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Sanctuary Road

Biological Assessment

Prepared for

Broome Shire Council

November 2023

people • planet • professional

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Executive Summary

The Broome Shire Council commissioned 360 Environmental Pty Ltd (360 Environmental) (part of SLR Consulting Australia Pty Ltd (SLR Consulting)) to undertake an ecological assessment (detailed flora and vegetation and basic vertebrate fauna) for the proposed Sanctuary Road (R21028) development (the Survey Area). The Survey Area is 17.9 ha and is located in the township of Broome in Western Australia.

The purpose of the assessment was to identify key biological values within the Survey Area to support the approvals applications to develop the Project. This report presents results of the survey undertaken.

Flora and Vegetation

The flora desktop assessment identified 20 significant species occurring within 50 km of the Survey Area. A pre-survey likelihood of occurrence assessment was undertaken and determined nine species as having a high likelihood of occurrence, two species as having a medium likelihood of occurrence, and nine species as having a low likelihood of occurrence.

The detailed flora and vegetation survey recorded the floristic composition and vegetation types from five flora sites (three quadrats, two relevés), mapping notes and opportunistic observations. A total of 65 taxa were recorded from 54 genera across 25 families.

No Threatened flora species pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* and/or gazetted as Threatened/Declared Rare Flora pursuant to the *Biodiversity and Conservation Ac*t 2016 were recorded during the survey.

No Priority flora were recorded in the Survey Area.

Two introduced species were recorded during the survey. One species, **Ziziphus mauritiana*, is listed as Declared Pest by the State Department of Primary Industries and Regional Development (DPIRD). No introduced species were found to be a Weed of National Significance as regulated by DPIRD under the Biosecurity and Agriculture Management Act 2007.

Four vegetation types were described and mapped across one broad landforms (Pindan Plain) within the Survey Area. Vegetation in the Survey Area was representative of existing broad scale vegetation, and soil and land system mapping for the area.

Vegetation condition within the Survey Area ranged from Very Good to Good with the majority considered to be in Good-Very Good condition. Evidence of disturbance included trampling, weeds, and clearing for makeshift camps.

Vertebrate Fauna

The vertebrate fauna desktop assessment identified 90 significant species occurring within 50 km of the Survey Area. An assessment of the likelihood of occurrence within the Survey Area was undertaken and identified that, of the potential significant fauna, one had a high likelihood of occurrence, five had a medium likelihood of occurrence, and 84 had a low likelihood of occurrence.

Fauna habitat mapping was based on a combination of field observations, vegetation mapping, and fauna habitat assessment data. One fauna habitat was mapped within the Survey Area, *Acacia* Shrubland, which provides habitat for native birds, mammals, and reptiles.

The basic terrestrial vertebrate fauna survey recorded a total of 25 fauna species from 15 families were recorded, comprising 21 bird, one mammal, and three reptile species.

No significant fauna species (Threatened or Priority), or evidence of these species such as tracks, scats, nests, diggings, burrows, or direct sightings were recorded within or directly surrounding the Survey Area.

One introduced species was recorded during the survey, the Cat (*Felis catus*).

The basic fauna survey was undertaken in January 2023 with is considered suitable for all vertebrate fauna taxa.

Abbreviations

Abbreviations used through the report are described below in **Table 1**

Table 1: Abbreviations

Abbreviation	Description
360 Environmental	360 Environmental
BAM Act	Biosecurity and Agriculture Management Act 2007
BC Act	Biodiversity Conservation Act 2016
BoM	Bureau of Meteorology
°C	Degree Celsius
CD	Conservation Dependent Fauna
CR	Critically Endangered
DAFF	Department of Agriculture, Fisheries and Forestry
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DP	Declared Pest
DWER	Department of Water and Environmental Regulation
EIA	Environmental Impact Assessment
EN	Endangered
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	Environment Protection Biodiversity and Conservation Act 1999
ESA	Environmentally Sensitive Area
GIS	Geographic Information System
Ha	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
IBSA	Index of Biodiversity Surveys for Assessments
Km	Kilometres
M	Metres
Mm	Millimetres
MA	Marine
MI	Migratory
MNES	Matters of National Environmental Significance
NVIS	National Vegetation Information System

