 3989/1957, 6466/1957, 15347/1962 and 74793/64 Registered 17th November 1965 at 9.180c.

Blackmore
REGISTRAR OF TITLES

WITHDRAWN
To lot 1 on plan 8420 only
Caveat 56456/1966 Lodged 18.8.1966 at 10.020c.

Blackmore
REGISTRAR OF TITLES

Re Transfer 8688/1967 FOURTEEN DAYS NOTICE SENT on Caveats 63250/65 and 49296/65 on 10/2/1967.
Limit 27/2/1967. 7 of Fred Levitt Barrett's 570, 571 and 572 only. No action taken by Caveats lifted.

Withdrawal 8677/67 of Caveat 79614/64. Lodged 9-2-1967 at 9.140c.

Blackmore
REGISTRAR OF TITLES

Withdrawal 8678/67 of Caveat 46214/65. Lodged 9-2-1967 at 9.140c.

Blackmore
REGISTRAR OF TITLES

Withdrawal 8679/67 of Caveat 46215/65. Lodged 9-2-1967 at 9.140c.

Blackmore
REGISTRAR OF TITLES

CROWN GRANT

Vol. 1293 Fol. 166

EASEMENTS AND ENCUMBRANCES REFERRED TO

88964/6/68-300

Withdrawal 8680/67 of Caveat 49297/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8681/67 of Caveat 49298/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8682/67 of Caveat 49299/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8683/67 of Caveat 49300/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8684/67 of Caveat 49301/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8685/67 of Caveat 49302/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8686/67 of Caveat 55992/65. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

Withdrawal 8687/67 of Caveat 56456/66. Lodged 9-2-1967 at 9-14 0'0".

Blackmore
REGISTRAR OF TITLES

TRANSFER 8688/67

Registered 9th FEBRUARY 1967 at 9-15 0'0"

LOTS 570, 571 and 572

To Vol. 16 Fol. 233 A *Blackmore*
REGISTRAR OF TITLES

CERTIFICATE OF TITLE

Vol. 1293

Fol. 166

Cancelled

CERTIFICATE OF TITLE

Vol. 1293

Fol. 166

EASEMENTS AND ENCUMBRANCES REFERRED TO

As to lots 5, 7, 8, 11, and 12 on Plan 8420 only -
Caveat 828/1967 Lodged 22-3-1967 at 10.0105

TRANSFER 65736/67

Registered 23rd August 1967 at 9.30 oc.

Lot 16 on Plan 8420

To Vol. 38 Fol. 388A.

As to Lot 12 only -
Withdrawal 724/11/67 of Caveat 828/1967 Lodged
14-9-1967 at 9.36 oc.

TRANSFER 72455/67

Registered 14th September 1967 at 9.36 oc.

Lot 12 on Plan 8420

To Vol. 41 Fol. 280A.

As to lot 2 on plan 8420 only -
Caveat 3709/67 Lodged 15-11-1967 at
10.14 oc.

As to lot 6 on plan 8420 only -
Caveat 3710/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 1 on plan 8420 only -
Caveat 3711/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 17 on plan 8420 only -
Caveat 3712/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 18 on plan 8420 only -
Caveat 3713/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 20 on plan 8420 only -
Caveat 3714/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 9 on plan 8420 only -
Caveat 3715/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 14 on plan 8420 only -
Caveat 3716/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 3 on plan 8420 only -
Caveat 3717/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 21 on plan 8420 only -
Caveat 3718/67 Lodged 15-11-1967
at 10.14 oc.

As to lot 13 on plan 8420 only -
Caveat 3719/67 Lodged 15-11-1967
at 10.14 oc.

Withdrawal 101303/67 of Caveat 3715/1967 Lodged
19-12-1967 at 10.34 oc.

TRANSFER 101304/67

Registered 19th December 1967 at 10.24 oc.

Lot 9 on Plan 8420

To Vol. 55 Fol. 64A.

As to lot 7 only -

Withdrawal 101407/67 of Caveat 828/1967 Lodged
19-12-1967 at 9.39 oc.

TRANSFER 101408/67

Registered 19th December 1967 at 9.39 oc.

Lot 7 on Plan 8420

To Vol. 55 Fol. 85A.

As to lot 5 only -

Withdrawal 101410/67 of Caveat 828/1967 Lodged
19-12-1967 at 9.39 oc.

TRANSFER 101411/67

Registered 19th December 1967 at 9.39 oc.

Lot 5 on Plan 8420

To Vol. 55 Fol. 86A.

Withdrawal A 178 of Caveat
3713/67 Lodged 3-11-1968 at
9.38 oc.

TRANSFER A 179

Registered 3rd January 1968 at 9.38 oc.

Lot 18 on Plan 8420

To Vol. 57 Fol. 86A.

As to lot 8 only -

Withdrawal A 1883 of Caveat 828/1967 Lodged
10-1-1968 at 9.26 oc.

TRANSFER A 1884

Registered 10th January 1968 at 9.26 oc.

Lot 8 on Plan 8420

To Vol. 58 Fol. 104A.

As to lot 11 only -

Withdrawal A 2575 of Caveat 828/1967 Lodged
12-1-1968 at 9.30 oc.

TRANSFER A 2576

Registered 12th January 1968 at 9.30 oc.

Lot 11 on Plan 8420

To Vol. 59 Fol. 8A.

TRANSFER A 51569

Registered 18th June 1968 at 12.57 oc.

lot 14

To Vol. 105 Fol. 102A.

TRANSFER A 71291

Registered 27th August 1968 at 12.50 oc.

lot 15

To Vol. 129 Fol. 167A.

Withdrawal A 184629 of Caveat 3711/67
Lodged 2-7-1969 at 9.27 oc.

CERTIFICATE OF TITLE

VOL. 16 FOL. 233A

CANCELLED

EASEMENTS AND ENCUMBRANCES REFERRED TO

TRANSFER A 184630
Registered 2nd July 1969 at 9.210c
Lot 1 on Plan 8420
To Vol. 242 Fol. 83A

Wholewards
ASSISTANT REGISTRAR OF TITLES

Withdrawal A 185741 of Caveat 3709/67.
Lodged 4.7.1969 at 2.250c.

TRANSFER A 185742
Registered 14th July 1969 at 2.250c.
Lot 2 on plan 8420
To Vol. 244 Fol. 6A

ASSISTANT REGISTRAR OF TITLES

Withdrawal A 180155 of Caveat 3716/67.
Lodged 17.6.1969 at 9.180c.

TRANSFER A 180156
Registered 19th June 1969 at 9.180c
Lot 4 on Plan 8420
To Vol. 235 Fol. 66A

ASSISTANT REGISTRAR OF TITLES

Withdrawal A 209953 of Caveat 3712/67.
Lodged 2.9.1969 at 9.380c.

Blackmore
ASSISTANT REGISTRAR OF TITLES

TRANSFER A 209954
Registered 2nd September 1969 at 9.380c
Lot 17 on plan 8420
To Vol. 267 Fol. 169A

ASSISTANT REGISTRAR OF TITLES

Withdrawal A 209907 of Caveat 3710/1967.
Lodged 2.9.1969 at 12.060c.

ASSISTANT REGISTRAR OF TITLES

TRANSFER A 209908
Registered 2nd September 1969 at 12.060c
Lot 6 on plan 8420
To Vol. 266 Fol. 121A

ASSISTANT REGISTRAR OF TITLES

TRANSFER A 262366
Registered 16th February 1970 at 9.110c
Lot 10 on plan 8420
To Vol. 327 Fol. 49A

ASSISTANT REGISTRAR OF TITLES

Withdrawal A 352013 of Caveat 3718/1967
Lodged 4.12.1970 at 2.460c.

OFFICE OF TITLES
Western Australia

TRANSFER A 352015
Registered 14th December 1970 at 2.460c.
Lot 21 on Plan 8420
To Vol. 447 Fol. 311A

OFFICE OF TITLES
Western Australia

As to four undivided fifth shares of Lot 19 on
Plan 8420 only
Caveat A 416894 Lodged 8-7-1971 at 10.350c

OFFICE OF TITLES
Western Australia

As to one undivided fifth share of Lot 19 on
Plan 8420 only
Caveat A 416895 Lodged 8-7-1971 at 10.350c

OFFICE OF TITLES
Western Australia

Withdrawal A 494392 of Caveat A 416895
Lodged 27.2.1972 at 10.080c

OFFICE OF TITLES
Western Australia

Withdrawal A 494393 of Caveat A 416894
Lodged 29.2.1972 at 10.080c

OFFICE OF TITLES
Western Australia

TRANSFER A 494394
Registered 27th February 1972 at 10.080c
Lot 19 on Plan 8420
To Vol. 613 Fol. 69A

OFFICE OF TITLES
Western Australia

Withdrawal A 735505 of Caveat 3714/1967
Lodged 4.12.1973 at 10.240c

OFFICE OF TITLES
Western Australia

TRANSFER A 735507
Registered 4th December 1973 at 10.240c
Lot 20 on Plan 8420
To Vol. 1366 Fol. 284

OFFICE OF TITLES
Western Australia

Withdrawal B 96823 of Caveat 3719/67.
Lodged 10.2.1976 at 10.290c.

OFFICE OF TITLES
Western Australia

TRANSFER B 96824
Registered 10th February 1976 at 10.290c.
Lot 13 on Plan 8420
To Vol. 1426 Fol. 92A

OFFICE OF TITLES
Western Australia

Withdrawal B 266318 of Caveat 3717/1967
Lodged 22.12.76 at 9.050c

OFFICE OF TITLES
Western Australia

TRANSFER B 266319
Registered 22nd December 1976 at 9.050c
Undedicated Balance (Lot 3)
To Vol. 1454 Fol. 598 on Plan 8420

OFFICE OF TITLES
Western Australia

CANCELLED

EASEMENTS AND ENCUMBRANCES REFERRED TO

Cancelled

CT 0016 0233A B



CANCELLED
CERTIFICATE OF TITLE

VOL 16 FOL 233 A

INDEXED

JT

Transfer A494394
Volume 16 Folio 233A

WESTERN



ORIGINAL
AUSTRALIA

REGISTER BOOK

VOL. 613 FOL. 69A

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT, 1893" AS AMENDED

CT 0613 0069A F



Thomas Victor Tomich of 8 Edeline Road, Spearwood, Minister of Religion, is now the proprietor of an estate in fee simple subject to the easements and encumbrances notified hereunder in the natural surface and therefrom to a depth of two hundred feet in all that piece of land delineated and coloured green on the map hereon containing twenty-two acres two roods and seventeen perches or thereabouts, being portion of Peel Estate Lot 570 and being Lot 19 on Plan 8420.

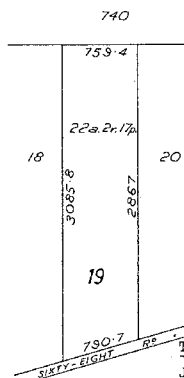
Dated the 29th day of February, 1972

REGISTRAR OF TITLES.



Transfer B13968 to Ilija Ilica Petrusich of 366 Canning Highway, Bicton, Taxi Driver. Registered 28th August 1975 at 9.00 o'clock.

Scale: 10 chains to an inch
S.



Transfer B977869 to Petar Jaksic, Granolithic Contractor and Mladenka Jaksic, his wife both of 34 Tanson Road, Parmelia, as joint tenants. Registered 9th September 1980 at 9.01 o'clock.



9722/12/68-12H-Q/FAL

For encumbrances and other matters affecting the land see back

EASEMENTS AND ENCUMBRANCES REFERRED TO

Mortgage B13969 to Australia and New Zealand Banking Group Limited. Registered 28th August 1975 at 9.00 o'clock.

Discharge B494142 of Mortgage B13969. Registered 20th March, 1978 at 9.00 o'clock.

Mortgage B511855 to Town & Country Permanent Building Society. Registered 24th April 1978 at 2.49 o'clock.

Memorial B864712. Section **WITHDRAWN** Assessment Act 1976. Registered 15th February 1980 at 10.38 o'clock.

Caveat B931103. Lodged 5.6 **WITHDRAWN** o'clock.

Discharge B977866 of Mortgage B511855. Registered 22nd August 1980 at 9.09 o'clock.

Withdrawal B977867 of Memorial B864712. Registered 22nd August 1980 at 9.09 o'clock.

Withdrawal B977868 of Caveat B931103. Lodged 22.8.80 at 9.09 o'clock.

Mortgage B977870 to Australia and New Zealand Banking Group Limited. Registered 9th September 1980 at 9.01 o'clock.



CERTIFICATE OF TITLE

VOL 613 FOL 69A

CT 0613 0069A B



WESTERN



AUSTRALIA

REGISTER NUMBER 19/P8420	
DUPLICATE EDITION 3	DATE DUPLICATE ISSUED 17/8/2015

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

VOLUME
613FOLIO
69A

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 19 ON PLAN 8420

REGISTERED PROPRIETOR: (FIRST SCHEDULE)

THE GLOW DEVELOPMENT (WA) PTY LTD OF 6 ARROWGRASS ROAD, CANNING VALE
(T N059299) REGISTERED 10 JULY 2015

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

1. *N059300 CAVEAT BY MINISTER FOR EDUCATION AS TO PORTION ONLY LODGED 10.7.2015.

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: 613-69A (19/P8420).
PREVIOUS TITLE: 16-233A.
PROPERTY STREET ADDRESS: 356 SIXTY EIGHT RD, BALDIVIS.
LOCAL GOVERNMENT AREA: CITY OF ROCKINGHAM.

APPENDIX 5

Asset Searches

OVERVIEW ONLY



UNDERGROUND LEGEND

Structures

- | | |
|------------------|-----------------------|
| Pillar | UG Crossing * |
| Metal Pole | Ring Main Unit |
| Transformer Site | LV Distribution Frame |

Distribution Cables

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

Cable Pole Terminations

- HV Termination LV Termination

Proposed Construction Assets

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

State Underground Power Project

- CURRENT Work Area *
- COMPLETED Area *

Feature

- Area of Interest

* Please refer to coversheet

Privately owned cables NOT SHOWN
(including house services)

This map is **INDICATIVE ONLY**.
Hand exposure via pothole
method is **MANDATORY**.

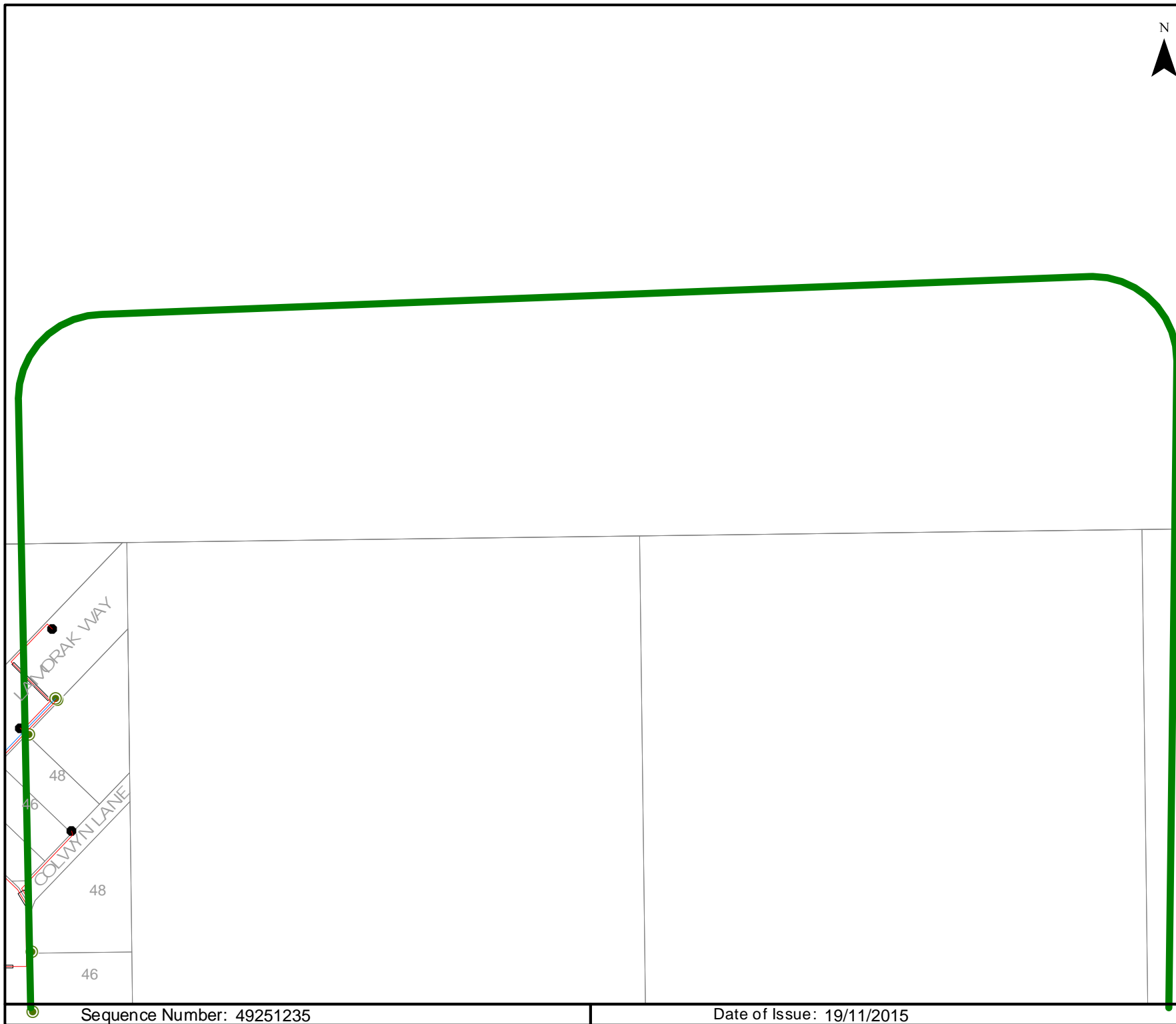
Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

Information valid for 30 days
from date of issue

A4

Scale : 1:4612

**WARNING! Look out for
overhead power lines**



UNDERGROUND LEGEND

- Structures**
- Pillar
 - Metal Pole
 - △ Transformer Site
 - UG Crossing *
 - Ring Main Unit
 - LV Distribution Frame

- Distribution Cables**
- High Voltage Cable (1kV - 33kV)
 - Low Voltage Cable (< 1kV)
 - Street Light Circuit (< 1kV)
 - Street Light Pilot (< 1kV)
 - Earth Wire

- Cable Pole Terminations**
- ▲ HV Termination
 - ▼ LV Termination

- Proposed Construction Assets**
- Design Area *
 - High Voltage Underground Cable
 - Low Voltage Underground Cable
 - Metal Pole
 - Pillar
 - △ Transformer site
 - ▲ HV Termination
 - ▼ LV Termination

- State Underground Power Project**
- CURRENT Work Area *
 - COMPLETED Area *

- Feature**
- Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

**This map is INDICATIVE ONLY.
Hand exposure via pothole method is MANDATORY.**

**Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30**

**Information valid for 30 days
from date of issue**

A4 Scale : 1:1500

WARNING! Look out for overhead power lines



UNDERGROUND LEGEND

Structures

Pillar

Metal Pole

Transformer Site

UG Crossing *

Ring Main Unit

LV Distribution Frame

Distribution Cables

High Voltage Cable (1kV - 33kV)

Low Voltage Cable (< 1kV)

Street Light Circuit (< 1kV)

Street Light Pilot (< 1kV)

Earth Wire

Cable Pole Terminations

HV Termination

LV Termination

Proposed Construction Assets

Design Area *

High Voltage Underground Cable

Low Voltage Underground Cable

Metal Pole

Pillar

Transformer site

HV Termination

LV Termination

State Underground Power Project

CURRENT Work Area *

COMPLETED Area *

Feature

Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

This map is INDICATIVE ONLY.
Hand exposure via pothole method is MANDATORY.

Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

Information valid for 30 days from date of issue

A4

Scale : 1:1500

WARNING! Look out for overhead power lines

Sequence Number: 49251235






Date of Issue: 19/11/2015

UNDERGROUND LEGEND



Structures

- | | |
|--|---|
|  Pillar |  UG Crossing * |
|  Metal Pole |  Ring Main Unit |
|  Transformer Site |  LV Distribution Frame |









Distribution Cables

-  High Voltage Cable (1kV - 33kV)
-  Low Voltage Cable (< 1kV)
-  Street Light Circuit (< 1kV)
-  Street Light Pilot (< 1kV)
-  Earth Wire

Cable Pole Terminations

-  HV Termination
-  LV Termination


Proposed Construction Assets

-  Design Area *
-  High Voltage Underground Cable
-  Low Voltage Underground Cable
-  Metal Pole
-  Pillar
-  Transformer site
-  HV Termination
-  LV Termination

State Underground Power Project

-  CURRENT Work Area *
-  COMPLETED Area *

Feature

-  Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN
(including house services)**

**This map is INDICATIVE ONLY.
Hand exposure via pothole
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**Telephone Support: 1300 769 345
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**Information valid for 30 days
from date of issue**

A4

Scale : 1:1500

**WARNING! Look out for
overhead power lines**



OVERVIEW ONLY



OVERHEAD LEGEND

Structures

- Power Pole
- Transmission Poles

Transmission Overhead Powerline

- Transmission (33kV - 330kV)

Distribution Overhead Powerline

- High Voltage (1kV - 33kV)
- Low Voltage (< 1kV)

Proposed Construction Assets

- Design Area *
- High Voltage Overhead Powerline
- Low Voltage Overhead Powerline
- Power Pole

Communications Assets

- Overhead Pilot Cable

Feature

- Area of Interest

* Please refer to coversheet

**Privately owned cables NOT SHOWN
(including house services)**

This map is **INDICATIVE ONLY**.
Check that you have enough
clearance from the **DANGER ZONES**
near overhead powerlines.

Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

Information valid for 30 days
from date of issue

A4

Scale : 1:4612

**WARNING! Look out for
overhead power lines**

Sequence Number: 49251235

Date of Issue: 19/11/2015



OVERHEAD LEGEND

Structures

- Power Pole ■ Transmission Poles

Transmission Overhead Powerline

- Transmission (33kV - 330kV)

Distribution Overhead Powerline

- High Voltage (1kV - 33kV)
— Low Voltage (< 1kV)

Proposed Construction Assets

- Design Area *
— High Voltage Overhead Powerline
— Low Voltage Overhead Powerline
● Power Pole

Communications Assets

- Overhead Pilot Cable

Feature

- ▭ Area of Interest

*** Please refer to coversheet**

**Privately owned cables NOT SHOWN
(including house services)**

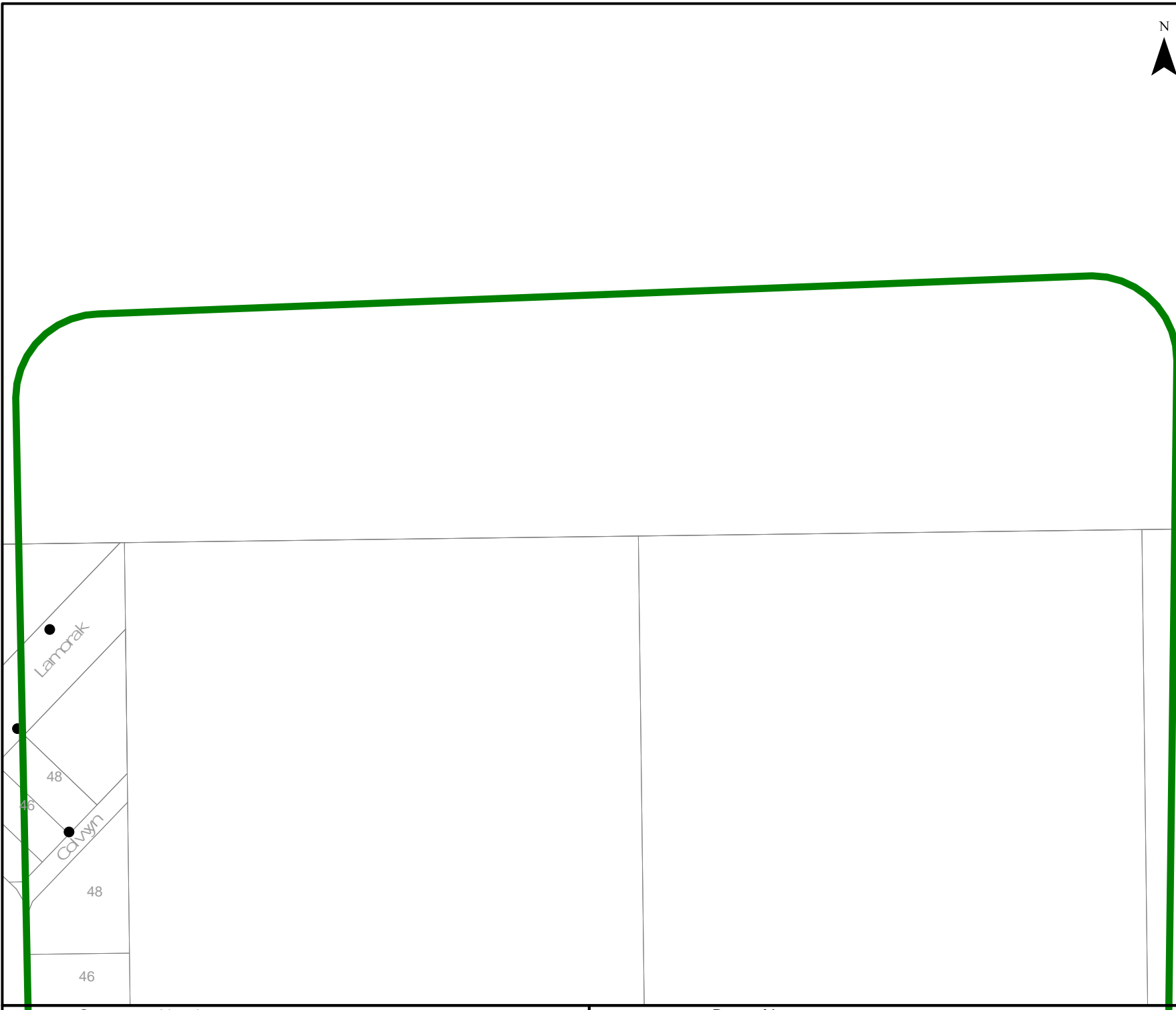
This map is **INDICATIVE ONLY**.
Check that you have enough
clearance from the **DANGER ZONES**
near overhead powerlines.

Telephone Support: 1 300 769 345
Mon to Fri - 08:00 to 16:30

Information valid for 30 days
from date of issue

A4 Scale : 1:1500

**WARNING! Look out for
overhead power lines**





OVERHEAD LEGEND

Structures

- Power Pole
- Transmission Poles

Transmission Overhead Powerline

- Transmission (33kV - 330kV)

Distribution Overhead Powerline

- High Voltage (1kV - 33kV)
- Low Voltage (< 1kV)

Proposed Construction Assets

- Design Area *
- High Voltage Overhead Powerline
- Low Voltage Overhead Powerline
- Power Pole

Communications Assets

- Overhead Pilot Cable

Feature

- Area of Interest

* Please refer to coversheet

**Privately owned cables NOT SHOWN
(including house services)**

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Information valid for 30 days
from date of issue

A4 Scale : 1:1500

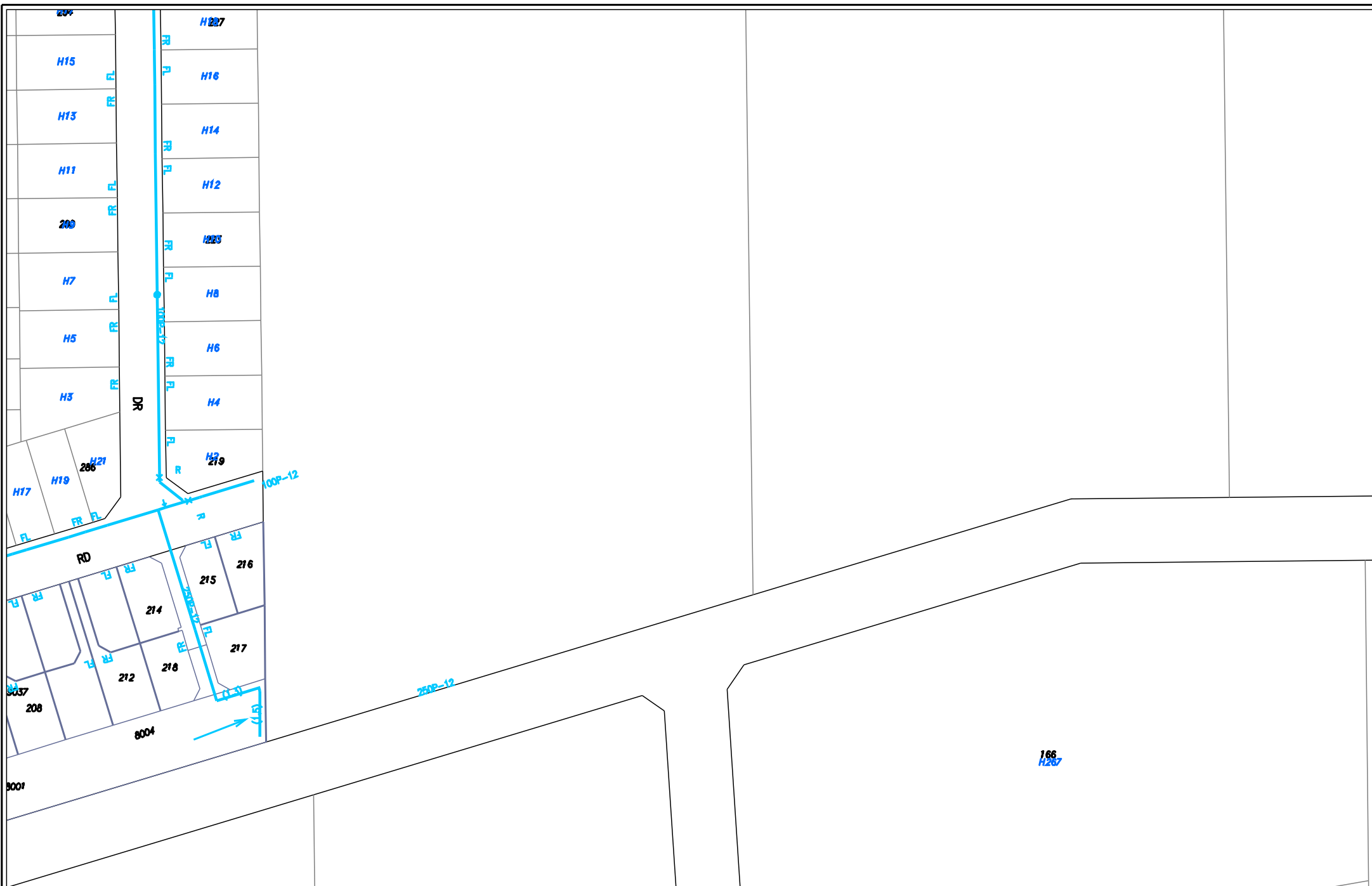
**WARNING! Look out for
overhead power lines**



Print Date: 19/11/2015 Page: 1 of 4



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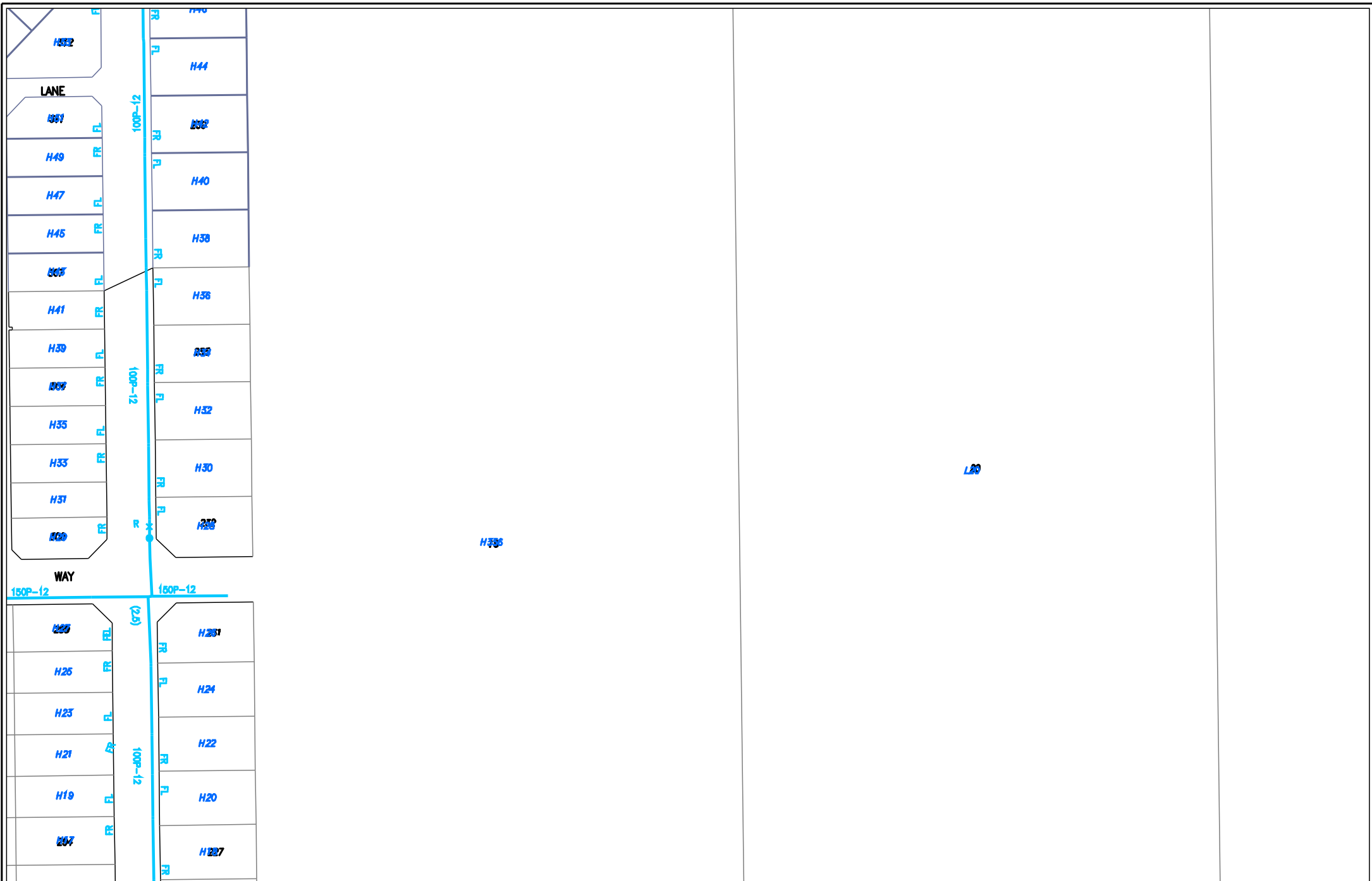
Scale: 1:1500 Centre Point: 115.819°, -32.361°

Sequence No: 49251238

Print Date: 19/11/2015 Page: 2 of 4



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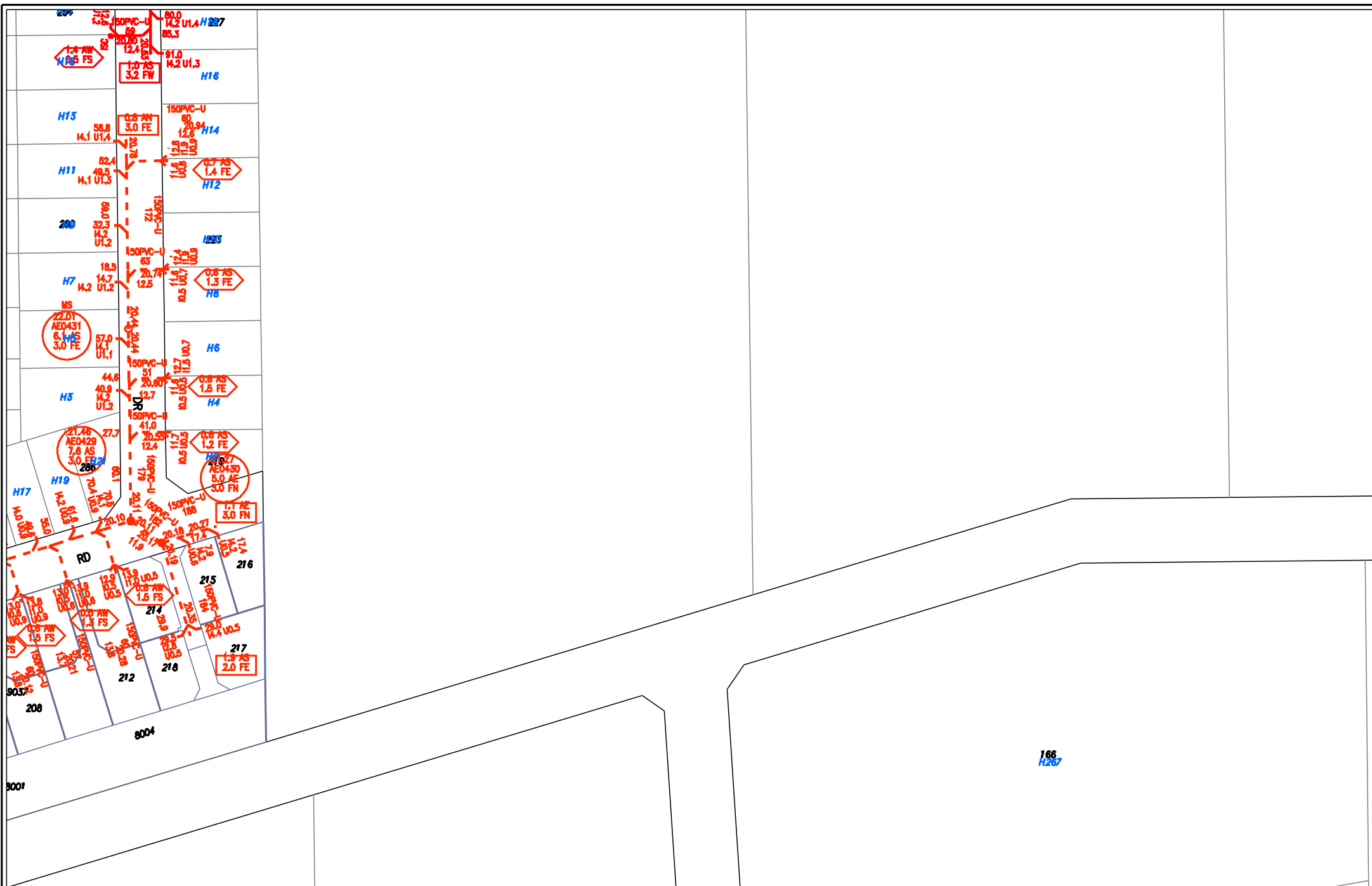
Scale: 1:1500 Centre Point: 115.819°, -32.359°

Sequence No: 49251238

Print Date: 19/11/2015 Page: 3 of 4



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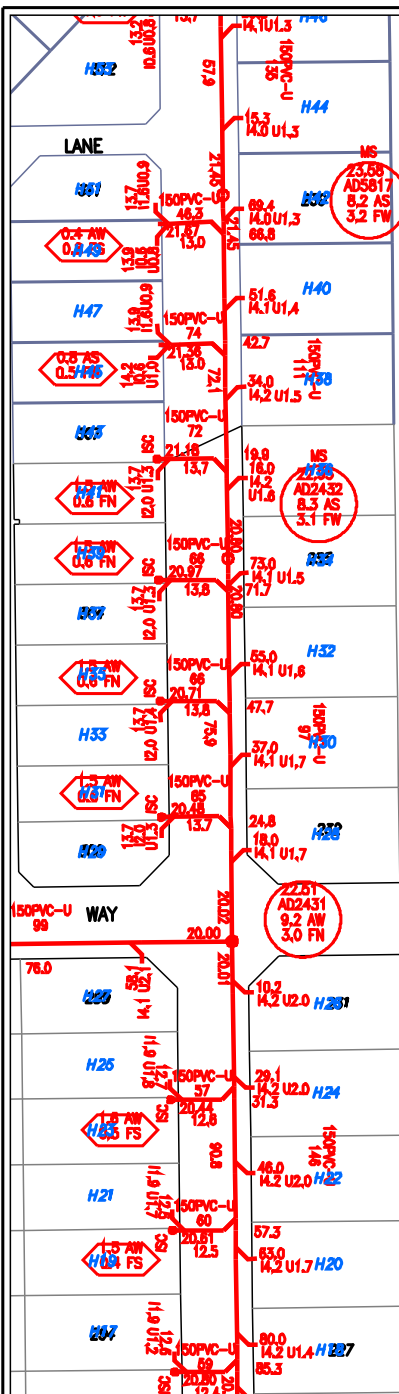
Scale: 1:1500 Centre Point: 115.819°, -32.361°

Sequence No: 49251238

Print Date: 19/11/2015 Page: 2 of 4



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H336

L20

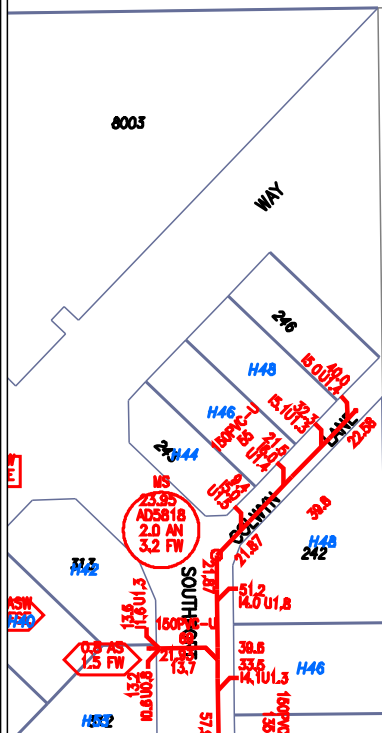
Scale: 1:1500 Centre Point: 115.819°, -32.359°

Sequence No: 49251238

Print Date: 19/11/2015 Page: 3 of 4



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Scale: 1:1500 Centre Point: 115.819°, -32.357°

Sequence No: 49251238

Print Date: 19/11/2015 Page: 4 of 4



Sewer

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Broadbanding Australia



To: Mrs Jackalyn Cabot
Phone: 08 6500 8805
Fax: 08 6500 8899
Email: jackie@pgv.net.au

Location of Underground Fibre Optic Cable Information Sheet

IMPORTANT: Please read all information and conditions below:

Dial before you dig Job #:	9954027	 DIAL BEFORE YOU DIG www.1100.com.au Some impact. No onsite action required.
Sequence #	49251239	
Issue Date:	11/19/2015	
Location:	356 Sixty Eight Road, Baldivis, WA-6171	

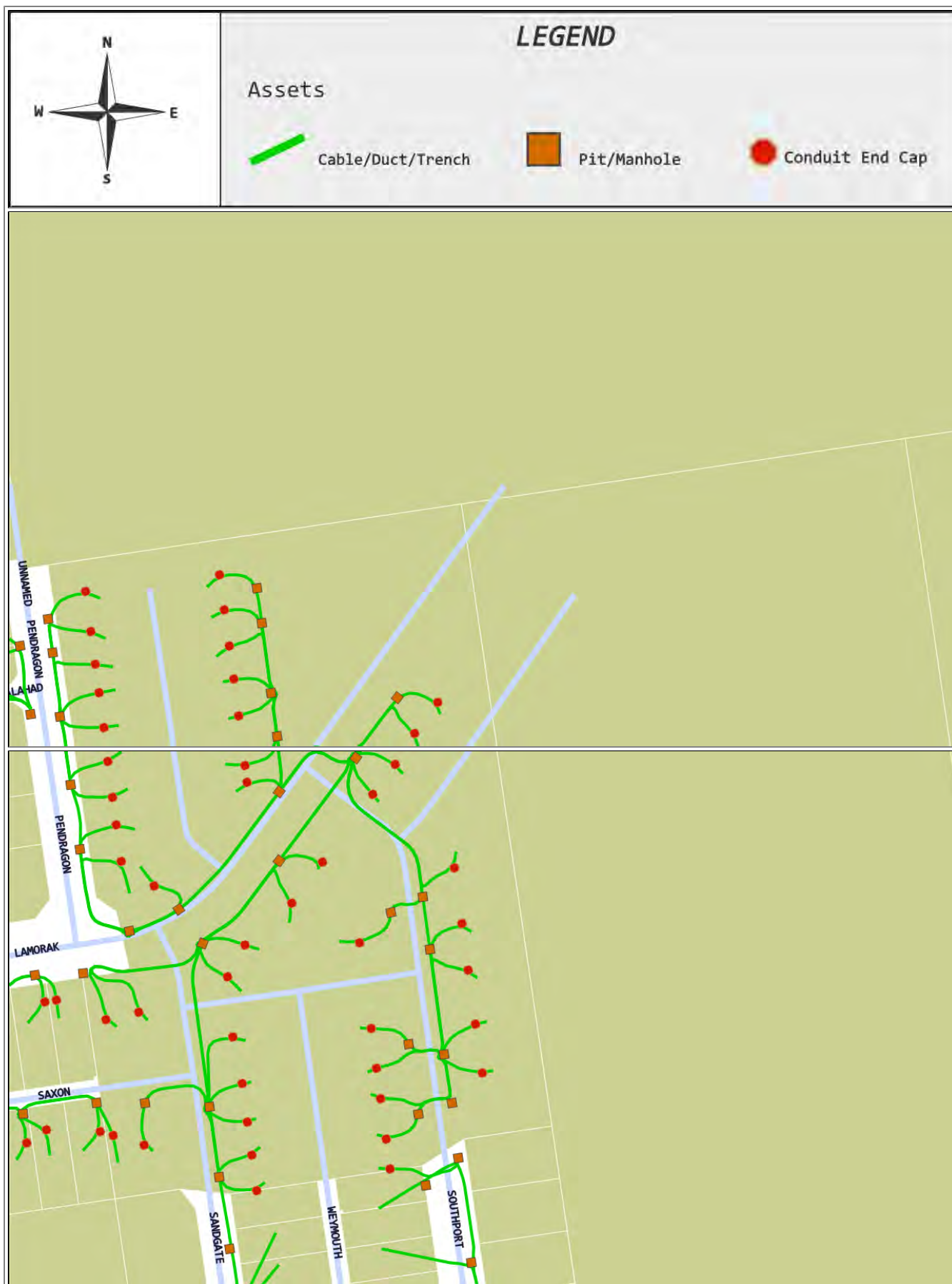
In relation to your enquiry at the above address:

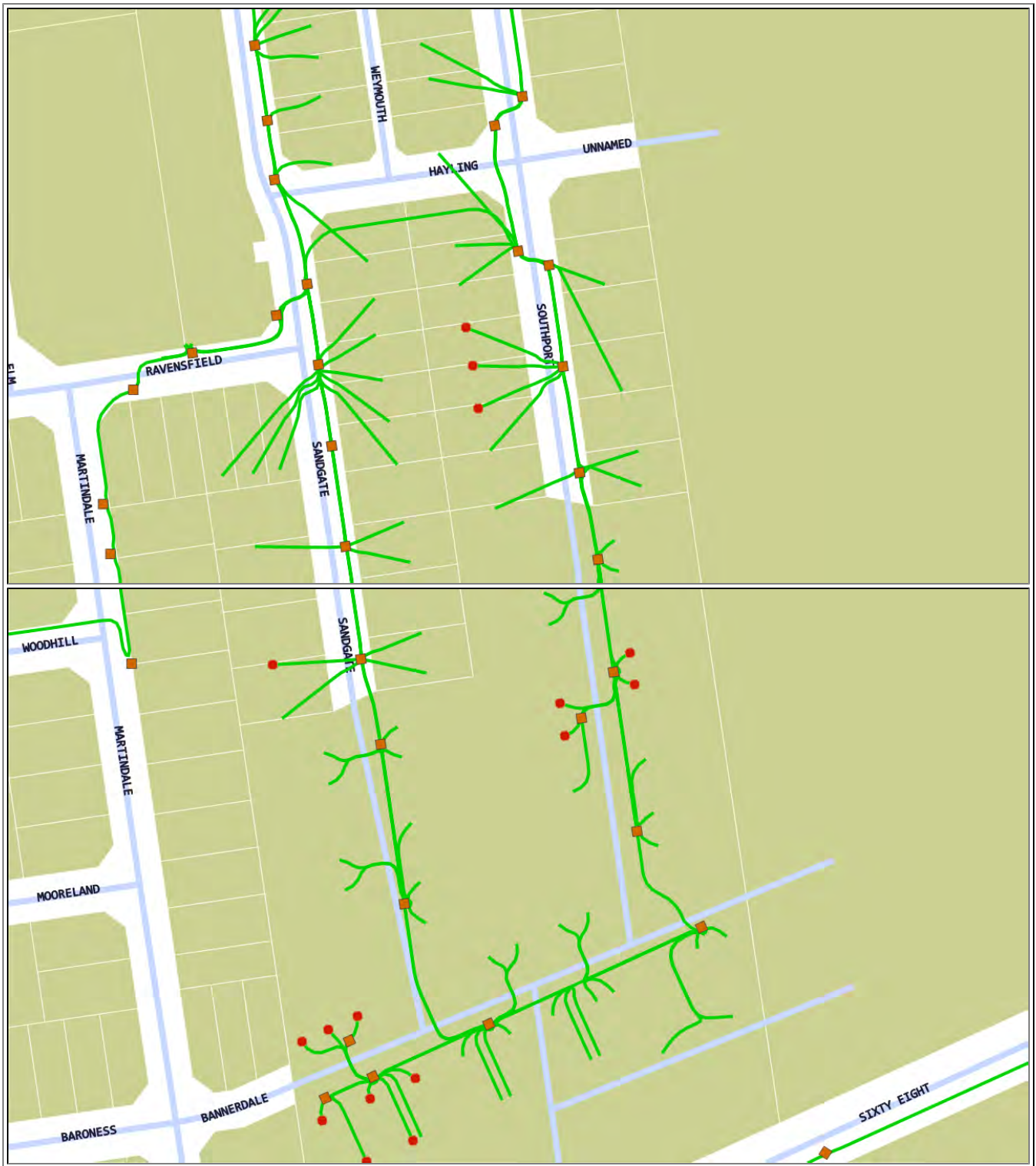
- NBN Co's records indicate that there ARE underground fibre optic/telecommunications facility/facilities (owned or controlled by NBN Co) in the vicinity of the location identified above ("Location").
- NBN Co indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of the fibre optic/telecommunications facilities shown on the plan/s.
- In particular, the fact that the Indicative Plan/s show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your cost to locate NBN Co telecommunications facilities during any activities you carry out on site.)