Abbreviation	Description
OS	Other Specially Protected Fauna
P	Priority
PEC	Priority Ecological Community
PMST	Protected Matters Search Tool
SLR Consulting	SLR Consulting Australia Pty Ltd
Study Area	The database search area (varied according to each parameter)
Survey Area	The Sanctuary Road Survey Area covers 17.9 ha
T	Threatened
TEC	Threatened Ecological Community
TPFL	Threatened and Priority Flora Database
TPFRF	Threatened and Priority Flora Report Forms
VU	Vulnerable
WA	Western Australia
WAH	Western Australian Herbarium
WAM	Western Australian Museum
WoNS	Weeds of National Significance

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1 Introduction

1.1 The Project

The Broome Shire Council commissioned 360 Environmental Pty Ltd (360 Environmental) part of SLR Consulting (SLR) to undertake a detailed flora and vegetation survey and a basic vertebrate fauna survey for the Sanctuary Road Survey Area (R21028) in Broome. The Sanctuary Road Survey Area is 17.9 ha in size and is in the township of Broome in the Dampier bioregion of Western Australia (Figure 1).

1.2 Objectives and Scope

The purpose of the survey was to identify key flora and fauna values within the Survey Area and identify potential environmental sensitivities that may impact the Project.

The scope of works includes:

- Undertake a Desktop Assessment including relevant database searches and a literature review to compile and summarise existing records of flora, vegetation, and fauna (including significant species and communities (such as Monsoon Vine Thicket) in the vicinity of the Survey Area
- Undertake a detailed flora and vegetation survey using quadrats and relevés to identify and describe the vegetation and flora occurring within the Survey Area
- Undertake targeted searching for significant flora within the Survey Area
- Undertake a basic terrestrial fauna survey which includes undertaking opportunistic observations for fauna and signs of fauna including tracks, scats, and calls
- Prepare a technical biological report
- Prepare a Native Vegetation Clearing Permit (NVCP) for the Survey Area (separate document)
- Supply a geospatial data package prepared in accordance with IBSA requirements.

This report presents the results of the Sanctuary Road Biological Survey undertaken to support the above objectives.

2 Background

2.1 Protection of Flora, Vegetation and Fauna

Western Australian flora and fauna is protected formally and informally by legislative and non-legislative measures:

Legislative measures:

- Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- WA Biodiversity Conservation Act 2016 (BC Act)
- WA Environmental Protection Act 1986 (EP Act)
- WA Biosecurity and Agriculture Management Act 2007 (BAM Act).

Non-legislative measures:

- WA Department of Biodiversity Conservation and Attractions (DBCA) Priority lists for fauna, flora, and ecological communities
- Weeds of National Significance (WoNS)
- Recognition of locally significant populations by DBCA.

In addition to these protection mechanisms, the EIA process is supported by various guidance documents published by the Environmental Protection Authority (EPA), DBCA and the Department of Agriculture Water and Environment (DAWE)

Western Australia

- Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (Environmental Protection Authority, 2016b)
- Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (Environmental Protection Authority, 2020)
- Guidelines for surveys to detect the presence of bilbies and assess the importance of habitat in Western Australia (Department of Biodiversity Conservation and Attractions, 2017b).

Commonwealth

- EPBC Act referral guideline for the endangered northern quoll *Dasyurus hallucatus*: EPBC Act Policy Statement (Department of the Environment, 2016)
- Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (Department of the Environment, 2013)

- Survey Guidelines for Australia's Threatened Birds: Guidelines for detecting birds listed as threatened under the EPBC Act (Department of the Environment Water Heritage and the Arts, 2010)
- Survey Guidelines for Australia's Threatened Mammals: Guidelines for detecting mammals listed as threatened under the EPBC Act (Department of Sustainability Environment Population and Communities, 1999)
- Survey Guidelines for Australia's Threatened Reptiles: Guidelines for detecting reptiles listed as threatened under the EPBC Act (Department of Sustainability Environment Water Population and Communities, 2011).