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. If you require further information please contact NBN Co on **1800 626 762**.

Notes:

1. You are now aware that there are items of telecommunications facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
 2. You should have regard to section 474.6 and 474.7 of the Criminal Code Act 1995 (Cth) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by NBN Co Limited can interact with NBN Co's network facilities.
 3. Any information provided is valid only for **28 days** from the date of issue set out above.
-









Conditions

The following are conditions on which NBN Co provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in

NBNCo Limited, ABN: 86 136 533 741, P: +61 2 9926 1900, F: +61 2 9926 1901, E: info@nbnco.com.au

addition (and not in replacement of) any duties and obligations you have under applicable law.

1. NBN Co does not accept any responsibility for any inaccuracies of its plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your cost to locate NBN Co telecommunications facilities during any activities you carry out on site).
2. You should not assume that fibre optic cables follow straight lines or are installed at uniformed depths along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.
3. In carrying out any works in the vicinity of NBN Co facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates
 - 1000mm when operating mechanical excavators.
4. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as NBN Co's optic fibre cables). You must take all reasonable precautions should to avoid damaging NBN Co's facilities. These precautions may include (but not limited to) the following:
 - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
 - If any undisclosed underground cables are located, notify NBN Co immediately.
 - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
 - All excavations must be undertaken in accordance with all relevant legislation and regulations.
5. You will be responsible for all damage to NBN Co facilities that are connected (whether directly, or indirectly) with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include (without limitation) all losses expenses incurred by NBN Co as a result of any such damage.
6. You immediately must report any damage to NBN Co's network that you are/become aware of. Notification may be by telephone to the inquiries number listed above.
7. Except to the extent that liability may not be capable of lawful exclusion, NBN Co and its servants and agents and the related bodies corporate of NBN Co Limited and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any Plans attached hereto. Except as expressly provided to the contrary in this information sheet or the attached Indicative Plans, all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

IMPORTANT

This document is intended for the use of the named recipient only. Unauthorised use is prohibited. If you have it in error, please notify us and destroy this document.

Thank You,

Network Operations Centre - Assurance

Date: 11/19/2015

Please consider our environment before printing

Notice to recipient:

This document is intended only to be read or used by the addressee in connection with their Dial Before Your Dig query. It is confidential and may contain information that is subject to legal professional privilege or protected by copyright. You must not sell or sublicense the information contained in this document. If you are not the addressee indicated in this message (or responsible for delivery of the message to that person), you may not copy or deliver this message to anyone, and you should destroy this message and kindly notify the sender by reply e-mail. Copyright, confidentiality and legal professional privilege are not waived or lost by reason of mistaken delivery to you. Emails to/from NBN Co Limited may undergo email filtering and virus scanning, including by third party contractors, however, NBN Co Limited does not guarantee that any email or any attachment is secure, error-free or free of viruses or other unwanted or unexpected inclusions. Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of NBN Co Limited.

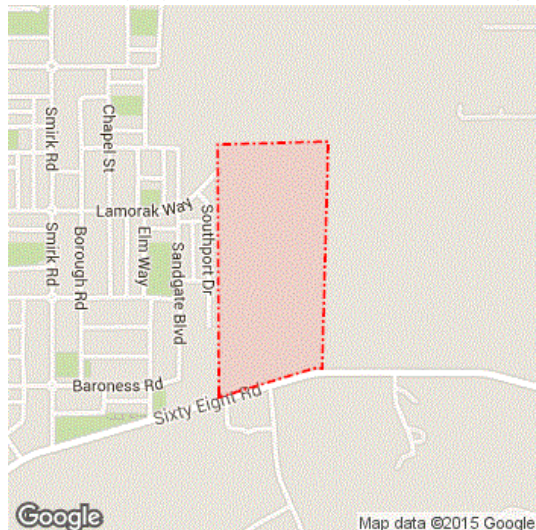
Caller Details

Contact: Mrs Jackalyn Cabot
Company: PGV Environmental
Address: Unit 1, 61 Guthrie Street
Osborne Park WA 6017

Caller Id: 1552281
Mobile: 0409179079
Email: jackie@pgv.net.au
Phone: 08 6500 8805
Fax: 08 6500 8899

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



User Reference: 10241
Working on Behalf of: Private
Enquiry Date: 19/11/2015
Start Date: 24/11/2015
End Date: 18/02/2016
Address: 356 Sixty Eight Road
Baldvis WA 6171
Job Purpose: Design
Onsite Activity: Subdivision
Location of Workplace: Private Property
Location in Road: Not Supplied

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:

Not Supplied

Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.1100.com.au
- For more information on safe excavation practices, visit www.1100.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
49251237	ATCO Gas Australia	131352	NOTIFIED
49251239	NBN Co, Wa	1800626762	NOTIFIED
49251236	Telstra, WA	1800653935	NOTIFIED
49251238	Water Corporation WA	0894248115	NOTIFIED
49251235	Western Power	1300769345	NOTIFIED

END OF UTILITIES LIST

EXISTING GAS NETWORK

	High Pressure
	Fremantle High Pressure
	Polyethylene High Pressure
	City High Pressure
	Medium Pressure
	Albany Medium Pressure
	Medium Low Pressure
	Low Pressure
	Not Gassed
	Service Line
	High Pressure Service

PROPOSED GAS NETWORK

	Proposed Main
--	---------------

ABANDONED GAS NETWORK

	Abandoned Gas Main
	Abandoned Gas Main Sold
	Abandoned Valve
	Abandoned Fitting

DUCTS AND SLEEVES

	Duct
	Horizontal Boring
	Sleeve
	Road Crossing
	Concrete Slab

TOPOGRAPHY

	ATCO Easement
	Fence
	Building
	Kerb
	Water Boundary
	Contour Line
	Elevation Point

VALVES

	High Pressure
	High Pressure Service
	Main
	Service
	Isolation

GATE STATIONS AND REGULATOR SETS

	High Pressure
	Fremantle High Pressure
	Polyethylene High Pressure
	City High Pressure
	Medium Pressure
	Medium Low Pressure
	Gate Station
	L.P.G. Tank

FITTINGS

	Syphon
	Coupling
	Expansion Joint
	Main Cross
	Reducer
	Stopple
	Flange
	Change Node
	Thredolet
	Tapping Band
	Bend
	Elbow
	Monolithic Joint
	End Cap
	Tee
	Transition
	Three-Way Tee
	Short Stop
	Barrier
	Squeeze Off

PROTECTION DEVICES

	Test Point
	Potential Monitoring
	Odorant Test Point
	Earthing
	Pressure Monitoring Device
	Bond Wire
	Bond Junction
	Rectifier
	Insulation Joint
	Anode

DELIVERY POINTS

	Service Point
	Meter
	Interval Meter
	Meter Set

FEATURE POINTS

SC	Side Elevation
	Obstacle
	See Details
NC	Not Connected
SV	Gas Service
	Sign
OLS	Offline Service
	Linked Reference Document
PLS	Pre-Laid Service
PLSS	Pre-Laid Service Stairs
EoM B/L	End of Main Building Line
EoM CoD	End of Main on Direction Peg

FEATURE LINES

	Miscellaneous Line
	Reference Line
	Gas Indicator Line
	Gas Pit

FEATURE POLYGONS

	Hard Digging		Proving Gas Location		Pressure Upgrade
	Licence Area		Not Gassed		
	Suburb		Local Government Authority		

ASSETS AFFECTED - see accompanying plan

WARNING – HIGH PRESSURE GAS PIPELINE IN THE VICINITY

Mrs Jackalyn Cabot
 PGV Environmental
 Unit 1, 61 Guthrie Street
 Osborne Park
 WA, 6017

Job No: 9954027
Sequence No: 49251237
Date of Issue: 19/11/2015
Phone: 08 6500 8805
Mobile: 0409179079
Fax: 08 6500 8899

DBYD Utility Registration Name: 70852 - ATCO Gas Australia

DBYD Location: 356 Sixty Eight Road, Baldivis, WA, 6171

ATTENTION: This response to your inquiry has been interpreted from details in your requested DBYD picture location request only (not any street address you gave). It is your duty to ensure the accompanying plan/s match your geographical area of works.

IF YOU SEE, HEAR, SMELL OR OTHERWISE DETECT GAS, LEAVE THE IMMEDIATE AREA AND THEN CALL 13 13 52

Our records indicate that ATCO Gas Australia Pty Ltd gas infrastructure IS PRESENT in the vicinity of and/or surrounding area of the above enquiry. This response relates only to ATCO Gas Australia assets. Your Duty of Care requires that personnel must at all times comply with, and have on site, this information sheet and the accompanying plan(s). All plans are subject to this information sheet. You should also refer to the "Questionnaire for works near ATCO Gas infrastructure" on page [5] of this document, which must be read and all questions answered. If you answer "yes" to any of the questions you must contact ATCO Gas Australia during business hours on 1300 926 755.

All information provided is to be used as a guide only (see Disclaimer item 5). It does not absolve you or third parties from your Duty of Care obligations, including to take additional precautions where work has the potential to impact on gas assets, public safety or the environment, or from your duties at law (including Reg 3.21 of the Occupational Safety and Health Regulations 1996).


WARNINGS

- No works of any type within 15 metres of any **HIGH PRESSURE** gas infrastructure without prior approval from ATCO Gas Australia.
- **NO HOT WORK** within 15 metres of any gas infrastructure except in compliance with applicable laws & Australian Standard 1674. DO NOT let heat sources or hot works impact on gas infrastructure and take into consideration that the ground or adjacent structures may also be capable of transmitting heat so as to circumvent protection afforded by a heat shield or barrier.
- **DANGER** Gas can cause asphyxiation and is flammable. Keep all ignition sources well away (eg flames, matches/lighters, sparks, electrical devices, vehicles or engines, mobile phones, cameras)
- Gas pipes must not be unsupported or left without adequate cover or protection without prior approval from ATCO Gas Australia.
- Damage to the pipe coating or pipe itself can be very dangerous if not given immediate attention. Report any damage to ATCO Gas Australia immediately on 13 13 52. Do not attempt to repair any damaged gas infrastructure.
- No alteration or removal of live or abandoned gas infrastructure without prior written approval from ATCO Gas Australia.
- Any abandoned or proposed gas infrastructure indicated on the gas plans must be treated as live.
- Never assume the location or depth of any gas infrastructure. Pipes may not follow straight lines or maintain a constant depth. Always check carefully (eg careful hand digging of potholes).
- Unauthorised repairs or tampering with gas infrastructure may result in prosecution under the *Energy Operators (Powers) Act 1979*. ATCO Gas Australia reserves all rights to recover compensation for loss or damage to its gas infrastructure or other property including for indirect or consequential losses.

PLANS:

Plans provided are current for **30 days only** from date of request. You must use current plans at all times.

Plans do not show all gas service lines (which connect gas mains to individual meter positions). See condition 3(c) below.

If plan shows **additional detail** symbols (*) or () in the area of proposed works it is **your duty** to obtain that further detail from the number below.

Plans (including the location of pipes, services, infrastructure and boundaries) are **approximate only**. You must safe and proper procedures - including **potholing** (see condition 4 below)

Plans are not a guide as to gas availability for connection purposes.

To call ATCO Gas Australia: weekdays from 8am to 4pm, call – 1300 926 755

after hours, weekends and emergencies, call – 13 13 52

CONDITIONS FOR WORKS IN THE VICINITY OF ATCO GAS AUSTRALIA ASSETS

1. Compliance with Warnings

You must comply with the Warnings contained in this information sheet and the accompanying plan(s).

2. Compliance with 'Additional Information for the Notification of Works within 15 metres of High Pressure Gas Pipelines' (NCN WI008 RF01), applicable laws and duty of care

All work (including but not limited to using Excavator's Augers, Directional, drilling machines, 'Ditch Witch' type trenching machine, Loader, Dozer, Skid Steer (Bob Cat)) must comply with all applicable requirements in the 'Additional Information for the Notification of Works within 15 metres of High Pressure Gas Pipelines' (NCN WI008 RF01) and with all applicable laws and Australian Standards. All due care must be exercised to locate any gas infrastructure in the vicinity and when conducting any works near them.

3. All Gas Infrastructure

All work that may have any impact upon any gas infrastructure (see 3(a), (b) and (c) below for examples) should be carefully planned with notification to ATCO Gas Australia well in advance of commencement. Contact ATCO Gas Australia Engineering Services on (08) 9499 5200 or email engineering.services@atcogas.com.au. Amongst other things, this includes excavation of or near gas pipelines, boring/drilling, crossings of pipelines (including by other underground infrastructure e.g. drains, power cables, etc), road works and structural installations. In addition:

a. High Pressure Pipelines (HP, PEHP > 110, CHP, FHP)

No works of any type are permitted within 15 metres of these pipelines without prior approval from ATCO Gas Australia. For approvals contact ATCO Gas Australia on 1300 926 755.

You must ascertain the location of any high pressure pipeline, in relation to your proposed work by:

- locating a straight line between two high pressure warning signs and
- assessing the distance from this line to your proposed work area.

ATCO Gas Australia may require stand-by supervision during your works and will advise of attendance requirements.

b. Medium (MP), Medium-Low (MLP), Low (LP) and other Pipeline Pressures

These pipelines are installed in most streets throughout the Perth metro area and several country centres. Main valves, regulator sets and test points also exist at intervals along these pipelines. Where work may impact upon these pipelines or assets then ATCO Gas Australia must be contacted as per item 3 above.

c. Gas Services and Meters

If a gas meter is installed on a property, an underground gas service pipe will run from the meter position to the gas main in the street. Plans do not show all gas service lines, but their presence must be anticipated. Most gas meter boxes installed since 1996 will include a sticker giving approximate guidelines for the gas service line location. All due care must be exercised to locate any gas services in the vicinity and when conducting any works near them.

4. Compliance with Safe Work Practices

It is your responsibility to have and comply with adequate safe work practices and procedures.

Without limiting your obligations:

PLAN - The complete Dial Before You Dig documentation and plans must always be on site and referred to for the duration of work. Refer to regulation 3.21 of the *Occupational Safety and Health Regulations 1996* and the Utility Providers "Code of Practice" for further useful information.

POTHOLE - Using current Dial Before You Dig plans, all gas pipes should be located (including any deviation in the direction of a gas pipe) by exposing them by careful digging using a HAND SHOVEL. Where the proposed work is parallel to a gas pipeline, pothole every 5 metres along the entire route. Damage to the pipe coating or to the pipe itself can create a very dangerous situation if not given immediate attention. If damage does occur, it must be reported to ATCO Gas Australia immediately on Ph. 13 13 52.

PROTECT - Supervise and monitor all excavations near gas infrastructure using a dedicated spotter. Where any gas infrastructure is required to be exposed, adequate protection of the gas infrastructure is required to prevent potential damage. Also implement appropriate controls when conducting 'hot work' (in accordance with AS 1674) in the vicinity of the ATCO Gas Australia GDS such as; isolation; separation distance; the placement of an effective non-combustible barrier of sufficient size and thermal resistance for the intensity, type and duration of heat exposure; gas monitoring; monitoring the environment surrounding the ATCO Gas Australia GDS to ensure it is not being impacted by the work, and other controls as necessary.

5. Disclaimer & further terms

- a. Nothing in this document, any accompanying plan or the 'Additional Information for the Notification of Works within 15 metres of High Pressure Gas Pipelines' (NCN WI008 RF01) (together called "**Documents**") purports to exclude or modify any term, condition or warranty to the extent that by law it cannot lawfully be excluded or modified by agreement or notice, including but not limited to those contained in Schedule 2 of the *Competition and Consumer Act 2010* (Cth) and corresponding provisions of state legislation.
- b. If any of ATCO Gas Australia Pty Ltd or their respective related entities, officers, employees, agents, contractors or advisers (together called "**Associates**") is liable for a breach of a term, condition or warranty described in paragraph 5(a) above, its liability is, to the fullest extent permitted by law, limited to any one or more of the following as it determines in its absolute discretion:
 - i. in relation to goods supplied by them, replacing or repairing the goods, supplying an equivalent item, paying the cost of replacing or repairing the goods or paying the cost of acquiring or hiring an equivalent item; and
 - ii. in relation to services supplied by them, the re-supply of the services or the payment of the cost of having the services re-supplied.
- c. Subject to paragraphs 5(a) and (b), but otherwise despite any other provision in the Documents, no representation or warranty is made or given (whether expressly or by implication) by any of ATCO Australia Gas or their respective Associates in respect of any information contained or referred to in any of the Documents or in any other communication from ATCO Gas Australia concerning any of the Documents or the subject matter of any of the Documents ("**Information**"). In particular, but without limiting the generality of the foregoing limitation, none of ATCO Gas Australia or their respective Associates makes any warranty or representation as to the truth, accuracy, completeness, reliability, currency, timeliness, quality or fitness for any purpose of or the standard of care taken in the preparation of any Document or Information (including, but not limited to, the accuracy of the scale of, or the location of any thing or symbol shown on, any plan or diagram).
- d. Subject to paragraphs 5(a) and (b), to the maximum extent permitted by law, none of ATCO Gas Australia or their respective Associates is liable to any person or other body ("**Recipient**") who receives or otherwise obtains access to all or any part or parts of the Documents or Information, in any way (including, but not limited to, liability for negligence, breach of statutory duty or lack of care) in respect of any cost, expense, damages, loss or liability, including, but not limited to:

ASSETS AFFECTED - High Pressure Pipelines

- e. By using any document or information each Recipient is taken to represent and warrant to ATCO Gas Australia that the Recipient will comply with the conditions and other terms referred to in the Documents or Information, including but not limited to conditions that:
- i. the Recipient must comply with the conditions in numbered paragraphs 1 to 4 above and this paragraph 5;
 - ii. as between ATCO Gas Australia and each Recipient, ATCO Gas Australia owns the Information and all rights and title in and to the Information are to remain vested in ATCO Gas Australia;
 - iii. no Recipient has any right, title or interest in the Information or, except as expressly provided for in the Documents, any licence or right to copy, alter, modify, publish or otherwise use or deal with the Information without prior written approval from ATCO Gas Australia;
 - iv. ATCO Gas Australia makes no representation and gives no warranty as to its right to disclose any Information;
 - v. the Recipient relies on any Information entirely at its own risk and expense;
 - vi. the Recipient must undertake its own independent due diligence and investigations in relation to the Information;
 - vii. none of ATCO Gas Australia or their respective Associates owes the Recipient any duty of care in respect of the Information; and
 - viii. none of ATCO Gas Australia or their respective Associates is under any obligation to correct, update or revise any Documents or Information.

Page 4 of 5

Questionnaire for Works near ATCO Gas Australia Gas Infrastructure

The accompanying documentation must be read and the following questions answered and instructions followed when planning and **before commencing any work**.

	Questions	Yes	No
1	Will any works be within 15 metres of any High Pressure gas infrastructure?		
If answered Yes you must contact the ATCO Gas Australia High Pressure Coordinator to seek prior approval on 1300 926 755 between 08:00 hours – 16:00 hours (Monday – Friday, except public holidays).			

If you answer **Yes** to any of the following questions you must contact ATCO Gas Australia **Engineering Services** to seek prior approval on **(08) 9499 5200** between the above hours. Plan ahead and allow sufficient time for ATCO Gas Australia Engineering Services to consider your request.

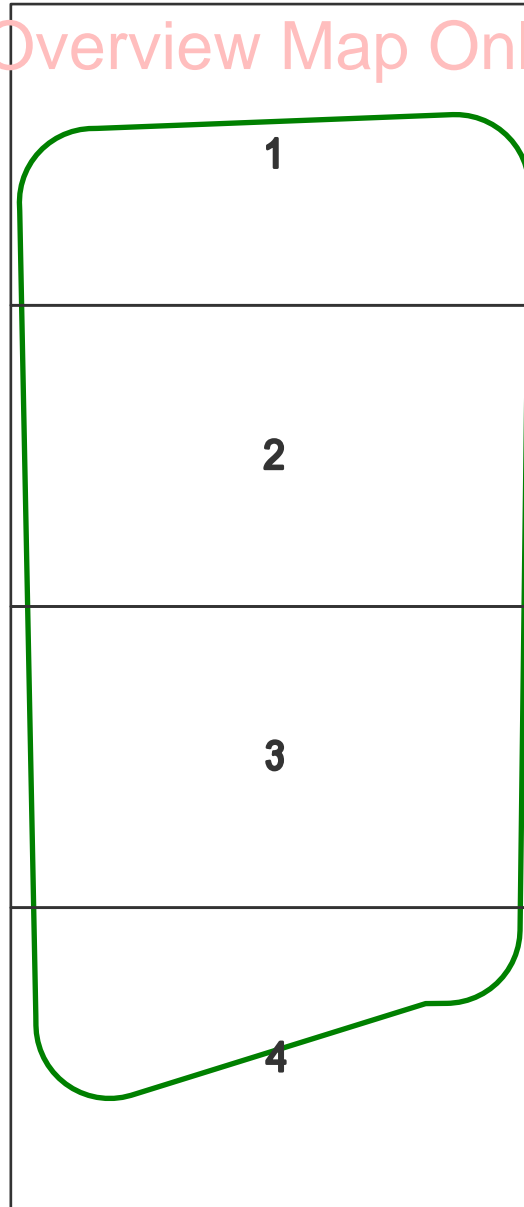
	Question	Yes	No
2	Will any works require the use of a vibrating roller within 15 metres of any gas mains?		
3	Will any works involve boxing the ground out to a depth of 300mm or more for the construction of a road/car park or crossover/driveway over a gas main?		
4	Will any works affect water flows or drainage, eg. surface drainage, within 15 metres of any gas mains?		
5	Will any works involve traversing any gas infrastructure with any heavy vehicle or plant (eg. cranes, agitators or trucks)?		
6	Will any works involve stockpiling of spoil, dangerous goods or any other materials over any gas infrastructure?		
7	Will any works or structure (eg. fencing) obstruct access to gas infrastructure?		
8	Will any works involve placing infrastructure eg. cable, pipes etc. that will not comply with the minimum separation distances to the gas infrastructure: 300mm crossing, 500mm parallel?		
9	Will any works involve blasting that could affect any gas infrastructure?		
10	Will any works involve the installation of electrical infrastructure to operate above 22kV in the vicinity of any steel gas infrastructure?		