2.2 Existing Environment

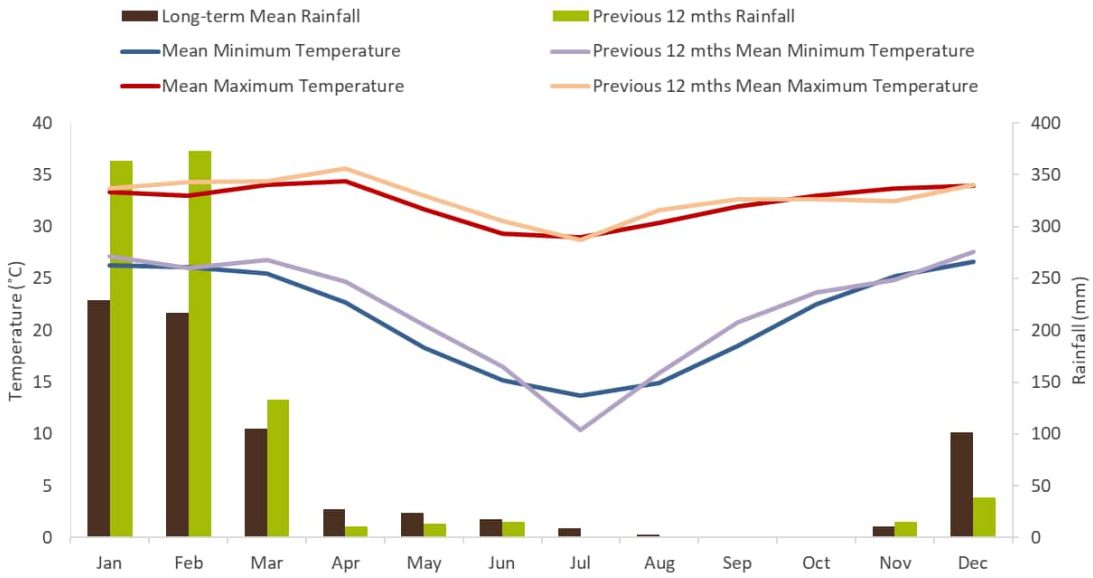
2.2.1 Climate

The closest long-term Bureau of Meteorology weather station with a complete dataset is the Broome Weather Station (Station 003003), located approximately 2.5 km southeast of the Survey Area.

Climate statistics were calculated utilising data from the most current climate normal, which is defined as a 30-year interval (Bureau of Meteorology, 2007), where possible. A climate normal is a period long enough to include year-to-year variations while avoiding the influence of longer-term changes in climate (Bureau of Meteorology, 2007).

The long-term (1991 to 2022) mean minimum temperature for the Broome Weather station ranges from 13.7˚C (July) to 26.8˚C (April) and the long-term mean maximum temperature ranges from 31.6˚C (July) to 34.4˚C (April) (Graph 1) (Bureau of Meteorology, 2023).

The Broome weather station (Station 003003) recorded 963.7mm of rainfall in the 12 months prior to the survey (January 2022 to December 2022), which is 216.7 mm above the long-term average of 747.0 mm (Bureau of Meteorology, 2023). In the three months prior to the survey (October 2022 to December 2022), 54.2 mm of rainfall was recorded, which is 59.3 mm below the long-term average of 113.5 mm for the same time period (Bureau of Meteorology, 2023). There was, however, a significant rainfall event that occurred two weeks before the current survey which resulted in 485.0 mm rain in three days (January 4th - 6th 2023).



Graph 1. Monthly long-term (1991 -2022) and prior 12 month (Jan -Dec 2022) total rainfall, and mean maximum and mean minimum temperatures for the Broome Weather Station (003003) (Bureau of Meteorology, 2023).