If unsure, please contact ATCO Gas Australia Engineering Services on **(08) 9499 5200**.

IMPORTANT: it is your responsibility to **TAKE CARE** to comply with all requirements of ATCO Gas Australia Engineering Services (including their 'Additional Information for the Notification of Works within 15 metres of High Pressure Gas Pipelines' (NCN WI008 RF01)), the ATCO Gas Australia Dial Before You Dig cover sheets and maps and all applicable laws and standards.

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.
No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755

Overview Map Only



Sequence No: 49251237

Map Tile:

Scale: 1:6150

© ATCO Gas Australia Pty Ltd
ABN 90 089 531 975

Job No: 9954027

Date: 19/11/2015

Location: 356 Sixty Eight Road, Baldivis 6171



Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

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WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.
No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755

BALDIVIS

8003

LAMORAK WAY

326

327

328

Sequence No: 49251237 Map Tile: 1 Scale: 1:1500 © ATCO Gas Australia Pty Ltd
Job No: 9954027 Date:19/11/2015 Location: 356 Sixty Eight Road, Baldivis 6171 ABN 90 089 531 975

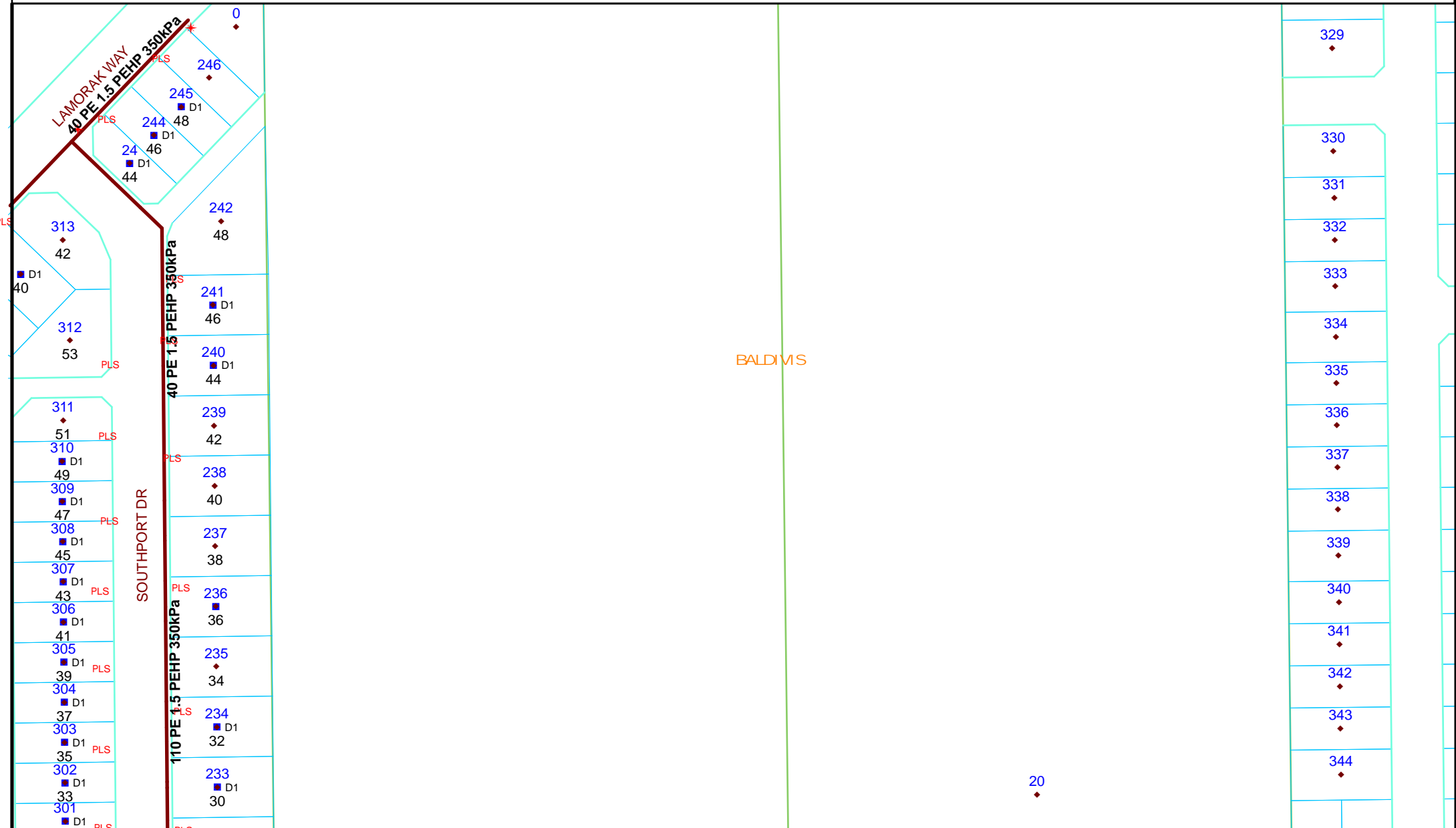
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.



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Sequence No: 49251237

Map Tile: 2

Scale: 1:1500

© ATCO Gas Australia Pty Ltd
ABN 90 089 531 975

Job No: 9954027

Date: 19/11/2015

Location: 356 Sixty Eight Road, Baldivis 6171



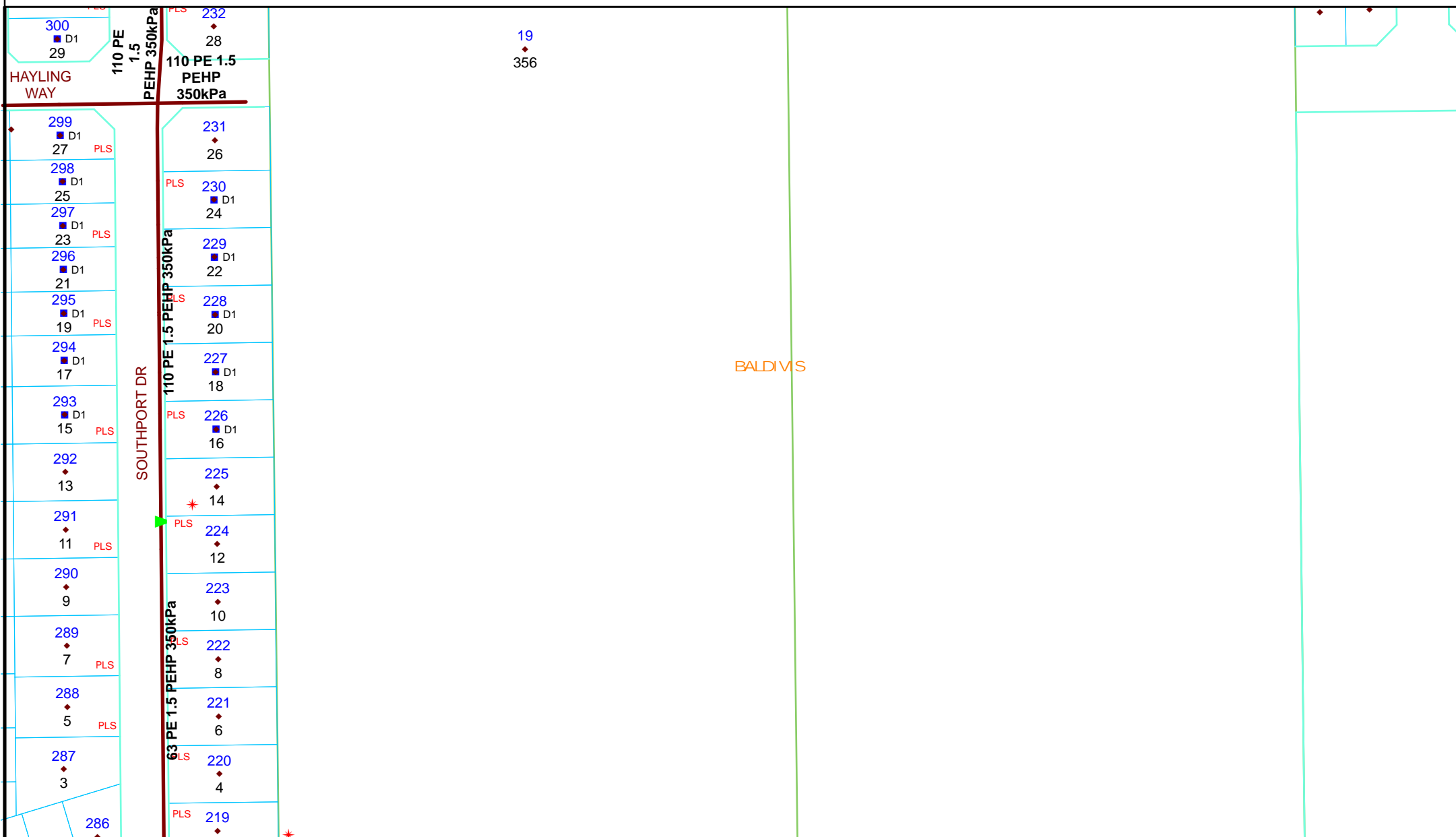
Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

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PLS

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 49251237

Map Tile: 3

Scale: 1:1500

© ATCO Gas Australia Pty Ltd
ABN 90 089 531 975

Job No: 9954027

Date: 19/11/2015

Location: 356 Sixty Eight Road, Baldivis 6171



Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

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APPENDIX 6

DPaW Flora Database Searches

Sheet	NameID	Taxon	Cons_ Code	Plant_Desc	Site_Descr	Vegetation	Frequency	Notes	Locality	Geocode_ Me	Precision	Date
6960103	3237	Acacia benthamii	2		Low plain. Grey sand.	Open Jarrah & Tuart woodland. Allocasuarina fraseriana, Banksia attenuata, Kunzea glabrescens, Hibbertia hypericoides.	ca 20 plants.		Lot 203, Stock Road, Stake Hill	GPS	1	31/03/2005
5943086	3863	Dillwynia dillwynioides	3		Seasonal dampland.	Melaleuca raphiophylla Low Forest B over M. raphiophylla Low Scrub B over Dense Low Grass and Dense Low Sedges.			Site 8, 1.4 km S of Stakehill Road and the N boundary of Baldvis Pine Plantation, Karnup,	MAN	2	4/11/1998
5943523	3863	Dillwynia dillwynioides	3		Seasonal dampland.	Eucalyptus rudis Low Forest A over Melaleuca raphiophylla Open Low Woodland A over Kunzea ericifolia Open Scrub over Dense Low Scrub of mixed grasses, weeds and sedges.			Site 10, 100 m N of S boundary of Baldvis Pine Plantation and 1.8 km E of Karri Street, Karnup,	MAN	2	4/11/1998
7536062	3863	Dillwynia dillwynioides	3		Moist grey loam.	Low Woodland A of Eucalyptus rudis, Melaleuca raphiophylla, Banksia littoralis, Lepidosperma longitudinale, Hibbertia stellaris, Kunzea glabrescens, Villarsia albiflora.	>20 plants.	Condition of population: moderate.	Baldivis Ordnance Reserve	GPS	1	15/09/2006
5437784	4027	Jacksonia sericea	4	Prostrate shrub 10 cm high, 2 m wide; sterile, only a few spiny branchlets.	Limestone ridge, brown orange sand with outcropping limestone over Tamala limestone.	Mixed Low Heath C of Grevillea preissii, Rhagodia baccata and Melaleuca acerosa.	locally abundant.		Lot 4 Mandurah Road, Singleton (Bushplan Site 395)	GPS	1	30/06/1999

Sheet	NameID	Taxon	Cons_ Code	Plant_Desc	Site_Descr	Vegetation	Frequency	Notes	Locality	Geocode_ Me	Precision	Date
5437768	4027	Jacksonia sericea	4	Prostrate shrub 10 cm high, 2 m wide; old fruit; reflexed peduncles, no spiny branchlets; could be considered J. sericea.	Limestone ridge, brown-orange sand with outcropping limestone over Tamala limestone.	Mixed Low Heath C of Grevillea preissii, Rhagodia baccata and Melaleuca acerosa.	locally abundant.		Lot 4 Mandurah Road, Singleton (Bushplan Site 395)	GPS	1	30/06/1999
7536070	980	Schoenus capillifolius	3	Reproductive state: vegetative.	Inundated grey clay.	Dense Low Forst of Melaleuca raphiophylla. With Baumea articulata, Triglochin linearis, Villarsia albiflora, Callitriche stagnalis, Lemna disperma, Cotula coronopifolia.	large numbers, 40% cover.	Condition of population: healthy.	Baldivis Ordnance Reserve	GPS	1	15/09/2006
4555708	7756	Stylidium longitubum	3	Delicate annual herb.	Soil: Brown sand. Topography/drainage: Seasonally wet poorly drained flat. Geomorphology: Swamp deposits - holocene.	Vegetation: Melaleuca raphiophylla Low Forest B over exotic Very Open Low Grass over Lotus saueolens, Stylidium longitubum Herbs over Lepidosperma longitudinale Tall Sedges.			Remnant bushland near Hymus Swamp in SW corner of Lowlands property (M105), 11 km WNW of Serpentine (plot hymus05).	GPS	1	6/11/1993

FID_	PopId	Nameid	Taxon	ConsStatus	WARank	PopNumber	SubPopCode	Location	District	Vesting	Purpose1	Purpose2	CountDate	Method	MatureCount	LiveTotal	inFlower
	86764	3863	Dillwynia dillwynioides	3		4		Seasonal wetland adjoining Hymus Swamp. Ca 2 km N of Karnup Rd, at approx 1 km W of the junction with Yangetti Rd.	SWAN COASTAL	PRI			15/06/1994 0:00		0	0	N
	86769	3863	Dillwynia dillwynioides	3		9		Baldivis Ordinance Reserve (ID: 37090).	SWAN COASTAL	EXD	OTH		15/09/2006 0:00	ESTMT	20	20	Y
	98820	3863	Dillwynia dillwynioides	3		20	A	Baldivis Ordinance Reserve (ID: 37090). Site 8, 1.4km S of Stakehill Rd and the N boundary of Baldivis Pine Plantation, Karnup.	SWAN COASTAL	EXD	TIM	OTH	4/11/1998 0:00		0	0	N
	98821	3863	Dillwynia dillwynioides	3		20	B	Baldivis Ordinance Reserve (ID: 37090). Site 10, 100m N of S boundary of Baldivis Pine Plantation & 1.8km E of Karri St, Karnup.	SWAN COASTAL	EXD	TIM	OTH	4/11/1998 0:00		0	0	N
	85073	1639	Drakaea elastica	T	CR	30		Private property, Lot 2 Lowlands Rd, Mardella (Lowlands Farm). S from Wilkinson Road/Serpentine River junction. Within `Hymus Swamp` along the `Dampier to Bunbury Natural Gas Pipeline Corridor`. Both sides of gas pipeline.	SWAN COASTAL	PRI			29/09/2005 0:00	ACT_IND	54	54	N
	84515	980	Schoenus capillifolius	3		12		Baldivis Ordinance Reserve (No.37090), Rockingham	SWAN COASTAL	EXD			15/09/2006 0:00		0	0	N
	89296	7756	Stylidium longitubum	3		14		PRI Lot.2. Remnant bushland near Hymus Swamp in SW cnr of lowlands property (M105), 11km WNW of Serpentine (plot hymus05).	SWAN COASTAL	PRI			6/11/1993 0:00		0	0	N

Taxon	Status	Rank	IUCN Criteria	EPBC	DPaW Region	DPaW District	Distribution	Flowering Period	Recovery Plan
<i>Dillwynia dillwynioides</i>	3				SWAN	SWAN COASTAL	Harvey, Pinjarrah, Yunderup, Gingin, Perth, Karnup, Mundijong, Serpentine	Aug-Oct	
<i>Dodonaea hackettiana</i>	4				SWAN	SWAN COASTAL	Wattleup, Thompson Lake, Kings Park, Jandakot, Bibra Lake-The Spectacles, Gingin, Peron, Baldivis, Beeliar, Baldivis, Harry Waring Marsupial Reserve	Jul-Oct	
<i>Schoenus capillifolius</i>	3				SWAN, SWST, WHTB	PERTH HILLS, SWAN COASTAL, WELLINGTON, GREAT SOUTHERN, CENTRAL WHEATBELT	Upper Swan, Kenwick, Waterloo, Beauford River, Beverley, Goomalling, Carousel Swamp, Pearce, Waroona, Karnup, Baldivis	Sep-Nov	
<i>Stylidium longitubum</i>	3				SWAN, SWST, WHTB	BLACKWOOD, SWAN COASTAL, WELLINGTON, GREAT SOUTHERN	Upper Swan, Bullsbrook, Bunbury, Midland, Busselton, Arthur River, Jandakot, Mundijong, Karnup	Nov	
<i>Thelymitra variegata</i>	2				SCST, SWAN, SWST, WARR, WHTB	BLACKWOOD, ALBANY, FRANKLAND, SWAN COASTAL, GREAT SOUTHERN	Baldivis, Capel, Albany, Hyden, Mt Lindesay	Aug-Sep	

APPENDIX 7

Naturemap Report

NatureMap Species Report

Created By Jackalyn Hams on 05/11/2015

Current Names Only Yes

Core Datasets Only Yes

Method 'By Circle'

Centre 115°49' 06" E, 32°21' 32" S

Buffer 5km

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1.	3237	<i>Acacia benthamii</i>		P2	
2.	30032	<i>Acacia saligna</i> subsp. <i>saligna</i>			
3.	3557	<i>Acacia stenoptera</i> (Narrow Winged Wattle)			
4.	24260	<i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
5.	24261	<i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
6.	24262	<i>Acanthiza inornata</i> (Western Thornbill)			
7.	24560	<i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
8.	25535	<i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
9.	25536	<i>Accipiter fasciatus</i> (Brown Goshawk)			
10.	25755	<i>Acrocephalus australis</i> (Australian Reed Warbler)			
11.	4582	<i>Adriana quadripartita</i> (Bitter Bush)			
12.		<i>Afurcagobius suppositus</i>			
13.	185	<i>Aira cupaniana</i> (Silvery Hairgrass)	Y		
14.		<i>Aleurodiscus</i> sp.			
15.	2652	<i>Alternanthera nodiflora</i> (Common Joyweed)			
16.		<i>Aname mainae</i>			
17.	24312	<i>Anas gracilis</i> (Grey Teal)			
18.	24315	<i>Anas rhynchotis</i> (Australasian Shoveler)			
19.	24316	<i>Anas superciliosa</i> (Pacific Black Duck)			
20.	25553	<i>Anhinga melanogaster</i> (Darter)			
21.		<i>Anhinga novaehollandiae</i>			
22.	24561	<i>Anthochaera carunculata</i> (Red Wattlebird)			
23.	24562	<i>Anthochaera lunulata</i> (Western Little Wattlebird)			
24.	202	<i>Anthoxanthum odoratum</i> (Sweet Vernal Grass)	Y		
25.	3688	<i>Aotus gracillima</i>			
26.	1117	<i>Aphelia cyperoides</i>			
27.	24991	<i>Aprasia repens</i> (Sand-plain Worm-lizard)			
28.	24285	<i>Aquila audax</i> (Wedge-tailed Eagle)			
29.		<i>Archargiolestes parvulus</i>			
30.	24337	<i>Ardea garzetta</i> subsp. <i>nigripes</i> (Little Egret)			
31.	41324	<i>Ardea modesta</i> (Eastern Great Egret)		IA	
32.	24340	<i>Ardea novaehollandiae</i> (White-faced Heron)			
33.	24341	<i>Ardea pacifica</i> (White-necked Heron)			
34.	25566	<i>Artamus cinereus</i> (Black-faced Woodswallow)			
35.	24353	<i>Artamus cyanopterus</i> (Dusky Woodswallow)			
36.	20283	<i>Astartea scoparia</i>			
37.	6323	<i>Astroloma ciliatum</i> (Candle Cranberry)			
38.		<i>Atherinosoma elongata</i>			
39.	2480	<i>Atriplex suberecta</i>			
40.	17234	<i>Austrostipa compressa</i>			
41.	17240	<i>Austrostipa flavescens</i>			
42.	233	<i>Avena barbata</i> (Bearded Oat)	Y		
43.	24318	<i>Aythya australis</i> (Hardhead)			
44.	1800	<i>Banksia attenuata</i> (Slender Banksia, Piara)			
45.	1822	<i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
46.	1830	<i>Banksia littoralis</i> (Swamp Banksia, Pungura)			
47.	1834	<i>Banksia menziesii</i> (Firewood Banksia)			
48.	32077	<i>Banksia sessilis</i> var. <i>cygnorum</i>			
49.	32315	<i>Barbula calycina</i>			
50.		<i>Barnardius zonarius</i>			
51.	15037	<i>Bartisia trixago</i>	Y		
52.	741	<i>Baumea articulata</i> (Jointed Rush)			
53.	743	<i>Baumea juncea</i> (Bare Twigrush)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
54.	4594	<i>Beyeria cinerea</i>			
55.	24319	<i>Biziura lobata</i> (Musk Duck)			
56.	749	<i>Bolboschoenus caldwellii</i> (Marsh Club-rush)			
57.	3710	<i>Bossiaea eriocarpa</i> (Common Brown Pea)			
58.	6341	<i>Brachyloma preissii</i> (Globe Heath)			
59.	30142	<i>Brachyloma preissii</i> subsp. <i>obtusifolium</i>			
60.	30136	<i>Brachyloma preissii</i> subsp. <i>preissii</i>			
61.	42381	<i>Brachyuropis semifasciatus</i> (Southern Shovel-nosed Snake)			
62.	244	<i>Briza maxima</i> (Blowfly Grass)	Y		
63.	245	<i>Briza minor</i> (Shivery Grass)	Y		
64.		<i>Bromus</i> sp.			
65.	1383	<i>Burchardia bairdiae</i>			
66.	25715	<i>Cacatua roseicapilla</i> (Galah)			
67.	25716	<i>Cacatua sanguinea</i> (Little Corella)			
68.		<i>Cacatua</i> sp.			
69.	25598	<i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
70.	1276	<i>Caesia micrantha</i> (Pale Grass Lily)			
71.	15330	<i>Caladenia arenicola</i>			
72.	15361	<i>Caladenia longicauda</i> subsp. <i>calcigena</i>			
73.	24779	<i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		IA	
74.	24784	<i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
75.	24788	<i>Calidris ruficollis</i> (Red-necked Stint)		IA	
76.	24789	<i>Calidris subminuta</i> (Long-toed Stint)		IA	
77.	25717	<i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
78.	24731	<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black-Cockatoo)		T	
79.	24734	<i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo)		T	
80.		<i>Calyptorhynchus</i> sp.			
81.	5439	<i>Calytrix angulata</i> (Yellow Starflower)			
82.	32335	<i>Campylopus bicolor</i>			
83.	1162	<i>Cartonema philydroides</i>			
84.	2957	<i>Cassytha racemosa</i> (Dodder Laurel)			
85.	11799	<i>Cassytha racemosa</i> forma <i>racemosa</i>			
86.	1742	<i>Casuarina obesa</i> (Swamp Sheoak, Kuli)			
87.		<i>Catasarcus spinipennis</i>			
88.	6542	<i>Centaurium tenuiflorum</i>	Y		
89.	1121	<i>Centrolepis aristata</i> (Pointed Centrolepis)			
90.	1125	<i>Centrolepis drummondiana</i>			
91.	1129	<i>Centrolepis glabra</i> (Smooth Centrolepis)			
92.	24186	<i>Chalinolobus gouldii</i> (Gould's Wattled Bat)			
93.	24373	<i>Charadrius melanops</i> (Black-fronted Dotterel)			
94.	24377	<i>Charadrius ruficapillus</i> (Red-capped Plover)			
95.	24321	<i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
96.	2490	<i>Chenopodium glaucum</i> (Glaucous Goosefoot)	Y		
97.	763	<i>Chorizandra enodis</i> (Black Bristlerush)			
98.	24980	<i>Christinus marmoratus</i> (Marbled Gecko)			
99.		<i>Chroicocephalus novaehollandiae</i>			
100.	24431	<i>Chrysococcyx basalis</i> (Horsfield's Bronze Cuckoo)			
101.	6543	<i>Cicendia filiformis</i> (Slender Cicendia)	Y		
102.	24288	<i>Circus approximans</i> (Swamp Harrier)			
103.	24774	<i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
104.		<i>Colletotrichum</i> sp.			
105.	25675	<i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
106.	24399	<i>Columba livia</i> (Domestic Pigeon)	Y		
107.	4552	<i>Comesperma confertum</i>			
108.	4564	<i>Comesperma virgatum</i> (Milkwort)			
109.	6349	<i>Conostephium preissii</i>			
110.	1418	<i>Conostylis aculeata</i> (Prickly Conostylis)			
111.	11826	<i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
112.	25568	<i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
113.	2891	<i>Corrigiola litoralis</i> (Strapwort)	Y		
114.	25592	<i>Corvus coronoides</i> (Australian Raven)			
115.	7945	<i>Cotula coronopifolia</i> (Waterbuttons)	Y		
116.	25595	<i>Cracticus tibicen</i> (Australian Magpie)			
117.	25596	<i>Cracticus torquatus</i> (Grey Butcherbird)			
118.	3137	<i>Crassula colorata</i> (Dense Stonecrop)			
119.	3140	<i>Crassula glomerata</i>	Y		
120.	3142	<i>Crassula natans</i>	Y		
121.	15706	<i>Crassula natans</i> var. <i>minus</i>	Y		
122.	25400	<i>Crinia insignifera</i> (Squelching Froglet)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
123.	4802 <i>Cryptandra mutila</i>			
124.	30893 <i>Cryptoblepharus buchananii</i>			
125.	25020 <i>Cryptoblepharus plagiocephalus</i>			
126.	25027 <i>Ctenotus australis</i>			
127.	25039 <i>Ctenotus fallens</i>			
128.	768 <i>Cyathochaeta avenacea</i>			
129.	24322 <i>Cygnus atratus</i> (Black Swan)			
130.	283 <i>Cynodon dactylon</i> (Couch)	Y		
131.	783 <i>Cyperus congestus</i> (Dense Flat-sedge)	Y		
132.	815 <i>Cyperus tenellus</i> (Tiny Flatsedge)	Y		
133.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
134.	7454 <i>Dampiera linearis</i> (Common Dampiera)			
135.	7484 <i>Dampiera trigona</i> (Angled-stem Dampiera)			
136.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
137.	1218 <i>Dasypogon bromeliifolius</i> (Pineapple Bush)			
138.	3834 <i>Daviesia polyphylla</i>			
139.	3845 <i>Daviesia triflora</i>			
140.	17663 <i>Desmocladius asper</i>			
141.	17691 <i>Desmocladius fasciculatus</i>			
142.	16595 <i>Desmocladius flexuosus</i>			
143.	299 <i>Deyeuxia quadriseta</i> (Reed Bentgrass)			
144.	1259 <i>Dianella revoluta</i> (Blueberry Lily)			
145.	1287 <i>Dichopogon capillipes</i>			
146.	32345 <i>Didymodon australasiae</i>			
147.	32346 <i>Didymodon torquatus</i>			
148.	17838 <i>Dielsia stenostachya</i>			
149.	3863 <i>Dillwynia dillwynioides</i>		P3	
150.	18541 <i>Diplopeltis huegelii</i> subsp. <i>huegelii</i>			
151.	7054 <i>Dischisma arenarium</i>	Y		
152.	7055 <i>Dischisma capitatum</i> (Woolly-headed <i>Dischisma</i>)	Y		
153.	1639 <i>Drakaea elastica</i> (Glossy-leaved Hammer Orchid)		T	
154.	3095 <i>Drosera erythrorhiza</i> (Red Ink Sundew)			
155.	16244 <i>Drosera gigantea</i> subsp. <i>geniculata</i>			
156.	3098 <i>Drosera glanduligera</i> (Pimpernel Sundew)			
157.	3106 <i>Drosera macrantha</i> (Bridal Rainbow)			
158.	13216 <i>Drosera menziesii</i> subsp. <i>penicillaris</i>			
159.	3114 <i>Drosera nitidula</i> (Shining Sundew)			
160.	3131 <i>Drosera stolonifera</i> (Leafy Sundew)			
161.	<i>Egretta novaehollandiae</i>			
162.	347 <i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
163.	<i>Elanus axillaris</i>			
164.	<i>Eolophus roseicapillus</i>			
165.	24567 <i>Epthianura albifrons</i> (White-fronted Chat)			
166.	379 <i>Eragrostis elongata</i> (Clustered Lovegrass)			
167.	15446 <i>Eryngium pinnatifidum</i> subsp. <i>pinnatifidum</i>			
168.	24379 <i>Erythronys cinctus</i> (Red-kneed Dotterel)			
169.	5649 <i>Eucalyptus foecunda</i> (Narrow-leaved Red Mallee)			
170.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
171.	20808 <i>Eucalyptus petiolaris</i>	Y		
172.	5763 <i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
173.	3880 <i>Eutaxia virgata</i>			
174.	10765 <i>Exocarpos sparteus</i> (Broom Ballart, Djuk)			
175.	25622 <i>Falco cenchroides</i> (Australian Kestrel)			
176.	25623 <i>Falco longipennis</i> (Australian Hobby)			
177.	24041 <i>Felis catus</i> (Cat)	Y		
178.	24761 <i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
179.	<i>Fusarium</i> sp.			
180.	907 <i>Gahnia trifida</i> (Coast Saw-sedge)			
181.	24763 <i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
182.	24764 <i>Gallinula ventralis</i> (Black-tailed Native-hen)			
183.	25730 <i>Gallirallus philippensis</i> (Buff-banded Rail)			
184.	20473 <i>Gastrolobium ebracteolatum</i>			
185.	4341 <i>Geranium solanderi</i> (Native Geranium)			
186.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
187.	1518 <i>Gladiolus angustus</i> (Long Tubed Painted Lady)	Y		
188.	10909 <i>Gompholobium confertum</i>			
189.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
190.	7538 <i>Goodenia pulchella</i>			
191.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
192.	1982 <i>Grevillea crithmifolia</i>			

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193.	15839	<i>Grevillea preissii</i> subsp. <i>preissii</i>			
194.		<i>Gymnophilus allantopus</i>			
195.	1472	<i>Haemodorum simplex</i>			
196.	2175	<i>Hakea lissocarpha</i> (Honey Bush)			
197.	24293	<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)		IA	
198.	24295	<i>Haliastur sphenurus</i> (Whistling Kite)			
199.	25410	<i>Heleioporus eyrei</i> (Moaning Frog)			
200.	3016	<i>Heliophila pusilla</i>	Y		
201.	25119	<i>Hemiergis quadrilineata</i>			
202.	5135	<i>Hibbertia hypericoides</i> (Yellow Buttercups)			
203.	5162	<i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
204.	5172	<i>Hibbertia stellaris</i> (Orange Stars)			
205.	5176	<i>Hibbertia vaginata</i>			
206.	25734	<i>Himantopus himantopus</i> (Black-winged Stilt)			
207.	24491	<i>Hirundo neoxena</i> (Welcome Swallow)			
208.	13758	<i>Histiopteris incisa</i>			
209.	6222	<i>Homalosciadium homalocarpum</i>			
210.	12859	<i>Hovea trisperma</i> var. <i>trisperma</i>			
211.	6223	<i>Hydrocotyle alata</i>			
212.	6229	<i>Hydrocotyle diantha</i>			
213.	5817	<i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
214.	5825	<i>Hypocalymma robustum</i> (Swan River Myrtle)			
215.	8086	<i>Hypochoeris glabra</i> (Smooth Catsear)	Y		
216.	1070	<i>Hypolaena exsulca</i>			
217.	17841	<i>Hypolaena pubescens</i>			
218.	910	<i>Isolepis cernua</i> (Nodding Club-rush)			
219.	20200	<i>Isolepis cernua</i> var. <i>setiformis</i>			
220.	917	<i>Isolepis marginata</i> (Coarse Club-rush)			
221.	919	<i>Isolepis oldfieldiana</i>			
222.	921	<i>Isolepis producta</i>			
223.	25478	<i>Isoodon obesulus</i> (Southern Brown Bandicoot)		P5	
224.	24153	<i>Isoodon obesulus</i> subsp. <i>fusciventer</i> (Quenda, Southern Brown Bandicoot)		P5	
225.	3992	<i>Isotropis cuneifolia</i> (Granny Bonnets)			
226.	8092	<i>Ixiolaena viscosa</i> (Sticky Ixiolaena)			
227.	4012	<i>Jacksonia furcellata</i> (Grey Stinkwood)			
228.	4027	<i>Jacksonia sericea</i> (Waldjumi)		P4	
229.	1175	<i>Juncus acutus</i> (Spiny Rush)	Y		
230.	20454	<i>Juncus acutus</i> subsp. <i>acutus</i>	Y		
231.	1178	<i>Juncus bufonius</i> (Toad Rush)	Y		
232.	1180	<i>Juncus capitatus</i> (Capitate Rush)	Y		
233.	1188	<i>Juncus pallidus</i> (Pale Rush)			
234.	4044	<i>Kennedia prostrata</i> (Scarlet Runner)			
235.	5832	<i>Kunzea ericifolia</i> (Spearwood, Pondil)			
236.	13562	<i>Lachenalia aloides</i>	Y		
237.	24511	<i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull)			
238.	1309	<i>Laxmannia squarrosa</i>			
239.	925	<i>Lepidosperma angustatum</i>			
240.	932	<i>Lepidosperma effusum</i> (Spreading Sword-sedge)			
241.	933	<i>Lepidosperma gladiatum</i> (Coast Sword-sedge, Kerbin)			
242.	937	<i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
243.	940	<i>Lepidosperma pubisquameum</i>			
244.	944	<i>Lepidosperma scabrum</i>			
245.		<i>Lepidosperma</i> sp.			
246.	945	<i>Lepidosperma squamatum</i>			
247.	1085	<i>Lepyrodia glauca</i>			
248.	25133	<i>Lerista elegans</i>			
249.	25147	<i>Lerista lineata</i> (Perth Slider, Lined Skink)		P3	
250.	6374	<i>Leucopogon conostephioides</i>			
251.	6436	<i>Leucopogon propinquus</i>			
252.	7677	<i>Levenhookia stipitata</i> (Common Stylewort)			
253.	25005	<i>Lialis burtonis</i>			
254.	25661	<i>Lichmera indistincta</i> (Brown Honeyeater)			
255.	25741	<i>Limosa limosa</i> (Black-tailed Godwit)		IA	
256.	36160	<i>Liparophyllum capitatum</i>			
257.	36179	<i>Liparophyllum violifolium</i>			
258.	25378	<i>Litoria adelaidensis</i> (Slender Tree Frog)			
259.	9289	<i>Lobelia anceps</i> (Angled Lobelia)			
260.	7408	<i>Lobelia tenuior</i> (Slender Lobelia)			
261.	6515	<i>Logania vaginalis</i> (White Spray)			
262.	476	<i>Lolium perenne</i> (Perennial Ryegrass)	Y		

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263.	478 <i>Lolium rigidum</i> (Wimmera Ryegrass)	Y		
264.	<i>Lolium</i> sp.			
265.	11073 <i>Lolium x hybridum</i>	Y		
266.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
267.	1228 <i>Lomandra hermaphrodita</i>			
268.	1231 <i>Lomandra maritima</i>			
269.	1232 <i>Lomandra micrantha</i> (Small-flower Mat-rush)			
270.	14542 <i>Lomandra micrantha</i> subsp. <i>micrantha</i>			
271.	8564 <i>Lotus subbiflorus</i>	Y		
272.	1097 <i>Lyginia barbata</i>			
273.	<i>Macrophomina</i> sp.			
274.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
275.	85 <i>Macrozamia riedlei</i> (<i>Zamia</i> , <i>Djiridji</i>)			
276.	24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
277.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
278.	17679 <i>Meeboldina coangustata</i>			
279.	17677 <i>Meeboldina roycei</i>			
280.	17694 <i>Meeboldina scariosa</i>			
281.	25758 <i>Megalurus gramineus</i> (Little Grassbird)			
282.	34676 <i>Meionectes brownii</i> (Swamp Raspwort)			
283.	13273 <i>Melaleuca incana</i> subsp. <i>incana</i>			
284.	5926 <i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
285.	5952 <i>Melaleuca preissiana</i> (Moonah)			
286.	5958 <i>Melaleuca radula</i> (Graceful Honeymyrtle)			
287.	5959 <i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
288.	5978 <i>Melaleuca teretifolia</i> (Banbar)			
289.	4085 <i>Melilotus indicus</i>	Y		
290.	<i>Melobasis lathamii</i>			
291.	25184 <i>Menetia greyii</i>			
292.	6886 <i>Mentha x piperita</i>	Y		
293.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)		IA	
294.	955 <i>Mesomelaena pseudostygia</i>			
295.	<i>Microcarbo melanoleucos</i>			
296.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
297.	15419 <i>Microtis media</i> subsp. <i>media</i>			
298.	1660 <i>Microtis orbicularis</i> (Dark Mignonette Orchid)			
299.	4090 <i>Mirbelia dilatata</i> (Holly-leaved Mirbelia)			
300.	7085 <i>Misopates orontium</i> (Lesser Snapdragon)	Y		
301.	7410 <i>Monopsis debilis</i>	Y		
302.	37440 <i>Monopsis debilis</i> var. <i>depressa</i>	Y		
303.	25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)		S	
304.	25191 <i>Morethia lineocellata</i>			
305.	24184 <i>Mormopterus planiceps</i> (Southern Freetail-bat)			
306.	24223 <i>Mus musculus</i> (House Mouse)	Y		
307.	24738 <i>Neophema elegans</i> (Elegant Parrot)			
308.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
309.	24798 <i>Numenius madagascariensis</i> (Eastern Curlew)		T	
310.	2401 <i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
311.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			
312.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
313.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
314.	7348 <i>Opercularia hispidula</i> (Hispid Stinkweed)			
315.	4113 <i>Ornithopus compressus</i> (Yellow Serradella)	Y		
316.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
317.	24328 <i>Oxyura australis</i> (Blue-billed Duck)		P4	
318.	25679 <i>Pachycephala pectoralis</i> (Golden Whistler)			
319.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
320.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
321.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
322.	7090 <i>Parentucellia viscosa</i> (Sticky Bartsia)	Y		
323.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
324.	30471 <i>Patersonia occidentalis</i> var. <i>angustifolia</i>			
325.	4343 <i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
326.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
327.	6006 <i>Pericalymma ellipticum</i> (Swamp Teatree)			
328.	<i>Peronospora</i> sp.			
329.	13911 <i>Persicaria decipiens</i>			
330.	2299 <i>Petrophile linearis</i> (Pixie Mops)			
331.	25697 <i>Phalacrocorax carbo</i> (Great Cormorant)			
332.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			

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333.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
334.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
335.	1478 <i>Phlebocarya ciliata</i>			
336.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
337.	16177 <i>Phyllangium paradoxum</i>			
338.	<i>Phytophthora cinnamomi</i>			
339.	5252 <i>Pimelea lanata</i>			
340.	18117 <i>Pimelea rosea</i> subsp. <i>rosea</i>			
341.	7303 <i>Plantago lanceolata</i> (Ribwort Plantain)	Y		
342.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
343.	24842 <i>Platalea regia</i> (Royal Spoonbill)			
344.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
345.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
346.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
347.	25704 <i>Podiceps cristatus</i> (Great Crested Grebe)			
348.	8175 <i>Podolepis gracilis</i> (Slender Podolepis)			
349.	8182 <i>Podotheca angustifolia</i> (Sticky Longheads)			
350.	8183 <i>Podotheca chrysantha</i> (Yellow Podotheca)			
351.	<i>Podotheca</i> sp.			
352.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
353.	24681 <i>Polioccephalus poliocephalus</i> (Hoary-headed Grebe)			
354.	25722 <i>Polytelis anthopeplus</i> (Regent Parrot)			
355.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
356.	24767 <i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
357.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
358.	24770 <i>Porzana pusilla</i> subsp. <i>palustris</i> (Baillon's Crane)			
359.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
360.	1670 <i>Prasophyllum drummondii</i> (Swamp Leek Orchid)			
361.	1674 <i>Prasophyllum giganteum</i> (Bronze Leek Orchid)			
362.	10853 <i>Prasophyllum plumiforme</i>			
363.	<i>Pseudogobius olorum</i>			
364.	25511 <i>Pseudonaja affinis</i> (Dugite)			
365.	25259 <i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
366.	<i>Pterostylis</i> aff. <i>nana</i>			
367.	<i>Pterostylis</i> sp.			
368.	<i>Purpureicephalus spurius</i>			
369.	8195 <i>Quinetia urvillei</i>			
370.	2938 <i>Ranunculus trilobus</i> (Buttercup)	Y		
371.	24245 <i>Rattus rattus</i> (Black Rat)	Y		
372.	24776 <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
373.	38832 <i>Resupinatus cinerascens</i>			
374.	11930 <i>Rhagodia baccata</i> subsp. <i>dioica</i> (Sea Berry Saltbush)			
375.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
376.	<i>Rhizoctonia</i> sp.			
377.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
378.	40431 <i>Rytidosperma acerosum</i>			
379.	6483 <i>Samolus junceus</i>			
380.	7603 <i>Scaevola canescens</i> (Grey Scaevola)			
381.	13182 <i>Scaevola repens</i> var. <i>repens</i>			
382.	980 <i>Schoenus capillifolius</i>		P3	
383.	984 <i>Schoenus curvifolius</i>			
384.	986 <i>Schoenus efoliatus</i>			
385.	<i>Schoenus</i> sp.			
386.	1018 <i>Schoenus subfascicularis</i>			
387.	1023 <i>Schoenus tenellus</i>			
388.	6033 <i>Scholtzia involucrata</i> (Spiked Scholtzia)			
389.	<i>Sclerotinia</i> sp.			
390.	6 <i>Selaginella gracillima</i> (Tiny Clubmoss)			
391.	25534 <i>Sericornis frontalis</i> (White-browed Scrubwren)			
392.	8224 <i>Siloxerus filifolius</i>			
393.	25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
394.	30948 <i>Smicornis brevirostris</i> (Weebill)			
395.	8230 <i>Sonchus asper</i> (Rough Sowthistle)	Y		
396.	9367 <i>Sonchus hydrophilus</i> (Native Sowthistle)			
397.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
398.	2912 <i>Spergula arvensis</i> (Corn Spurry)	Y		
399.	635 <i>Sporobolus virginicus</i> (Marine Couch)			
400.	4828 <i>Spyridium globulosum</i> (Basket Bush)			
401.	4733 <i>Stackhousia monogyna</i>			
402.	2918 <i>Stellaria media</i> (Chickweed)	Y		

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
403.	24523	<i>Sterna caspia</i> (Caspian Tern)		IA	
404.	25643	<i>Sterna hybrida</i> (Whiskered Tern)			
405.	24329	<i>Stictonetta naevosa</i> (Freckled Duck)			
406.	24554	<i>Stipiturus malachurus</i> subsp. <i>westernensis</i> (Southern Emu-wren)			
407.	25590	<i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
408.	7693	<i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
409.	7712	<i>Stylidium despectum</i> (Dwarf Triggerplant)			
410.	7717	<i>Stylidium divaricatum</i> (Daddy-long-legs)			
411.	7756	<i>Stylidium longitubum</i> (Jumping Jacks)		P3	
412.	7774	<i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
413.	7785	<i>Stylidium repens</i> (Matted Triggerplant)			
414.	7790	<i>Stylidium roseoalatum</i> (Pink-wing Triggerplant)			
415.	7806	<i>Stylidium utricularioides</i> (Pink Fan Triggerplant)			
416.		<i>Succinea</i> (<i>succinea</i>)			
417.	2329	<i>Synaphea spinulosa</i>			
418.	33992	<i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
419.	25705	<i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
420.	24682	<i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
421.	24185	<i>Tadarida australis</i> (White-striped Freetail-bat)			
422.	24331	<i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
423.	15741	<i>Tamarix aphylla</i> (Athel Tree)	Y		
424.	20135	<i>Taxandria linearifolia</i>			
425.	1036	<i>Tetralix octandra</i>			
426.	4535	<i>Tetralix hirsuta</i> (Black Eyed Susan)			
427.	1708	<i>Thelymitra fuscolutea</i> (Chestnut Sun Orchid)			
428.		<i>Thelymitra</i> sp.			
429.	24844	<i>Threskiornis molucca</i> (Australian White Ibis)			
430.	24845	<i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
431.	1318	<i>Thysanotus arbuscula</i>			
432.	1319	<i>Thysanotus arenarius</i>			
433.	1338	<i>Thysanotus manglesianus</i> (Fringed Lily)			
434.	1339	<i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
435.	1343	<i>Thysanotus patersonii</i>			
436.		<i>Thysanotus</i> sp.			
437.	1351	<i>Thysanotus sparteus</i>			
438.	25203	<i>Tiliqua occipitalis</i> (Western Bluetongue)			
439.	25207	<i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
440.		<i>Tortula antarctica</i>			
441.	19041	<i>Trachymene coerulea</i> subsp. <i>coerulea</i>			
442.	6280	<i>Trachymene pilosa</i> (Native Parsnip)			
443.		<i>Tranes vigorsii</i>			
444.	25521	<i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
445.	1361	<i>Tricoryne elatior</i> (Yellow Autumn Lily)			
446.	1363	<i>Tricoryne tenella</i>			
447.	4292	<i>Trifolium campestre</i> (Hop Clover)	Y		
448.	4295	<i>Trifolium dubium</i> (Suckling Clover)	Y		
449.	4297	<i>Trifolium glomeratum</i> (Cluster Clover)	Y		
450.	4313	<i>Trifolium subterraneum</i> (Subterranean Clover)	Y		
451.	24806	<i>Tringa glareola</i> (Wood Sandpiper)		IA	
452.	24808	<i>Tringa nebularia</i> (Common Greenshank)		IA	
453.	11665	<i>Trymalium ledifolium</i> var. <i>ledifolium</i>			
454.	8255	<i>Ursinia anthemoides</i> (Ursinia)	Y		
455.	24386	<i>Vanellus tricolor</i> (Banded Lapwing)			
456.	8257	<i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
457.	24206	<i>Vespadelus regulus</i> (Southern Forest Bat)			
458.	722	<i>Vulpia bromoides</i> (Squirrel Tail Fescue)	Y		
459.	33101	<i>Vulpia myuros</i> forma <i>myuros</i>	Y		
460.	7389	<i>Wahlenbergia preissii</i>			
461.	34113	<i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
462.		<i>Xanthomonas</i> sp.			
463.	6289	<i>Xanthosia huegelii</i>			
464.	1049	<i>Zantedeschia aethiopica</i> (Arum Lily)	Y		
465.	25765	<i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

Conservation Codes

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

Name ID Species Name		Naturalised	Conservation Code	¹ Endemic To Query Area
4 - Priority 4				
5 - Priority 5				

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

APPENDIX 8

Protected Matters Search Tool Report



EPBC Act Protected Matters Report

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

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

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

Report created: 05/11/15 17:04:02

[Summary](#)

[Details](#)

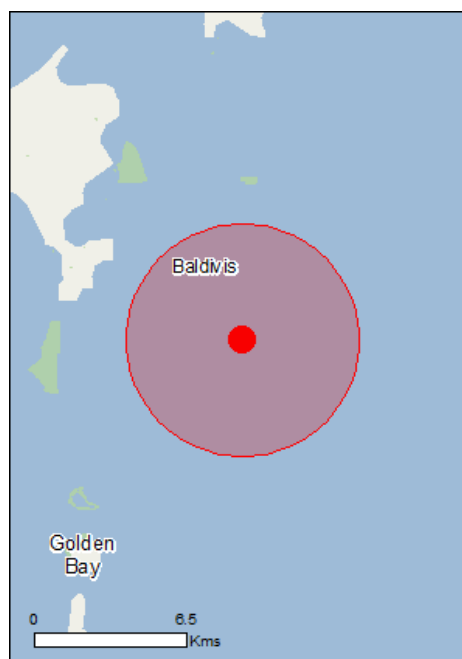
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

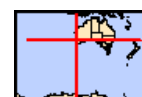
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	20
Listed Migratory Species:	8

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:	None
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:	None
Regional Forest Agreements:	None
Invasive Species:	36
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Becher point wetlands	Within 10km of Ramsar
Peel-yalgorup system	10 - 20km upstream

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
Sedgeland in Holocene dune swales of the southern Swan Coastal Plain	Endangered	Community known to occur within area

Listed Threatened Species	[Resource Information]
---------------------------	--------------------------

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

Birds

Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area

Calyptorhynchus banksii naso		
Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat may occur within area

Calyptorhynchus baudinii		
Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Species or species habitat likely to occur within area

Calyptorhynchus latirostris		
Carnaby's Black-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

Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area

Mammals

Bettongia penicillata ogilbyi		
Woylie [66844]	Endangered	Species or species habitat likely to occur within area

Dasyurus geoffroii		
Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area

Pseudocheirus occidentalis		
Western Ringtail Possum, Ngwayir [25911]	Vulnerable	Species or species habitat likely to occur within area

Setonix brachyurus		
Quokka [229]	Vulnerable	Species or species habitat may occur within

Name	Status	Type of Presence area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
Darwinia foetida Mucnea Bell [83190]	Critically Endangered	Species or species habitat likely to occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area
Drakaea elastica Glossy-leafed Hammer-orchid, Praying Virgin [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus balanites Cadda Road Mallee, Cadda Mallee [24264]	Endangered	Species or species habitat likely to occur within area
Lepidosperma rostratum Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
Synaphea stenoloba Dwellingup Synaphea [66311]	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
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
Migratory Terrestrial Species		
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		within area Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to 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
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Thinornis rubricollis		
Hooded Plover [59510]		Species or species habitat likely to occur within area

Extra Information

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

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

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		

Name	Status	Type of Presence
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur

Name	Status	Type of Presence
Olea europaea Olive, Common Olive [9160]		within area Species or species habitat may occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-32.35827 115.81707

Acknowledgements

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

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Parks and Wildlife Commission NT, Northern Territory Government](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- Other groups and individuals

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

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

APPENDIX 9

Conservation Codes

Conservation Codes for Western Australian Flora and Fauna

T Threatened species

Listed as Specially Protected under the Wildlife Conservation Act 1950, published under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

- Fauna that is rare or likely to become extinct are declared to be fauna that is in need of special protection
- Flora that are extant and considered likely to become extinct, or rare and therefore in need of special protection, are declared to be rare flora

Species* which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such. The assessment of the conservation status of these species is based on their national extent.