2.2.2 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic Regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological, geographical and geological attributes. These bioregions are subdivided into 419 subregions as part of a refinement of the IBRA framework (Department of the Environment and Energy, 2016). The Survey Area occurs within the Dampierland bioregion and the Pindanland (DAL02) subregion.

The Pindanland subregion is characterised by sandplains of the Dampier Peninsular and western part of Dampier Land, including the hinterland of the Eighty Mile Beach (Graham, 2001). It is a fine-textured sand-sheet with subdued dunes and includes the paleodelta of the Fitzroy River. The vegetation is described primarily as pindan. This is the coastal, semi-arid, north-western margin of the Canning Basin.

2.2.3 Soil Landscapes and Land Systems

Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales, ranging from 1:20,000 to 1:250,000 (Department of Primary Industries and Regional Development, 2018b). The Survey Area occurs within one land system. The Yeeda (335Ye) land system is described as sandplain, deep red and yellow sands, pindan, and tall woodlands. With red sandplains supporting pindan vegetation with dense acacia shrubs, scattered bloodwood and grey box trees and curly spinifex and ribbon grass.

2.2.4 Hydrography

No hydrographic features intersect the Survey Area. The buffer zone of the Roebuck Bay mudflats occurs approximately 3 km to the east of the Survey Area (Figure 2). This area supports the Roebuck Bay mudflats Threatened Ecological Community (TEC), which is an intertidal system supporting a species-rich faunal community and numerous conservation significant fauna species (Department of Water and Environmental Regulation, 2016; Graham, 2001).

2.2.5 Broad Vegetation Types

Mapping of pre-European vegetation in Western Australia was completed on a broad scale (1:1,000,000) by Beard (1976). These vegetation types were later refined by Shepherd *et al.* (Shepherd et al., 2002) resulting in 819 vegetation types. One broad vegetation system association is mapped within the Survey Area. The Dampierland 750 vegetation type is described as Pindan Woodland which is composed of *Acacia* thickets with eucalypt woodlands over spinifex. Key species include *Acacia tumida*, *Eucalyptus tectifica*, *Corymbia grandifolia*, *Triodia pungens*, and *T. bitextura*.

Representation of the broad vegetation type at a local, regional and state level is shown in Table 2.

Table 2: Broad Vegetation Types within the Survey Area and their Representation at the State, Regional and Local Levels (Department of Primary Industries and Regional Development, 2018a)

Broad Vegetation Type	Extent			
	Pre-European (ha)	Current (ha)	Remaining (%)	Managed in DBCA Lands (%)*
Representation across Western Australia				
750	1,231,155.50	1,225,687.52	99.56	2.78
Representation across the Dampierland Bioregion				
750	1,229,182.16	1,225,280.52	99.68	2.78
Representation across the Pindanland (DAL02) Subregion				
750	1,221,734.45	1,217,843.72	99.68	2.80
Representation across the Shire of Broome				
750	1,115,559.36	1,110,131.18	99.51	3.07

*as a portion of the current extent

2.2.6 Environmentally Sensitive and Conservation Areas

Environmentally Sensitive Areas (ESAs) are declared by the Department of Water and Environmental Regulation (DWER) to prevent the degradation of important environmental values such as Threatened flora, Threatened Ecological Communities (TECs) or significant wetlands.

The Survey Area does not occur within a mapped ESA (Figure 3). The nearest ESA is associated with the Roebuck Bay mudflats, located approximately 2.9 km East of the Survey Area (Department of Water and Environmental Regulation, 2020).

Conservation Areas consist of areas protected for the purpose of conservation, including but not limited to National Parks, Nature Reserves, Conservation Parks, and Regional Parks.

The Survey Area is not identified within a Conservation Area. The nearest Conservation Areas are:

- Broome Wildlife Centre located 1.4 km north of the Survey Area and is vested under the Conservation Parks and Commission of WA
- Unnamed reserve with a purpose for conservation, recreation and traditional and customary Aboriginal use and enjoyment is located 3.1 km north of the Survey Area and is vested under the Yawuru native Title Holders
- Yawuru Birragun Conservation Park located 4.1 km northeast of the Survey Area and is vested under the Yawuru native Title Holders
- Yawuru Nagulagun/Roebuck Bay Marine Park located 2.2 km east of the Survey Area and is vested under the Conservation and Parks Commission of WA.

2.2.7 Land Use

The Survey Area is located on Crown and freehold land. Some clearing has occurred throughout the Survey Area associated with roads.

3 Methods

The biological surveys documented by this report were undertaken in accordance with relevant EPA and DAWE guidelines (see section 2).

3.1 Desktop Assessment

3.1.1 Literature Review

Background information on the Survey Area and surrounds was compiled prior to the field survey (see Section 2). Historical vegetation mapping (Beard, 1976; Shepherd et al., 2002), land systems mapping (Department of Primary Industries and Regional Development, 2018b), and the IBRA classification system (Department of the Environment and Energy, 2016) were consulted to provide broad contextual knowledge of the vegetation units and habitat likely to be encountered within the Survey Area.

The literature review also considered a selection of biological reports detailing assessments undertaken in the region that were either publicly available or provided by the client (Appendix A).

- Broome North: Southern Portion - Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2009), overlaps the Survey Area
- Broome Regional Resource Recovery Park Reconnaissance Flora & Level 1 Fauna Survey (Spectrum Ecology, 2020), 8.1 km northeast and 34 km east of the Survey Area
- Broome road Industrial Area - Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2010), 7 km northeast of the Survey Area
- Broome Road Subdivision Area - Conservation Significant Fauna Survey (GHD, 2015), 5.7 km northeast of the Survey Area
- Fauna Assessment of the Broome Port Area (Bamford Consulting, 2010), 5.8 km south of the Survey Area
- Flora and Vegetation Assessment, Cable Beach Foreshore Adaptation Project (Focused Vision, 2019), overlaps the Survey Area
- Flora, Vegetation and Fauna Assessment - Broome Asparagus Farm (AECOM Australia Pty Ltd, 2017a), 23 km northeast of the Survey Area
- Flora, Vegetation and Fauna Survey Broome Golf Club Redevelopment (Docherty, 2019), 5.8 km south of the Survey Area
- Mamabulanjin Orchard Flora and Fauna Survey (GHD, 2019), 9.3 km norteast of the Survey Area
- Nyamba Buru Yawuru Flora and Fauna Survey (Ecoscape (Australia) Pty Ltd, 2017), 46 km southeast of the Survey Area

- Targeted Bilby Survey - Crab Creek Road, Broome (360 Environmental Pty Ltd, 2017), 6.8 km east of the Survey Area.

Table 3: Database Searches of the Survey Area

Database Name	Date Received	Search Target	Buffer around the Survey Area
Threatened and Priority Ecological Communities database search (Department of Biodiversity Conservation and Attractions, 2022c)	21 December 2022	TECs and PECs	50 km
Threatened and Priority Flora (TPFL) database search (Department of Biodiversity Conservation and Attractions, 2022f)	14 November 2022	Threatened and Priority Flora	50 km
Western Australian Herbarium Flora database search (Department of Biodiversity Conservation and Attractions, 2022g)	16 November 2022	Threatened and Priority Flora	50 km
DBCA Threatened and Priority Fauna database search (Department of Biodiversity Conservation and Attractions, 2022e)	14 November 2022	Threatened and Priority Fauna	40 km
NatureMap (Department of Biodiversity Conservation and Attractions, 2022b)	11 November 2022	Inventory of potential flora and fauna	50 km
Protected Matters Search Tool (Department of Agriculture Water and the Environment, 2022a)	13 December 2022	Commonwealth listed Threatened flora and fauna and TECs	20 km

3.1.2 Likelihood of Occurrence

Significant flora and fauna species identified from the desktop assessment were assessed to determine the likelihood of their occurrence within the Survey Area, both prior to and post field survey. The assessment was completed based on the likelihood of occurrence criteria presented in Table 4.