X Presumed extinct species

Listed as Specially Protected under the Wildlife Conservation Act 1950, published under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such.

IA Migratory birds protected under an international agreement

Listed as Specially Protected under the Wildlife Conservation Act 1950, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), relating to the protection of migratory birds.

S Other specially protected fauna

Listed as Specially Protected under the Wildlife Conservation Act 1950. Fauna declared to be in need of special protection, otherwise than for the reasons mentioned for Schedules 1, 2 or 3, are published under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Threatened Fauna and Flora are ranked according to their level of threat using IUCN Red List categories and criteria. For example: Carnaby's Cockatoo (*Calyptorhynchus latirostris*) is listed as 'Specially Protected' under the Wildlife Conservation Act 1950, published under Schedule 1, and referred to as a 'Threatened' species with a ranking of 'Endangered'.

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.

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

P Priority species

Species that maybe threatened or near threatened but are data deficient, have not yet been adequately surveyed to be listed under the Schedules of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora or fauna. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Conservation dependent species that are subject to a specific conservation program are placed in Priority 5.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1: Priority One: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2: Priority Two: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not

meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3: Priority Three: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

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

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

5: Priority Five: Conservation Dependent species

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

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

Commonwealth of Australia Conservation Codes

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* has the following nine conservation codes for Flora and Fauna.

Extinct

Taxa not definitely located in the wild during the past 50 years

Extinct in the Wild

Taxa known to survive only in captivity

Critically Endangered

Taxa facing an extremely high risk of extinction in the wild in the immediate future

Endangered

Taxa facing a very high risk of extinction in the wild in the near future

Vulnerable

Taxa facing a high risk of extinction in the wild in the medium-term

Near Threatened

Taxa that risk becoming Vulnerable in the wild

Conservation Dependent

Taxa whose survival depends upon ongoing conservation measures. Without these measures, a conservation dependent taxon would be classified as Vulnerable or more severely threatened.

Data Deficient (Insufficiently Known)

Taxa suspected of being Rare, Vulnerable or Endangered, but whose true status cannot be determined without more information.

Least Concern

Taxa that are not considered Threatened

APPENDIX 10

DPaW TEC and PEC Database Searches

OBJECTID	OCC_UNIQUE	COM_ID	COM_NAME	CT_DESC	S_ID_COUNT	FIRST_S_ID	LAST_S_ID	BUFFER	OCC_CONFI	BDY_ID
244	606	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYCOOL01		2000	No	360
245	640	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Walyungup01		2000	No	361
246	919	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Walyungup02		2000	No	362
247	26	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	COOL09		2000	No	363
248	920	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Walyungup03		2000	No	364
249	922	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	2	Walyungup04	Walyungup05	2000	No	365
259	817	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 94		2000	No	375
260	820	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 92		2000	No	376
261	823	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 90		2000	No	377
262	819	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 91		2000	No	378
264	617	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy95		2000	No	380
271	615	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Ptkennedy101		2000	No	387

OBJECTID	OCC_UNIQUE	COM_ID	COM_NAME	CT_DESC	S_ID_COUNT	FIRST_S_ID	LAST_S_ID	BUFFER	OCC_CONFI	BDY_ID
272	904	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy new 01		2000	No	388
273	636	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy18		2000	No	389
276	618	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	PtKennedy104		2000	No	392
277	641	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy113		2000	No	393
280	1925	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy115		2000	No	396
281	642	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	PtKennedy121		2000	No	397
283	643	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy120		2000	No	399
284	903	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 119		2000	No	400
285	902	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Pt Kennedy 118		2000	No	401
286	836	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 116		2000	No	402
290	837	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 123		2000	No	406
291	838	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Pt Kennedy 25		2000	No	408

OBJECTID	OCC_UNIQUE	COM_ID	COM_NAME	CT_DESC	S_ID_COUNT	FIRST_S_ID	LAST_S_ID	BUFFER	OCC_CONFI	BDY_ID
294	619	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	PtKennedy28		2000	No	411
295	941	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYPoint Becher01		2000	No	412
298	943	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYPoint Becher02		2000	No	415
300	944	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYPoint Becher03		2000	No	417
301	945	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYPoint Becher04		2000	No	418
302	620	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL30		2000	No	419
303	623	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL22		2000	No	420
304	624	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL23		2000	No	421
305	625	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL24		2000	No	422
306	626	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL26		2000	No	423
307	627	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL27		2000	No	424

OBJECTID	OCC_UNIQUE	COM_ID	COM_NAME	CT_DESC	S_ID_COUNT	FIRST_S_ID	LAST_S_ID	BUFFER	OCC_CONFI	BDY_ID
308	628	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL29		2000	No	425
431	634	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PTKENNEDY23		2000	No	566
449	616	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Ptkennedy103		2000	No	584
450	1922	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy124		2000	No	585
451	614	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy98		2000	No	586
452	824	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 97		2000	No	587
453	1926	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	PtKennedy125		2000	No	588
468	1949	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Walyungup06		2000	No	608
469	1950	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Walyungup07		2000	No	609
470	1951	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Walyungup08		2000	No	610
524	946	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	MYPoint Becher05		2000	No	671
683	621	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL158		2000	No	849
684	622	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL160		2000	No	850

OBJECTID	OCC_UNIQUE	COM_ID	COM_NAME	CT_DESC	S_ID_COUNT	FIRST_S_ID	LAST_S_ID	BUFFER	OCC_CONFI	BDY_ID
685	2027	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL17		2000	No	851
686	2028	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL18		2000	No	852
689	2034	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL21		2000	No	856
690	2033	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL152		2000	No	857
691	2035	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	LARKHILL150		2000	No	858
692	2032	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	LARKHILL13		2000	No	859
764	833	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 96		2000	No	938
765	821	SCP19b	Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	Critically Endangered	1	Pt Kennedy 100		2000	No	939
2144	4332	Walyungup Microbial	Microbial community of a coastal saline lake (Lake Walyungup)	Priority 1	6	Walynugup05	WalyungupSite03	2000	No	2611
14262	3159	SCP21c	Low lying Banksia attenuata woodlands or shrublands	Priority 3	1	HYMUS03		1000	No	14907
14420	845	SCP19a	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Critically Endangered	1	Pt Kennedy 122		2000	No	407
14893	3160	SCP21c	Low lying Banksia attenuata woodlands or shrublands	Priority 3	1	HYMUS04		1000	No	0
14931	3120	SCP25	Southern Eucalyptus gomphocephala-Agonis flexuosa woodlands	Priority 3	1	SEW6		200	No	0
14932	3121	SCP25	Southern Eucalyptus gomphocephala-Agonis flexuosa woodlands	Priority 3	1	SEW7		200	No	0

APPENDIX 11

Flora Species List

SPECIES LIST – Lot 19 Sixty Eight Road, Baldivis

* = Introduced species

GYMNOSPERMS

CYCADACEAE

Macrozamia fraseri

MONOCOTYLEDONS

ANARTHRIACEAE

Lyginia barbata

ARACEAE

**Zantedeschia aethiopica*

ASPARAGACEAE

Chamaescilla corymbosa

Lomandra caespitosa

Sowerbaea laxiflora

Thysanotus patersonii

Thysanotus sparteus

COLCHICACEAE

Burchardia congesta

CYPERACEAE

Lepidosperma pubisquameum

Mesomelaena pseudostygia

Tetraria octandra

DASYPOGONACEAE

Dasypogon bromeliifolius

HAEMODORACEAE

Conostylis aculeata

HEMEROCALLIDACEAE

Caesia micrantha

Corynotheca micrantha

Dianella revoluta var. *divaricata*

IRIDACEAE

Patersonia occidentalis

**Romulea rosea*

ORCHIDACEAE

Caladenia flava

**Disa bracteata*

POACEAE

Austrostipa compressa

**Avena fatua*

**Briza maxima*

**Briza minor*

**Bromus diandrus*

**Ehrharta calycina*

**Ehrharta longiflora*

**Lagurus ovatus*

**Lolium perenne*

Neurachne alopecuroidea

RESTIONACEAE

Desmocladus flexuosus

DICOTYLEDONS

AMARANTHACEAE

Ptilotus stirlingii

APIACEAE

Eryngium pinnatifidum

APOCYNACEAE

**Gomphocarpus fruticosus*

ASTERACEAE

**Arctotheca calendula*

**Hypochaeris glabra*

**Sonchus oleraceus*

**Taraxacum officinale*

**Ursinia anthemoides*

CARYOPHYLLACEAE

**Petrorhagia dubia*

CASUARINACEAE

Allocasuarina fraseriana

DILLENIACEAE

Hibbertia hypericoides

Hibbertia racemosa

DROSERACEAE

Drosera porrecta

ERICACEAE

Astroloma pallidum

Conostephium pendulum

Leucopogon propinquus

EUPHORBIACEAE

**Euphorbia peplus*

**Euphorbia terracina*

FABACEAE

**Acacia iteaphylla*

Acacia pulchella

Acacia stenoptera

**Chamaecytisus palmensis*

Hardenbergia comptoniana

Hovea trisperma

Kennedia prostrata

**Lupinus cosentinii*

**Melilotus indicus*

**Trifolium campestre*

GERANIACEAE

**Erodium cicutarium*

LOBELIACEAE

Lobelia tenuior

MYRTACEAE

Eucalyptus gomphocephala

Eucalyptus marginata

Melaleuca systena

OROBANCHACEAE

**Orobanche minor*

PRIMULACEAE

**Lysimachia arvensis*

PROTEACEAE

Banksia attenuata

Hakea lissocarpha

Petrophile linearis

RUBIACEAE

Opercularia hispidula

SCROPHULARIACEAE

**Dischisma capitatum*

THYMELEACEAE

Pimelea rosea subsp. *rosea*

APPENDIX 12

Quadrat Data

QUADRAT SE1

50 388817 E 6419389 N

Vegetation: *Eucalyptus marginata* (Jarrah)/*Allocasuarina fraseriana*/*Banksia attenuata* Low Woodland over *Hibbertia hypericoides*/*Mesomelaena pseudostygia* Low Shrubland

Condition: Degraded

Soil Type: Yellow-grey sand

Landform: Gentle slope up to the north



QUADRAT (10 x 10m)

SPECIES	HEIGHT (m)	COVER (%)
<i>Allocasuarina fraseriana</i>	7	10
<i>Eucalyptus marginata</i>	5	5
<i>Banksia attenuata</i>	5	5
* <i>Ehrharta calycina</i>	1.2	20
<i>Opercularia hispidula</i>	1	5
<i>Macrozamia fraseri</i>	1	<1
<i>Hibbertia hypericoides</i>	0.5	10
<i>Burchardia congesta</i>	0.5	<1
<i>Petrophile linearis</i>	0.4	<1
<i>Eryngium pinnatifidum</i>	0.4	<1
<i>Tetraria octandra</i>	0.4	<1
<i>Acacia pulchella</i>	0.4	<1
<i>Lepidosperma pubisquameum</i>	0.4	<1
* <i>Lolium perenne</i>	0.4	<1
<i>Dasypogon bromeliifolius</i>	0.4	<1
* <i>Briza maxima</i>	0.3	25
<i>Chamaescilla corymbosa</i>	0.3	2

SPECIES	HEIGHT (m)	COVER (%)
<i>Conostylis aculeata</i>	0.3	1
<i>Desmocladius flexuosus</i>	0.3	<1
<i>Ptilotus stirlingii</i>	0.3	<1
* <i>Ursinia anthemoides</i>	0.2	1
<i>Corynotheca micrantha</i>	0.2	<1
* <i>Briza minor</i>	0.2	<1
<i>Astroloma pallidum</i>	0.1	<1
* <i>Hypochaeris glabra</i>	Flat	<1
<i>Hardenbergia comptoniana</i>	Climber	<1
<i>Thysanotus patersonii</i>	Climber	<1

* introduced species

QUADRAT SE2

50 388858 E 6419240 N

Vegetation: *Eucalyptus gomphocephala* (Tuart) Woodland over
Banksia attenuata Low Open Woodland over weeds
Condition: Completely Degraded
Soil Type: Yellow-grey sand
Landform: Flat



QUADRAT (10 x 10m)

SPECIES	HEIGHT (m)	COVER (%)
<i>Eucalyptus gomphocephala</i>	15	25
<i>Banksia attenuata</i>	5	10
* <i>Ehrharta calycina</i>	0.8	70
* <i>Gomphocarpus fruticosus</i>	0.7	<1
* <i>Lolium perenne</i>	0.5	1
* <i>Bromus diandrus</i>	0.4	2
* <i>Zantedeschia aethiopica</i>	0.4	<1
* <i>Romulea rosea</i>	0.2	2
* <i>Trifolium campestre</i>	0.2	1
* <i>Melilotus indicus</i>	0.2	1
* <i>Sonchus oleraceus</i>	0.2	<1
* <i>Hypochaeris glabra</i>	Flat	<1

* introduced species

APPENDIX 13

DPaW Fauna Database Search

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Oxyura australis	BIRDATLAS2	10776 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	28.000000	3.000000	1999.000000
Oxyura australis	BIRDATLAS2	133701 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	17.000000	3.000000	2001.000000
Oxyura australis	BIRDATLAS2	142660 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands, Baldivis	500.000000	14.000000	4.000000	2001.000000
Oxyura australis	BIRDATLAS2	157128 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands, Baldivis	5000.000000	11.000000	2.000000	2001.000000
Oxyura australis	BIRDATLAS2	1924 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	15.000000	11.000000	1998.000000
Oxyura australis	BIRDATLAS2	198583 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	3.000000	2.000000	2002.000000
Oxyura australis	BIRDATLAS2	25602 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	24.000000	7.000000	1999.000000
Oxyura australis	BIRDATLAS2	283826 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	5.000000	1.000000	2003.000000
Oxyura australis	BIRDATLAS2	439388 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Westlands Baldavis	100.000000	26.000000	1.000000	2005.000000
Oxyura australis	BIRDATLAS2	448709 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard	100.000000	14.000000	3.000000	2004.000000
Oxyura australis	BIRDATLAS2	455021 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	13.000000	3.000000	2005.000000
Oxyura australis	BIRDATLAS2	456366 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Lake Wellard	100.000000	27.000000	5.000000	2005.000000
Oxyura australis	BIRDATLAS2	471032 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Lake Wellard	100.000000	26.000000	5.000000	2006.000000
Oxyura australis	BIRDATLAS2	487034 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Lake Wellard	100.000000	26.000000	1.000000	2007.000000
Oxyura australis	BIRDATLAS2	487047 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	5000.000000	27.000000	8.000000	2006.000000
Oxyura australis	BIRDATLAS2	497446 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellards Lagoon	100.000000	25.000000	8.000000	2008.000000
Oxyura australis	BIRDATLAS2	5003871 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetland	0.000000	28.000000	5.000000	2006.000000
Oxyura australis	BIRDATLAS2	5003872 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetland	0.000000	2.000000	7.000000	2006.000000
Oxyura australis	BIRDATLAS2	5007310 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	0.000000	4.000000	10.000000	2006.000000
Oxyura australis	BIRDATLAS2	5019363 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa Wellard Wetlands	0.000000	6.000000	12.000000	2007.000000
Oxyura australis	BIRDATLAS2	5057651 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	2.000000	2010.000000
Oxyura australis	BIRDATLAS2	5064278 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	27.000000	6.000000	2010.000000
Oxyura australis	BIRDATLAS2	5080156 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	3.000000	2011.000000
Oxyura australis	BIRDATLAS2	5103590 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	27.000000	4.000000	2012.000000
Oxyura australis	BIRDATLAS2	5130679 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	1.000000	8.000000	2013.000000
Oxyura australis	BIRDATLAS2	73092 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	1.000000	4.000000	2000.000000
Oxyura australis	BIRDATLAS2	770719 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Lake Wellard	0.000000	28.000000	11.000000	2008.000000
Oxyura australis	BIRDATLAS2	774620 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Wellard Wetlands	0.000000	23.000000	4.000000	2010.000000
Oxyura australis	BIRDATLAS2	9334 216	24328.000000	Anatidae	Oxyura	australis		Gould	Blue-billed Duck	Animalia	4	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	14.000000	2.000000	1999.000000
Actitis hypoleucos	BIRDATLAS2	5000209 157	41323.000000	Scolopacidae	Actitis	hypoleucos		Linnaeus	Common Sandpiper	Animalia	IA	BIRD	Observational		WARNBRO	Applecross Jetty	0.000000	31.000000	8.000000	2005.000000
Actitis hypoleucos	BIRDATLAS2	5019363 157	41323.000000	Scolopacidae	Actitis	hypoleucos		Linnaeus	Common Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa Wellard Wetlands	0.000000	6.000000	12.000000	2007.000000
Actitis hypoleucos	BIRDATLAS2	5057651 157	41323.000000	Scolopacidae	Actitis	hypoleucos		Linnaeus	Common Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	2.000000	2010.000000
Actitis hypoleucos	BIRDATLAS2	770719 157	41323.000000	Scolopacidae	Actitis	hypoleucos		Linnaeus	Common Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	Lake Wellard	0.000000	28.000000	11.000000	2008.000000
Apus pacificus	BIRDATLAS2	58174 335	25554.000000	Apodidae	Apus	pacificus		(Latham)	Fork-tailed Swift	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	16.000000	1.000000	2000.000000
Ardea ibis	BIRDATLAS2	5003871 977	25558.000000	Ardeidae	Ardea	ibis		Linnaeus	Cattle Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetland	0.000000	28.000000	5.000000	2006.000000
Ardea ibis	BIRDATLAS2	5064278 977	25558.000000	Ardeidae	Ardea	ibis		Linnaeus	Cattle Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	27.000000	6.000000	2010.000000
Ardea modesta	BIRDATLAS2	133701 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	17.000000	3.000000	2001.000000
Ardea modesta	BIRDATLAS2	142660 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands, Baldivis	500.000000	14.000000	4.000000	2001.000000
Ardea modesta	BIRDATLAS2	157128 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands, Baldivis	5000.000000	11.000000	2.000000	2001.000000
Ardea modesta	BIRDATLAS2	262146 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		KERALUP	Lake Amarillo	0.000000	24.000000	2.000000	2002.000000
Ardea modesta	BIRDATLAS2	262321 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup	500.000000	18.000000	1.000000	2002.000000
Ardea modesta	BIRDATLAS2	271045 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		WAIKIKI	Lake Walyungup	500.000000	23.000000	4.000000	2002.000000
Ardea modesta	BIRDATLAS2	198583 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	3.000000	2.000000	2002.000000
Ardea modesta	BIRDATLAS2	270935 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Welland Wetlands	500.000000	6.000000	1.000000	2002.000000
Ardea modesta	BIRDATLAS2	270954 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetland	100.000000	6.000000	1.000000	2002.000000
Ardea modesta	BIRDATLAS2	283898 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	17.000000	11.000000	2002.000000
Ardea modesta	BIRDATLAS2	289373 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard wetlands	0.000000	12.000000	1.000000	2003.000000
Ardea modesta	BIRDATLAS2	286592 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		SECRET HARBOUR	Serpentine River reserve	0.000000	23.000000	7.000000	2002.000000
Ardea modesta	BIRDATLAS2	442641 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Lake Wellard	100.000000	26.000000	3.000000	2004.000000
Ardea modesta	BIRDATLAS2	456365 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		WARNBRO	lake Walyungup	100.000000	28.000000	4.000000	2005.000000
Ardea modesta	BIRDATLAS2	448709 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard	100.000000	14.000000	3.000000	2004.000000
Ardea modesta	BIRDATLAS2	455021 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	13.000000	3.000000	2005.000000
Ardea modesta	BIRDATLAS2	5029568 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup Rockingham	0.000000	25.000000	6.000000	2008.000000
Ardea modesta	BIRDATLAS2	497446 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellards Lagoon	100.000000	25.000000	8.000000	2008.000000
Ardea modesta	BIRDATLAS2	5003871 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetland	0.000000	28.000000	5.000000	2006.000000
Ardea modesta	BIRDATLAS2	5003872 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetland	0.000000	2.000000	7.000000	2006.000000
Ardea modesta	BIRDATLAS2	5007310 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	0.000000	4.000000	10.000000	2006.000000
Ardea modesta	BIRDATLAS2	5022736 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	7.000000	3.000000	2008.000000