Only species either recorded within the Survey Area or considered as having a high or medium likelihood of occurrence are discussed in detail. Species classified as having a low likelihood of occurrence based on the above criteria are not discussed unless a justification for this classification is required.

Taxa listed as Marine only under the EPBC Act were not included as significant taxa because the Marine only listed taxa identified by the desktop assessment and field survey do not constitute MNES under the EPBC Act. Additionally Marine only listed taxa identified were common and widespread, and the Survey Area does not contain any marine habitat.

Table 4: Likelihood of Occurrence Criteria

Rank	Criteria
Recorded	The species was recorded in the Survey Area.
Previously Recorded	The species has been previously recorded in the Survey Area.
High (Likely to occur)	• There are existing records of the species near the Survey Area (within 5 km), and for fauna has been recorded in the Survey Area in the last 15 years; • The species is strongly linked to a specific habitat, which is present in the Survey Area; or • The species has more general habitat preferences, and suitable habitat is present.
Medium (May occur)	• There are existing records of the species from the locality (within 5 – 15 km), however: ○ The species is strongly linked to a specific habitat, of which only a small amount is present in the Survey Area; or ○ The species has more general habitat preferences, but only some suitable habitat is present ○ There is suitable habitat in the Survey Area, but the species is recorded infrequently in the locality.
Low (Unlikely to occur)	• The species is linked to a specific habitat, which is absent from the Survey Area; or • Suitable habitat is present, however there are no existing records of the species from the locality despite reasonable previous search efforts in suitable habitat; or • There is some suitable habitat in the Survey Area, however the species is very infrequently recorded in the locality.

3.2 Field Surveys

3.2.1 Survey Timing

The biological surveys were undertaken across one field trip to collect data from the Survey Area (Table 5). Survey effort is shown in Figure 4.

Table 5: Field Trips

Trip	Scope	Date	Personnel	Person Field Days
1 (Flora and Fauna)	Establishment of flora quadrat sites Preliminary vegetation and condition mapping Targeted flora searches during traverses between flora sites Basic fauna survey	17/01/2023-20/01/2023	Brian Vincent Dr Jon-Paul Emery	4

3.2.2 Field Personnel

Field personnel and their roles is detailed in Table 6.

The flora and vegetation surveys were led by Senior Associate Botanist Brian Vincent. Brian has 20 years of experience conducting surveys of similar scope throughout Western Australia.

The basic terrestrial vertebrate fauna survey was undertaken by Senior Zoologist Dr. Jon-Paul Emery. Jon-Paul has 3 years' experience conducting surveys of similar scope throughout Western Australia.

Table 6: Field Personnel

Personnel	Collection Licence	Role	Trips
Brian Vincent	FB62000440	Senior Botanist	1
Dr. Jon-Paul Emery		Senior Zoologist	1

3.3 Flora and Vegetation

3.3.1 Establishment of Flora Sites

Three flora sites were sampled in the dominant vegetation type observed within the Survey Area. The other three vegetation types were not large enough to accommodate three flora sites, therefore only had one relevé established or mapping notes taken.

Flora sites were quadrats 50 x 50 m, where possible, corners were aligned to northwest, northeast, southeast and southwest, and accurately measured using measuring tapes. As a minimum, the north-west corner of each quadrat was demarcated with an aluminium fence dropper and removed at the completion of the sites (this was at the request of Broome Shire Council). A comprehensive record of the flora present at the time of sampling was recorded for each quadrat.

A handheld Fulcrum mobile data collection device was used to record quadrat data, and mapping notes, opportunistic flora collections and photographs were also taken where required. Tracks were recorded using a handheld Garmin GPS unit. At each flora site, the following was recorded:

- Site code
- Date and personnel
- Landform and soil description
- Relevant site descriptors including, slope, aspect, litter cover, bare ground cover and fire history
- Inventory of vascular flora including the approximate average height and percentage foliar cover for each taxon recorded
- Vegetation description in accordance with the National Vegetation Information System (NVIS), Level 5 'association', whereby the dominant growth form, height, cover and species (three species) for the three traditional strata (upper, mid and ground) are described
- Vegetation condition in accordance with the Northern Botanical Provinces vegetation condition scale (Environmental Protection Authority, 2016a), and evidence of disturbance (for example clearing, rubbish, feral animals, weed incursion and evidence of feral animals and dieback) where present
- Photograph of the vegetation occurring within the site.