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Ardea modesta	BIRDATLAS2	5057651 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	2.000000	2010.000000
Ardea modesta	BIRDATLAS2	5064278 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	27.000000	6.000000	2010.000000
Ardea modesta	BIRDATLAS2	5080156 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	3.000000	2011.000000
Ardea modesta	BIRDATLAS2	5103590 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	27.000000	4.000000	2012.000000
Ardea modesta	BIRDATLAS2	5130679 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	1.000000	8.000000	2013.000000
Ardea modesta	BIRDATLAS2	63397 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa Wellard Wetlands, Baldivis	100.000000	27.000000	2.000000	2000.000000
Ardea modesta	BIRDATLAS2	67813 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	500.000000	10.000000	1.000000	2000.000000
Ardea modesta	BIRDATLAS2	770719 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Lake Wellard	0.000000	28.000000	11.000000	2008.000000
Ardea modesta	BIRDATLAS2	770720 187	41324.000000	Ardeidae	Ardea	modesta		J.E. Gray	Eastern Great Egret	Animalia	IA	BIRD	Observational		BALDIVIS	Lake Wellard	0.000000	26.000000	6.000000	2009.000000
Calidris acuminata	BIRDATLAS2	283898 163	24779.000000	Scolopacidae	Calidris	acuminata		(Horsfield)	Sharp-tailed Sandpiper	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	17.000000	11.000000	2002.000000
Calidris acuminata	BIRDATLAS2	289814 163	24779.000000	Scolopacidae	Calidris	acuminata		(Horsfield)	Sharp-tailed Sandpiper	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	20.000000	10.000000	2001.000000
Calidris acuminata	BIRDATLAS2	455021 163	24779.000000	Scolopacidae	Calidris	acuminata		(Horsfield)	Sharp-tailed Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	13.000000	3.000000	2005.000000
Calidris acuminata	BIRDATLAS2	5103604 163	24779.000000	Scolopacidae	Calidris	acuminata		(Horsfield)	Sharp-tailed Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	31.000000	8.000000	2010.000000
Calidris ruficollis	BIRDATLAS2	190786 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup	500.000000	20.000000	10.000000	2001.000000
Calidris ruficollis	BIRDATLAS2	262321 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup	500.000000	18.000000	1.000000	2002.000000
Calidris ruficollis	BIRDATLAS2	271045 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		WAIKIKI	Lake Walyungup	500.000000	23.000000	4.000000	2002.000000
Calidris ruficollis	BIRDATLAS2	283898 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	17.000000	11.000000	2002.000000
Calidris ruficollis	BIRDATLAS2	289814 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	20.000000	10.000000	2001.000000
Calidris ruficollis	BIRDATLAS2	286596 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		WAIKIKI	Lake Walyungup	500.000000	9.000000	10.000000	2002.000000
Calidris ruficollis	BIRDATLAS2	286592 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		SECRET HARBOUR	Serpentine River reserve	0.000000	23.000000	7.000000	2002.000000
Calidris ruficollis	BIRDATLAS2	456365 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		WARNBRO	lake Walyungup	100.000000	28.000000	4.000000	2005.000000
Calidris ruficollis	BIRDATLAS2	455021 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	13.000000	3.000000	2005.000000
Calidris ruficollis	BIRDATLAS2	487034 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		BALDIVIS	Lake Wellard	100.000000	26.000000	1.000000	2007.000000
Calidris ruficollis	BIRDATLAS2	5103604 162	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	31.000000	8.000000	2010.000000
Calidris ruficollis	WAM_BIRDS	urn:lsid:taxonomy.org.au:AVIF:16316	24788.000000	Scolopacidae	Calidris	ruficollis		(Pallas)	Red-necked Stint	Animalia	IA	BIRD	Specimen		COOLOONGUP	Cooloongup Lake; White Lake, 4 kilometres ESE of Rockingham	0.000000	28.000000	11.000000	1979.000000
Haliaeetus leucogaster	BIRDATLAS2	33880 226	24293.000000	Accipitridae	Haliaeetus	leucogaster		(Gmelin)	White-bellied Sea-Eagle	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	23.000000	8.000000	1999.000000
Haliaeetus leucogaster	BIRDATLAS2	63397 226	24293.000000	Accipitridae	Haliaeetus	leucogaster		(Gmelin)	White-bellied Sea-Eagle	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa Wellard Wetlands, Baldivis	100.000000	27.000000	2.000000	2000.000000
Limosa lapponica	BIRDATLAS2	286592 153	30932.000000	Scolopacidae	Limosa	lapponica		(Linnaeus)	Bar-tailed Godwit	Animalia	IA	BIRD	Observational		SECRET HARBOUR	Serpentine River reserve	0.000000	23.000000	7.000000	2002.000000
Merops ornatus	BIRDATLAS2	218661 329	24598.000000	Meropidae	Merops	ornatus		Latham	Rainbow Bee-eater	Animalia	IA	BIRD	Observational		BALDIVIS	Baldivis Children's Forest	100.000000	20.000000	11.000000	2005.000000
Merops ornatus	BIRDATLAS2	218857 329	24598.000000	Meropidae	Merops	ornatus		Latham	Rainbow Bee-eater	Animalia	IA	BIRD	Observational		BALDIVIS	Baldivis Children's Forest	100.000000	18.000000	1.000000	2006.000000
Merops ornatus	BIRDATLAS2	439388 329	24598.000000	Meropidae	Merops	ornatus		Latham	Rainbow Bee-eater	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Westlands Baldivis	100.000000	26.000000	1.000000	2005.000000
Merops ornatus	BIRDATLAS2	58174 329	24598.000000	Meropidae	Merops	ornatus		Latham	Rainbow Bee-eater	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	16.000000	1.000000	2000.000000
Merops ornatus	FAUNASURVEY	547136	24598.000000	Meropidae	Merops	ornatus		Latham	Rainbow Bee-eater	Animalia	IA	Birds	Survey	1	BALDIVIS	Baldivis - Tamworth Reservoir	1.000000	4.000000	12.000000	2012.000000
Numenius madagascari	TFAUNA	3836	0.000000	Scolopacidae	Numenius	madagascariensis		Linnaeus 1766	Eastern Curlew	Animalia	IA	Birds	Day sighting		COOLOONGUP	Rockingham area, and "White Lake"	1000.000000	1.000000	1.000000	1938.000000
Numenius madagascari	TFAUNA	3853	0.000000	Scolopacidae	Numenius	madagascariensis		Linnaeus 1766	Eastern Curlew	Animalia	IA	Birds	Day sighting		BALDIVIS	Rockingham Lakes	10000.000000	1.000000	1.000000	1948.000000
Pluvialis squatarola	BIRDATLAS2	286592 136	24383.000000	Charadriidae	Pluvialis	squatarola		(Linnaeus)	Grey Plover	Animalia	IA	BIRD	Observational		SECRET HARBOUR	Serpentine River reserve	0.000000	23.000000	7.000000	2002.000000
Tringa glareola	BIRDATLAS2	5058583 154	24806.000000	Scolopacidae	Tringa	glareola		Linnaeus	Wood Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	18.000000	3.000000	2010.000000
Tringa glareola	BIRDATLAS2	5080156 154	24806.000000	Scolopacidae	Tringa	glareola		Linnaeus	Wood Sandpiper	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	3.000000	2011.000000
Tringa nebularia	BIRDATLAS2	10776 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	28.000000	3.000000	1999.000000
Tringa nebularia	BIRDATLAS2	133701 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	17.000000	3.000000	2001.000000
Tringa nebularia	BIRDATLAS2	190785 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup	500.000000	26.000000	9.000000	2001.000000
Tringa nebularia	BIRDATLAS2	262321 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup	500.000000	18.000000	1.000000	2002.000000
Tringa nebularia	BIRDATLAS2	271045 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		WAIKIKI	Lake Walyungup	500.000000	23.000000	4.000000	2002.000000
Tringa nebularia	BIRDATLAS2	198583 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	3.000000	2.000000	2002.000000
Tringa nebularia	BIRDATLAS2	270935 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Welland Wetlands	500.000000	6.000000	1.000000	2002.000000
Tringa nebularia	BIRDATLAS2	270954 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetland	100.000000	6.000000	1.000000	2002.000000
Tringa nebularia	BIRDATLAS2	283898 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	17.000000	11.000000	2002.000000
Tringa nebularia	BIRDATLAS2	439388 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Westlands Baldivis	100.000000	26.000000	1.000000	2005.000000
Tringa nebularia	BIRDATLAS2	456365 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		WARNBRO	lake Walyungup	100.000000	28.000000	4.000000	2005.000000
Tringa nebularia	BIRDATLAS2	455021 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	13.000000	3.000000	2005.000000

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Tringa nebularia	BIRDATLAS2	5029568 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		WARNBRO	Lake Walyungup Rockingham	0.000000	25.000000	6.000000	2008.000000
Tringa nebularia	BIRDATLAS2	5007310 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	0.000000	4.000000	10.000000	2006.000000
Tringa nebularia	BIRDATLAS2	5022736 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	7.000000	3.000000	2008.000000
Tringa nebularia	BIRDATLAS2	5057651 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	2.000000	2010.000000
Tringa nebularia	BIRDATLAS2	5058583 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	18.000000	3.000000	2010.000000
Tringa nebularia	BIRDATLAS2	5064278 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	wellard wetlands east side	0.000000	27.000000	6.000000	2010.000000
Tringa nebularia	BIRDATLAS2	5103604 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	31.000000	8.000000	2010.000000
Tringa nebularia	BIRDATLAS2	9334 158	24808.000000	Scolopacidae	Tringa	nebularia		(Gunnerus)	Common Greenshank	Animalia	IA	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	14.000000	2.000000	1999.000000
Ctenotus gemmula (Sw: TFAUNA		16723	0.000000	Scincidae	Ctenotus	gemmula	(Swan Coastal Plain popn)	Storr 1974		Animalia	P3	Reptiles	Caught or trapped	2	BALDIVIS	Baldivis Children's Forest, Mandurah Road, Baldivis. Crown Reserve no.30269 City of Rockingham	300.000000	1.000000	9.000000	2004.000000
Lerista lineata	FAUNASURVEY	725484	25147.000000	Scincidae	Lerista	lineata		Bell	Perth Lined Slider	Animalia	P3	Reptiles	Survey	3	BALDIVIS	Baldivis Children's Forest - Site 2	10000.000000	29.000000	11.000000	2013.000000
Lerista lineata	FAUNASURVEY	725485	25147.000000	Scincidae	Lerista	lineata		Bell	Perth Lined Slider	Animalia	P3	Reptiles	Survey	1	BALDIVIS	Baldivis Children's Forest - Site 3	10000.000000	29.000000	11.000000	2013.000000
Lerista lineata	FAUNASURVEY	725486	25147.000000	Scincidae	Lerista	lineata		Bell	Perth Lined Slider	Animalia	P3	Reptiles	Survey	1	BALDIVIS	Baldivis Children's Forest - Site 6	10000.000000	29.000000	11.000000	2013.000000
Lerista lineata	TFAUNA	15066	0.000000	Scincidae	Lerista	lineata		Bell 1883	Lined Skink	Animalia	P3	Reptiles	Caught or trapped	1	WARNBRO	Cocos Park, Warnbro	1000.000000	6.000000	1.000000	2003.000000
Lerista lineata	TFAUNA	15067	0.000000	Scincidae	Lerista	lineata		Bell 1883	Lined Skink	Animalia	P3	Reptiles	Caught or trapped	1	WARNBRO	Cocos Park, Warnbro	1000.000000	1.000000	1.000000	2003.000000
Lerista lineata	TFAUNA	15083	0.000000	Scincidae	Lerista	lineata		Bell 1883	Lined Skink	Animalia	P3	Reptiles	Caught or trapped	2	KARNUP	Anstey Swamp, Rockingham Lakes Regional Park	1000.000000	8.000000	11.000000	2001.000000
Charadrius rubricollis	TFAUNA	3172	0.000000	Charadriidae	Charadrius	rubricollis		Gmelin 1789	Hooded Plover	Animalia	P4	Birds	Day sighting	2	COOLOONGUP	Cooloongup, City of Rockingham	1000.000000	5.000000	4.000000	1997.000000
Charadrius rubricollis	TFAUNA	3177	0.000000	Charadriidae	Charadrius	rubricollis		Gmelin 1789	Hooded Plover	Animalia	P4	Birds	Day sighting	1	COOLOONGUP	Lake Cooloongup, City of Rockingham	1000.000000	15.000000	2.000000	1997.000000
Charadrius rubricollis	TFAUNA	3688	0.000000	Charadriidae	Charadrius	rubricollis		Gmelin 1789	Hooded Plover	Animalia	P4	Birds	Day sighting	1	COOLOONGUP	Cooloongup Lake, City of Rockingham	1000.000000	10.000000	1.000000	1998.000000
Ixobrychus minutus	TFAUNA	3838	0.000000	Ardeidae	Ixobrychus	minutus		Linnaeus 1766	Little Bittern	Animalia	P4	Birds	Day sighting	2	COOLOONGUP	Rockingham area, "White Lake"	1000.000000	1.000000	9.000000	1939.000000
Synemon gratiosa	FAUNASURVEY	193780	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	9.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	193781	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	3	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	9.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	193782	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	9.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	193783	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	9.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	193784	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	16.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	193785	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy	100.000000	16.000000	3.000000	2011.000000
Synemon gratiosa	FAUNASURVEY	554507	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554508	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554509	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554510	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554511	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554512	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554513	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Lots 14 & 17	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554515	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554516	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554517	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000

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Synemon gratiosa	FAUNASURVEY	554518	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554519	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554520	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	5.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554547	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554548	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554549	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Scientific Park	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554555	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Offset	1.000000	12.000000	3.000000	2012.000000
Synemon gratiosa	FAUNASURVEY	554556	33992.000000	Castniidae	Synemon	gratiosa		0	Graceful Sunmoth	Animalia	P4	Insects	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Offset	1.000000	12.000000	3.000000	2012.000000
Isoodon obesulus	FAUNASURVEY	911165	25478.000000	Peramelidae	Isoodon	obesulus		(Shaw)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	4	WARNBRO	LakeWalyungup	3000.000000	30.000000	4.000000	2014.000000
Isoodon obesulus	FAUNASURVEY	911164	25478.000000	Peramelidae	Isoodon	obesulus		(Shaw)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	LakeCoolongup	3000.000000	23.000000	4.000000	2014.000000
Isoodon obesulus fusciv	FAUNASURVEY	73675	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern brown bandicoot	Animalia	P5	Mammals	Survey	3	KARNUP	Perth - Anstey Swamp	3000.000000	15.000000	9.000000	2009.000000
Isoodon obesulus fusciv	FAUNASURVEY	463486	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Safety_Bay - Walyungup_Lake	100.000000	14.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463685	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Safety_Bay - Walyungup_Lake	100.000000	18.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463686	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Safety_Bay - Walyungup_Lake	100.000000	18.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463501	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	14.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463502	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	14.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463503	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	14.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463504	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	12.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463505	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	12.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463506	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	11.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463507	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	13.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463508	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	13.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463509	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	12.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463510	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	13.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463511	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	11.000000	10.000000	2011.000000
Isoodon obesulus fusciv	FAUNASURVEY	463675	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	17.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463676	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463677	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	18.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463678	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463679	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	17.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463680	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463681	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	17.000000	5.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	463682	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	15.000000	5.000000	2012.000000

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Isoodon obesulus fusciv FAUNASURVEY		463683	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463684	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	18.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463687	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463688	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	17.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463689	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463690	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463691	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	17.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		463692	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Safety_Bay - Cooloongup_Lake	100.000000	18.000000	5.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		554503	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot	Animalia	P5	Mammals	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Business Park	2.000000	3.000000	6.000000	2011.000000
Isoodon obesulus fusciv FAUNASURVEY		716397	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	16.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716398	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716399	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716400	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716401	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716402	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716403	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716404	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716405	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716406	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716407	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716408	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716409	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716410	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716411	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716412	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716413	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	14.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716414	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Isoodon obesulus fusciv FAUNASURVEY		716415	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716416	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716425	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	23.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716428	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716429	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716430	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716431	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716432	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716433	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716434	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716435	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WARNBRO	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716315	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716316	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716317	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716318	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716319	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716320	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716321	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716322	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	16.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716323	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	15.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716324	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716325	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716326	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716327	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716328	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000

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Isoodon obesulus fusciv FAUNASURVEY		716354	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716355	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716356	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716357	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716358	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716359	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716360	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716361	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716362	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716363	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716364	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716365	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716366	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	16.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716367	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716368	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716369	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716370	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716371	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	14.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716372	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716373	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716374	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716375	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716376	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716377	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716378	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000

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Isoodon obesulus fusciv FAUNASURVEY		716379	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716380	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716381	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	14.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716382	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716383	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	14.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716384	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716385	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716386	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716387	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716388	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	13.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716389	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716390	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716391	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	31.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716392	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716393	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	2.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716394	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716395	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716396	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	1.000000	8.000000	2013.000000
Isoodon obesulus fusciv FAUNASURVEY		716417	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	22.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716418	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	22.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716419	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	20.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716420	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	22.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716421	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	20.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716422	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	22.000000	11.000000	2012.000000
Isoodon obesulus fusciv FAUNASURVEY		716423	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	20.000000	11.000000	2012.000000

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Isoodon obesulus fusciv	FAUNASURVEY	716424	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	22.000000	11.000000	2012.000000
Isoodon obesulus fusciv	FAUNASURVEY	716426	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv	FAUNASURVEY	716427	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	Southern Brown Bandicoot, Quenda	Animalia	P5	Mammals	Survey	1	WAIKIKI	Warnbro - Walyungp_Coolongup Lakes	100.000000	30.000000	7.000000	2013.000000
Isoodon obesulus fusciv	FAUNASURVEY	722643	24153.000000	Peramelidae	Isoodon	obesulus	fusciventer	(Gray)	quenda	Animalia	P5	Mammals	Survey	1	BALDIVIS	SwanCoastalPlain - Baldivis	10000.000000	1.000000	6.000000	2013.000000
Isoodon obesulus fusciv	TFAUNA	6477	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Caught or trapped	3	KARNUP	Anstey Swamp, Karnup (Site 4)	1000.000000	1.000000	11.000000	2001.000000
Isoodon obesulus fusciv	TFAUNA	14538	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	HOPELAND	Yangedi Road verge, Hopeland	10000.000000	23.000000	3.000000	2007.000000
Isoodon obesulus fusciv	TFAUNA	16722	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Caught or trapped	13	BALDIVIS	Baldivis Children's Forest, Mandurah Road, Baldivis. Crown Reserve no.30269 City of Rockingham	300.000000	1.000000	9.000000	2004.000000
Isoodon obesulus fusciv	TFAUNA	23246	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Caught or trapped	13	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	1.000000	9.000000	2004.000000
Isoodon obesulus fusciv	TFAUNA	23235	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Night sighting	1	BALDIVIS	18 Herbert Meander, Baldivis	1000.000000	8.000000	4.000000	2013.000000
Isoodon obesulus fusciv	TFAUNA	23406	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Dead	1	BALDIVIS	reserve 41683, just north of 309 Young Road	1000.000000	1.000000	6.000000	2013.000000
Isoodon obesulus fusciv	TFAUNA	24874	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	BALDIVIS	Near the junction of Mandurah rd and Sixty Eight Road. Near Lake Walyungup, Rockingham.	1000.000000	30.000000	9.000000	2013.000000
Isoodon obesulus fusciv	TFAUNA	67919	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	PORT KENNEDY	28 La Estrada Way, Port Kennedy	1000.000000	1.000000	6.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	68045	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	PORT KENNEDY	Bethanie Waters, 112 Proserpine Loop, Port Kennedy	1000.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	68421	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	2	WARNBRO	Ennis Avenue, Warnbro -read comments	1000.000000	10.000000	7.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	67764	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	BALDIVIS	Cnr Felton Parkway and Taggart Street	1000.000000	1.000000	10.000000	2011.000000
Isoodon obesulus fusciv	TFAUNA	67840	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Night sighting	1	BALDIVIS	Cnr of Clyde Ave & Nairn Dr, Baldivis	1000.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	67888	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	BALDIVIS	1 Whittingham Lane, Woody Grove, Baldivis	1000.000000	27.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	68052	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Night sighting	2	BALDIVIS	40 Bearfoot Rd, Baldivis	1000.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	68294	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Night sighting	1	BALDIVIS	18 Makin Rd, Baldivis	1000.000000	16.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	67978	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	KARNUP	8 Swallow Hill Court, Karnup	1000.000000	15.000000	5.000000	2012.000000
Isoodon obesulus fusciv	TFAUNA	80170	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	BALDIVIS	Felton Parkway	1000.000000	12.000000	11.000000	2013.000000
Isoodon obesulus fusciv	TFAUNA	80540	0.000000	Peramelidae	Isoodon	obesulus	fusciventer	Gray 1841	Quenda	Animalia	P5	Mammals	Day sighting	1	BALDIVIS	12 Foxton Green Baldivis	1000.000000	3.000000	6.000000	2015.000000
Falco peregrinus	BIRDATLAS2	58174 237	25624.000000	Falconidae	Falco	peregrinus		Tunstall	Peregrine Falcon	Animalia	S	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	16.000000	1.000000	2000.000000
Falco peregrinus	BIRDATLAS2	9334 237	25624.000000	Falconidae	Falco	peregrinus		Tunstall	Peregrine Falcon	Animalia	S	BIRD	Observational		BALDIVIS	Alcoa wetlands, Baldivis	100.000000	14.000000	2.000000	1999.000000
Morelia spilota imbricata	TFAUNA	11352	0.000000	Boidae	Morelia	spilota	imbricata	Lacepede 1804	Carpet Python	Animalia	S	Reptiles	Caught or trapped	1	WARNBRO	10 Kilmeny Loop, Warnbro	300.000000	26.000000	2.000000	2006.000000
Calidris ferruginea	BIRDATLAS2	283898 161	24784.000000	Scolopacidae	Calidris	ferruginea		(Pontoppidan)	Curlew Sandpiper	Animalia	T	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	17.000000	11.000000	2002.000000
Calidris ferruginea	BIRDATLAS2	289814 161	24784.000000	Scolopacidae	Calidris	ferruginea		(Pontoppidan)	Curlew Sandpiper	Animalia	T	BIRD	Observational		COOLOONGUP	Lake Cooloongup	500.000000	20.000000	10.000000	2001.000000
Calidris ferruginea	WAM_BIRDS	urn:lsid:taxonomy.org.au:AVIF:16314	24784.000000	Scolopacidae	Calidris	ferruginea		(Pontoppidan)	Curlew Sandpiper	Animalia	T	BIRD	Specimen		COOLOONGUP	Cooloongup Lake; White Lake, 4 kilometres ESE of Rockingham	0.000000	28.000000	11.000000	1979.000000

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Calidris ferruginea	WAM_BIRDS	urn:lsid:taxonomy.org.au:AVIF:16315	24784.000000	Scolopacidae	Calidris	ferruginea		(Pontoppidan)	Curlew Sandpiper	Animalia	T	BIRD	Specimen		COOLOONGUP	Cooloongup Lake; White Lake, 4 kilometres ESE of Rockingham	0.000000	28.000000	11.000000	1979.000000
Calyptorhynchus banksi	FAUNASURVEY	554483	24731.000000	Psittacidae	Calyptorhynchus	banksii	naso	Gould	Forest Red-tailed Black-Cockatoo	Animalia	T	Birds	Survey	1	PORT KENNEDY	Port Kennedy - Port Kennedy Business Park	2.000000	3.000000	6.000000	2011.000000
Calyptorhynchus banksi	FAUNASURVEY	547125	24731.000000	Psittacidae	Calyptorhynchus	banksii	naso	Gould	Forest Red-tailed Black-Cockatoo	Animalia	T	Birds	Survey	2	BALDIVIS	Baldivis - Tamworth Reservoir	1.000000	4.000000	12.000000	2012.000000
Calyptorhynchus banksi	FAUNASURVEY	547126	24731.000000	Psittacidae	Calyptorhynchus	banksii	naso	Gould	Forest Red-tailed Black-Cockatoo	Animalia	T	Birds	Survey	10	BALDIVIS	Baldivis - Tamworth Reservoir	1.000000	4.000000	12.000000	2012.000000
Calyptorhynchus banksi	TFAUNA	19285	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	4	BALDIVIS	Baldivis Children's Forest	1000.000000	2.000000	12.000000	2009.000000
Calyptorhynchus banksi	TFAUNA	23236	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	1.000000	3.000000	2006.000000
Calyptorhynchus banksi	TFAUNA	23237	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	23.000000	5.000000	2010.000000
Calyptorhynchus banksi	TFAUNA	23238	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	29.000000	6.000000	2010.000000
Calyptorhynchus banksi	TFAUNA	23239	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	15.000000	8.000000	2010.000000
Calyptorhynchus banksi	TFAUNA	23240	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	10.000000	10.000000	2010.000000
Calyptorhynchus banksi	TFAUNA	23241	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	21.000000	10.000000	2012.000000
Calyptorhynchus banksi	TFAUNA	22337	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	7	BALDIVIS	Baldivis	1000.000000	1.000000	7.000000	2000.000000
Calyptorhynchus banksi	TFAUNA	22338	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	10	BALDIVIS	Baldivis	1000.000000	1.000000	3.000000	2002.000000
Calyptorhynchus banksi	TFAUNA	22559	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	5	BALDIVIS	Baldivis	1000.000000	16.000000	3.000000	2006.000000
Calyptorhynchus banksi	TFAUNA	22333	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	3	KARNUP	Amarillo Drive, Karnup	1000.000000	12.000000	4.000000	2002.000000
Calyptorhynchus banksi	TFAUNA	22560	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	1	KARNUP	Karnup area	1000.000000	25.000000	3.000000	2006.000000
Calyptorhynchus banksi	TFAUNA	80373	0.000000	Psittacidae	Calyptorhynchus	banksii	naso	Latham 1790	Forest Red-tailed Black Cockatoo	Animalia	T	Birds	Day sighting	17	BALDIVIS	Yulbah Loop and Yate Crt or 61 Yulbah Loop	1000.000000	6.000000	4.000000	2014.000000
Calyptorhynchus latiros	BIRDATLAS2	218422 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Karnup Nature Reserve and Tramway Reserve	100.000000	27.000000	11.000000	2003.000000
Calyptorhynchus latiros	BIRDATLAS2	218424 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Karnup Nature Reserve and Tramway Reserve	100.000000	15.000000	2.000000	2004.000000
Calyptorhynchus latiros	BIRDATLAS2	218661 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Baldivis Children's Forest	100.000000	20.000000	11.000000	2005.000000
Calyptorhynchus latiros	BIRDATLAS2	218840 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Woodleigh Grove Reserve	100.000000	24.000000	7.000000	2005.000000
Calyptorhynchus latiros	BIRDATLAS2	420283 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Karnup NR	100.000000	2.000000	8.000000	2003.000000

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Calyptorhynchus latiros	BIRDATLAS2	420285 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Churcher Road	100.000000	2.000000	8.000000	2003.000000
Calyptorhynchus latiros	BIRDATLAS2	5080156 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	19.000000	3.000000	2011.000000
Calyptorhynchus latiros	BIRDATLAS2	5103590 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	27.000000	4.000000	2012.000000
Calyptorhynchus latiros	BIRDATLAS2	5103604 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Wellard Wetlands	100.000000	31.000000	8.000000	2010.000000
Calyptorhynchus latiros	BIRDATLAS2	5130679 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	wellard wetlands	0.000000	1.000000	8.000000	2013.000000
Calyptorhynchus latiros	BIRDATLAS2	770720 794	24734.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Observational		BALDIVIS	Lake Wellard	0.000000	26.000000	6.000000	2009.000000
Calyptorhynchus latiros	TFAUNA	21382	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	300	KERALUP	Armarillo	10000.000000	1.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	20071	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	346	BALDIVIS	Cnr Eighty Rd and Sixty Eight Rd in the pine plantation (Mark Blythman 12/01/10)	1000.000000	7.000000	4.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	21376	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	200	BALDIVIS	Baldivis	10000.000000	21.000000	2.000000	2005.000000
Calyptorhynchus latiros	TFAUNA	21378	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	230	BALDIVIS	Near Baldivis	10000.000000	10.000000	3.000000	2005.000000
Calyptorhynchus latiros	TFAUNA	21380	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	600	BALDIVIS	Baldivis	10000.000000	2.000000	4.000000	2005.000000
Calyptorhynchus latiros	TFAUNA	21383	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	200	BALDIVIS	Baldivis	1000.000000	25.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	20126	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	3	KARNUP	Karnup Pine Plantation	1000.000000	8.000000	5.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	21381	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	1200	KARNUP	Karnup	10000.000000	4.000000	4.000000	2005.000000
Calyptorhynchus latiros	TFAUNA	21384	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	574	KARNUP	Karnup	10000.000000	9.000000	4.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23242	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	5.000000	7.000000	2004.000000
Calyptorhynchus latiros	TFAUNA	23243	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	9.000000	11.000000	2007.000000
Calyptorhynchus latiros	TFAUNA	23244	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	24.000000	5.000000	2009.000000
Calyptorhynchus latiros	TFAUNA	23245	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	0	WARNBRO	Baldivis Children's Forest, 1399 Mandurah road, Baldivis	1000.000000	10.000000	10.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	23571	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	53	BALDIVIS	Baldivis PP, Corner 68 and 80 roads	1000.000000	12.000000	2.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23656	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	1520	BALDIVIS	Karnup PP, corner of 68 and 80 roads	10000.000000	26.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23657	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	300	BALDIVIS	Karnup PP, corner of 68 and 80 roads	10000.000000	26.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23691	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	1000	BALDIVIS	Stakehill rd, Baldivis	1000.000000	26.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	24280	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	78	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	7.000000	4.000000	2011.000000
Calyptorhynchus latiros	TFAUNA	24281	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	2	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	4.000000	6.000000	2011.000000
Calyptorhynchus latiros	TFAUNA	24282	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	3	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	9.000000	7.000000	2011.000000
Calyptorhynchus latiros	TFAUNA	24296	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	31	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	11.000000	2.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24297	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	14	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	18.000000	2.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24298	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	503	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	8.000000	2.000000	2010.000000

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Calyptorhynchus latiros	TFAUNA	24299	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	285	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	14.000000	3.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24300	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	54	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	23.000000	3.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24301	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	7	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	30.000000	3.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24302	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	346	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	7.000000	4.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24303	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	92	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	17.000000	4.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24304	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	202	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	28.000000	4.000000	2010.000000
Calyptorhynchus latiros	TFAUNA	24305	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	3	BALDIVIS	2013 Site code is ROCBALR001	1000.000000	13.000000	6.000000	2011.000000
Calyptorhynchus latiros	TFAUNA	24306	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	2	BALDIVIS	2013 Site code is ROCBALR003	1000.000000	7.000000	10.000000	2012.000000
Calyptorhynchus latiros	TFAUNA	24307	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	4	BALDIVIS	2013 Site code is ROCBALR003	1000.000000	7.000000	4.000000	2013.000000
Calyptorhynchus latiros	TFAUNA	24308	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	5	BALDIVIS	2013 Site code is ROCBALR003	1000.000000	5.000000	5.000000	2013.000000
Calyptorhynchus latiros	TFAUNA	24309	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	40	BALDIVIS	2013 Site code is ROCBALR004	1000.000000	7.000000	4.000000	2011.000000
Calyptorhynchus latiros	TFAUNA	24310	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	22	BALDIVIS	2013 Site code is ROCBALR005	1000.000000	5.000000	5.000000	2013.000000
Calyptorhynchus latiros	TFAUNA	23530	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	2	KARNUP	Karnup Pine Plantation, south of Marri rd	1000.000000	4.000000	12.000000	2005.000000
Calyptorhynchus latiros	TFAUNA	23578	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	15	KARNUP	Karnup PP	1000.000000	12.000000	2.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23602	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	600	KARNUP	Karnup PP (east)	1000.000000	12.000000	2.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23603	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	250	KARNUP	Karnup PP (west)	1000.000000	12.000000	2.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	23692	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	4001	KARNUP	Karnup PP, off Stakehill rd, Baldivis	1000.000000	26.000000	3.000000	2006.000000
Calyptorhynchus latiros	TFAUNA	24311	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	3	KARNUP	2013 Site code is ROCKARR001	1000.000000	5.000000	5.000000	2010.000000

NAME	SOURCE_COD	SOURCE_ID	NAME_ID	FAMILY	GENUS	SPECIES	INFRANAME	AUTHOR	VERNACULAR	KINGDOM	CONSV_CODE	CLASS	METHOD	COUNT	LOCALITY	SITE_NAME	ACCURACY_M	DAY	MONTH	YEAR
Calyptorhynchus latiros TFAUNA		32965	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32966	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32967	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32968	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32969	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32970	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32971	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32972	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32973	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32974	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32975	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32976	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		32977	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Fifty Road, Baldivis	1000.000000	15.000000	2.000000	2009.000000
Calyptorhynchus latiros TFAUNA		33031	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Definite signs	1	BALDIVIS	Eighty Road, Baldivis	1000.000000	30.000000	10.000000	2008.000000
Calyptorhynchus latiros TFAUNA		33032	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	230	BALDIVIS	Eighty Road , Baldivis	1000.000000	10.000000	3.000000	2004.000000
Calyptorhynchus latiros TFAUNA		31048	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	574	KARNUP	Karnup Pine Plantation, Baldivis	1000.000000	9.000000	4.000000	2006.000000
Calyptorhynchus latiros TFAUNA		31049	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1200	KARNUP	Karnup	1000.000000	4.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		31050	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	574	KARNUP	Karnup	1000.000000	9.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		31051	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	574	KARNUP	Karnup	1000.000000	9.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		31052	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1200	KARNUP	Karnup	1000.000000	4.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		31053	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	600	KARNUP	Karnup	1000.000000	2.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		31054	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	600	KARNUP	Karnup	1000.000000	2.000000	4.000000	2005.000000
Calyptorhynchus latiros TFAUNA		35863	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1200	BALDIVIS	Baldivis at carrot farm	1000.000000	1.000000	2.000000	2010.000000
Calyptorhynchus latiros TFAUNA		35864	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1200	BALDIVIS	Baldivis at carrot farm	1000.000000	1.000000	2.000000	2010.000000
Calyptorhynchus latiros TFAUNA		35865	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1	BALDIVIS	Baldivis	1000.000000	1.000000	1.000000	2010.000000
Calyptorhynchus latiros TFAUNA		35867	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	200	BALDIVIS	Baldivis	1000.000000	21.000000	2.000000	2005.000000
Calyptorhynchus latiros TFAUNA		35868	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	200	BALDIVIS	Baldivis	1000.000000	21.000000	2.000000	2005.000000
Calyptorhynchus latiros TFAUNA		35869	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	200	BALDIVIS	Baldivis	1000.000000	10.000000	3.000000	2004.000000
Calyptorhynchus latiros TFAUNA		35870	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	200	BALDIVIS	Baldivis	1000.000000	10.000000	3.000000	2004.000000
Calyptorhynchus latiros TFAUNA		36241	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	300	BALDIVIS	Amarillo	1000.000000	1.000000	2.000000	2006.000000
Calyptorhynchus latiros TFAUNA		35866	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	1	KARNUP	Baldivis	1000.000000	1.000000	1.000000	2010.000000
Calyptorhynchus latiros TFAUNA		36240	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day Sighting	300	KARNUP	Amarillo	1000.000000	1.000000	3.000000	2006.000000
Calyptorhynchus latiros WAM_BIRDS	urn:lsid:taxono my.org.au:AVIF :38469	24734.000000	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Specimen		BALDIVIS	Baldivis	10000.000000	24.000000	10.000000	2012.000000
Calyptorhynchus latiros TFAUNA		80359	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby 1948	Carnaby's Cockatoo	Animalia	T	Birds	Day sighting	6	SECRET HARBOUR	Tuart Park Cnr Anstey Rd and Bluestone Parkway	1000.000000	6.000000	4.000000	2014.000000
Calyptorhynchus latiros WAM_BIRDS	urn:lsid:taxono my.org.au:AVIF :38294	24734.000000	0.000000	Psittacidae	Calyptorhynchus	latirostris		Carnaby	Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo	Animalia	T	BIRD	Specimen		KARNUP	Amarillo Drive Karnup	10000.000000	25.000000	3.000000	2012.000000
Numenius madagascari TFAUNA		3836	0.000000	Scolopacidae	Numenius	madagascariensis		Linnaeus 1766	Eastern Curlew	Animalia	T	Birds	Day sighting		COOLOONGUP	Rockingham area, and "White Lake"	1000.000000	1.000000	1.000000	1938.000000
Numenius madagascari TFAUNA		3853	0.000000	Scolopacidae	Numenius	madagascariensis		Linnaeus 1766	Eastern Curlew	Animalia	T	Birds	Day sighting		BALDIVIS	Rockingham Lakes	10000.000000	1.000000	1.000000	1948.000000
Phascogale tapoatafa ss TFAUNA		19420	0.000000	Dasyuridae	Phascogale	tapoatafa	ssp. (WAM M434)	Meyer 1793	Brush-tailed Phascogale, Wambenger	Animalia	T	Mammals	Day sighting	1	BALDIVIS	Pagaoni Swamp	1000.000000	12.000000	5.000000	2010.000000
Phascogale tapoatafa ss TFAUNA		79987	0.000000	Dasyuridae	Phascogale	tapoatafa	ssp. (WAM M434)	Meyer 1793	Brush-tailed Phascogale, Wambenger	Animalia	T	Mammals	Night sighting	1	HOPELAND	Lot 2 Henderson West Road, Hopeland	1000.000000	1.000000	11.000000	2013.000000
Phascogale tapoatafa ss TFAUNA		80091	0.000000	Dasyuridae	Phascogale	tapoatafa	ssp. (WAM M434)	Meyer 1793	Brush-tailed Phascogale, Wambenger	Animalia	T	Mammals	Day sighting	1	BALDIVIS	Rockingham region	1000.000000	1.000000	4.000000	2015.000000
Westralunio carteri FAUNASURVEY		432560	34113.000000	Hyriidae	Westralunio	carteri		0	Carters Freshwater Mussel	Animalia	T	Molluscs	Survey	30	BALDIVIS	Peel Drain - Peel Drain	100.000000	17.000000	3.000000	2011.000000

APPENDIX 14

Significant Tree Data

Tree Number	Species	Easting MGA zn50	Northing MGA zn50	Photo Number	Height (m)	Diameter (mm)	Secondary Branches (mm)	Notes (hollows, bees etc.)
1	Jarrah (<i>Eucalyptus marginata</i>)	388799	6419374	2691	6	62		Hollows and Spouts
2	Tuart (<i>Eucalyptus gomphocephala</i>)	388805	6419367	2692	14	56		No Hollows, Good Condition
3	Jarrah (<i>Eucalyptus marginata</i>)	388796	6419428	2695	12	82		No Hollows, Good Condition
4	Tuart (<i>Eucalyptus gomphocephala</i>)	388857	6419407	2696	14	85	72	No Hollows, Good Condition
5	Standing Dead Tree	388873	6419401	2697	11	97		Hollows and Spouts
6	Tuart (<i>Eucalyptus gomphocephala</i>)	388864	6419431	2700	14	56	4x5-10	No Hollows, Good Condition
7	Jarrah (<i>Eucalyptus marginata</i>)	388904	6419430	2701	14	78	41	No Hollows, Good Condition
8	Tuart (<i>Eucalyptus gomphocephala</i>)	388917	6419404	2702	12	102		No Hollows, Good Condition
9	Jarrah (<i>Eucalyptus marginata</i>)	388898	6419396	2703	10	67		No Hollows, Leaning
10	Standing Dead Tree	388896	6419388	2704	11	118		Hollows and Spouts
11	Tuart (<i>Eucalyptus gomphocephala</i>)	388883	6419367	2705	12	109		No Hollows, two narrow branches out of a large base
12	Standing Dead Tree	388893	6419360	2706	10	52		Potential Hollows and Spouts
13	Standing Dead Tree	388895	6419357	2707	12	86		Potential Hollows and Spouts
14	Jarrah (<i>Eucalyptus marginata</i>)	388926	6419356	2708	9	84	32/24/17/12/8	Main trunk dead - small trunks to sides, Poor Condition
15	Standing Dead Tree	388900	6419341	2709	12	108		Spout
16	Tuart (<i>Eucalyptus gomphocephala</i>)	388890	6419342	2710	12	92	44	Potential Hollows and Spouts
17	Jarrah (<i>Eucalyptus marginata</i>)	388839	6419324	2712	11	78	24/17/10/8	No Hollows, Good Condition
18	Jarrah (<i>Eucalyptus marginata</i>)	388884	6419319	2713	12	103		Hollows and Spouts
19	Jarrah (<i>Eucalyptus marginata</i>)	388868	6419322	2714	12	83		Potential Spout
20	Standing Dead Tree	388869	6419328	2715	10	64	5	Spout
21	Tuart (<i>Eucalyptus gomphocephala</i>)	388916	6419287	2717	16	112		No Hollows, Very Good Condition
22	Tuart (<i>Eucalyptus gomphocephala</i>)	388907	6419307	2718	14	81		No Hollows, Good Condition
23	Jarrah (<i>Eucalyptus marginata</i>)	388843	6419299	2719	14	81		No Hollows, Good Condition
24	Jarrah (<i>Eucalyptus marginata</i>)	388824	6419286	2720	12	74		No Hollows, Good Condition
25	Tuart (<i>Eucalyptus gomphocephala</i>)	388808	6419263	2721L	15	63	42	Hollow at Base, Fair Condition
26	Tuart (<i>Eucalyptus gomphocephala</i>)	388808	6419261	2721R	12	59		No Hollows, Good Condition
27	Tuart (<i>Eucalyptus gomphocephala</i>)	388806	6419231	2722	16	94	49/48	No Hollows, Good Condition
28	Tuart (<i>Eucalyptus gomphocephala</i>)	388818	6419214	2723	16	93		No Hollows, Good Condition
29	Tuart (<i>Eucalyptus gomphocephala</i>)	388809	6419207	2724	12	52		No Hollows, Good Condition
30	Tuart (<i>Eucalyptus gomphocephala</i>)	388845	6419247	2725	15	81		No Hollows, Good Condition
31	Tuart (<i>Eucalyptus gomphocephala</i>)	388858	6419238	2726R	15	93		No Hollows, Good Condition
32	Tuart (<i>Eucalyptus gomphocephala</i>)	388861	6419234	2726L	17	89	5/7/3	No Hollows, wrapped with chicken wire
33	Tuart (<i>Eucalyptus gomphocephala</i>)	388899	6419243	2727R	17	126	26	No Hollows, Very Good Condition
34	Tuart (<i>Eucalyptus gomphocephala</i>)	388900	6419243	2727L	11	88		No Hollows, Leaning
35	Tuart (<i>Eucalyptus gomphocephala</i>)	388910	6419254	2728	14	60		No Hollows, Leaning

Tree Number	Species	Easting MGA zn50	Northing MGA zn50	Photo Number	Height (m)	Diameter (mm)	Secondary Branches (mm)	Notes (hollows, bees etc.)
36	Tuart (<i>Eucalyptus gomphocephala</i>)	388902	6419214	2729	14	80	54	No Hollows, Good Condition
37	Tuart (<i>Eucalyptus gomphocephala</i>)	388925	6419162	2730	14	69		No Hollows, Good Condition
38	Tuart (<i>Eucalyptus gomphocephala</i>)	388932	6419153	2731	12	80		No Hollows, Fair Condition
39	Tuart (<i>Eucalyptus gomphocephala</i>)	388893	6419199	2733	14	108		No Hollows, Good Condition
40	Tuart (<i>Eucalyptus gomphocephala</i>)	388888	6419184	2732	11	74	32	No Hollows, Good Condition
41	Tuart (<i>Eucalyptus gomphocephala</i>)	388868	6419194	2734	15	100	42	No Hollows, Good Condition
42	Jarrah (<i>Eucalyptus marginata</i>)	388852	6419200	2735	11	57	29	No Hollows, Good Condition
43	Jarrah (<i>Eucalyptus marginata</i>)	388852	6419193	2736	12	69		No Hollows, Potential Spout, Leaning
44	Jarrah (<i>Eucalyptus marginata</i>)	388848	6419191	2737	14	83		No Hollows, Good Condition
45	Tuart (<i>Eucalyptus gomphocephala</i>)	388823	6419186	2739	10	114		Hollows and Spouts
46	Tuart (<i>Eucalyptus gomphocephala</i>)	388820	6419159	2740	17	163		Spout
47	Tuart (<i>Eucalyptus gomphocephala</i>)	388880	6419148	2741	16	102	24/21	No Hollows, Good Condition
48	Jarrah (<i>Eucalyptus marginata</i>)	388865	6419151	2742	8	61	19	Large Part Dead, Very Poor Condition
49	Tuart (<i>Eucalyptus gomphocephala</i>)	388903	6419159	2743	12	56	41	No Hollows, Squares cut out of bark
50	Tuart (<i>Eucalyptus gomphocephala</i>)	388915	6419129	2744	10	92		No Hollows, Good Condition
51	Tuart (<i>Eucalyptus gomphocephala</i>)	388895	6419131	2745	15	80		No Hollows, Good Condition
52	Tuart (<i>Eucalyptus gomphocephala</i>)	388920	6419125	2747	14	59		No Hollows, Good Condition
53	Tuart (<i>Eucalyptus gomphocephala</i>)	388856	6419118	2748L	12	88		No Hollows, Good Condition
54	Jarrah (<i>Eucalyptus marginata</i>)	388852	6419117	2748M	12	91		No Hollows, Good Condition
55	Tuart (<i>Eucalyptus gomphocephala</i>)	388851	6419120	2748R	15	122		No Hollows, Good Condition
56	Tuart (<i>Eucalyptus gomphocephala</i>)	388850	6419142	2749	17	62	57/39	No Hollows, Good Condition
57	Tuart (<i>Eucalyptus gomphocephala</i>)	388842	6419135	2750	15	58		No Hollows, Good Condition
58	Jarrah (<i>Eucalyptus marginata</i>)	388855	6419094	2752	12	61	51	No Hollows, Very Poor Condition
59	Tuart (<i>Eucalyptus gomphocephala</i>)	388840	6419097	2753	16	89		No Hollows, Good Condition
60	Tuart (<i>Eucalyptus gomphocephala</i>)	388820	6419121	2754	17	96		Potential Hollows, Good Condition
61	Tuart (<i>Eucalyptus gomphocephala</i>)	388827	6419104	2755	14	57		No Hollows, Good Condition, slender to top
62	Tuart (<i>Eucalyptus gomphocephala</i>)	388813	6419110	2756L	16	53	19	No Hollows, Good Condition
63	Tuart (<i>Eucalyptus gomphocephala</i>)	388802	6419107	2756R	17	91		No Hollows, Good Condition
64	Tuart (<i>Eucalyptus gomphocephala</i>)	388794	6419095	2757L	15	88		No Hollows, Good Condition
65	Tuart (<i>Eucalyptus gomphocephala</i>)	388788	6419088	2757R	14	111		No Hollows, Good Condition
66	Tuart (<i>Eucalyptus gomphocephala</i>)	388813	6419093	2758	14	104		No Hollows, Good Condition
67	Tuart (<i>Eucalyptus gomphocephala</i>)	388835	6419098	2759	15	90	62/41	No Hollows, Good Condition

Tree 1



Tree 2



Tree 3



Tree 4



Tree 5



Tree 6



Tree 7



Tree 8



Tree 9



Tree 10



Tree 11



Tree 12



Tree 13



Tree 14



Tree 15



Tree 16



Tree 17



Tree 18



Tree 19



Tree 20



Tree 21



Tree 22



Tree 23



Tree 24



Tree 25(Left) Tree 26 (Right)



Tree 27



Tree 28



Tree 29



Tree 30



Tree 31 (Right) Tree 32 (Left)



Tree 33 (Right) Tree 34 (Left)



Tree 35



Tree 36



Tree 37



Tree 38



Tree 39



Tree 40



Tree 41



Tree 42



Tree 43



Tree 44



Tree 45



Tree 46



Tree 47



Tree 48



Tree 49



Tree 50



Tree 51



Tree 52



Tree 53-55 (Left to Right)



Tree 56



Tree 57



Tree 58



Tree 59



Tree 60



Tree 61



Tree 62 (Left) Tree 63 (Right)



Tree 64 (Left) Tree 65 (Right)



Tree 66



Tree 67