3.3.2 Opportunistic Flora

Additional flora taxa observed opportunistically around flora sites or while traversing on foot within the Survey Area were also recorded. Where populations of significant flora taxa, Declared Pests (DPs) or WoNS were encountered, a GPS location and a count of the individuals present was recorded.

3.3.3 Targeted Searching

Prior to the survey, significant flora with the likelihood or potential to occur within the Survey Area was compiled (see section 3.1.2). Field personnel familiarised themselves with photographs, reference samples and descriptions of these taxa before conducting the survey.

The entire Survey Area was not systematically searched. Where Threatened or Priority flora were encountered in the field a GPS location was taken and a count of individuals was recorded. Specimens of any potential significant flora that could not be identified in the field were collected for identification and lodgement at the Western Australian Herbarium (WAH).

3.3.4 Taxonomy and Nomenclature

Where field identification of plant taxa was not possible, specimens were collected for identification using resources of the WAH. Identification of flora collections was completed by experienced taxonomist Sharnya Yates.

The finalised species list was checked against FloraBase (Department of Biodiversity Conservation and Attractions, 2022a) to determine the conservation status and known distribution of each taxon. Introduced species were compared against the current BAM Act Declared Plants list the WoNS list to determine their control status (Department of Agriculture Water and the Environment, 2022b; Department of Primary Industries and Regional Development, 2022).

Any significant flora taxa, including potential Threatened and Priority species, range extensions, and potential new taxa were submitted to the WAH for verification and lodgement. Where relevant, Threatened and Priority Flora Report Forms (TPFRFs) were submitted to DBCA.

3.3.5 Vegetation Unit and Condition Mapping

Broad vegetation and condition mapping was conducted in the field, with boundaries delineated over aerial photography, at a scale of approximately 1:2,000. Broad vegetation units were refined based on taxonomic identification of flora collections, statistical analysis of data collected from the quadrats, and relevés and mapping notes taken during the field survey. Vegetation condition mapping was refined based on site data and mapping notes. Finalised polygons were produced as electronic mapping data using GIS software.

3.4 Vertebrate Fauna

3.4.1 Daily Survey Conditions

Survey conditions for the detailed fauna survey are presented in Table 7. Daily temperature and rainfall data is from the Broome Weather Station (Station 003003)(Bureau of Meteorology, 2022). This information is important for potential detection of species diversity during a survey.

Table 7: Detailed Fauna Survey Weather Conditions

Date	Temperature (°C)		Rainfall (mm)
	Min	Max	
17/01/2023	23.2	31	24.6
18/01/2023	25.9	32.5	0.2
19/01/2023	23.9	32.1	15.4
20/01/2023	27.8	32.1	0

3.4.2 Fauna Habitat Assessment

Fauna habitat assessments were undertaken throughout the Survey Area to identify fauna habitat values. Habitat assessment locations are shown in Figure 4. The following information was collected at each site using the mobile data collection app, Fulcrum:

- Site photo
- Landform
- Soil type and colour
- Rock types, surface stone cover, and size classes
- Key habitat and microhabitat features including leaf litter, logs, burrows, rocky outcrops, rock crevices, hollows, and water sources
- Habitat quality, fire history, and evidence of disturbance
- General description of vegetation structure.

Fauna habitat mapping was based on a combination of field observations, fauna habitat assessment data, and vegetation mapping undertaken by 360 Environmental.

3.4.3 Opportunistic Observations

Opportunistic observations of fauna were recorded throughout the Survey Area. Observations of primary evidence (direct sightings, calls) and secondary evidence (tracks, scats, diggings, etc.) were recorded. Active searches were undertaken in microhabitats likely to contain fauna. They primarily involved raking leaf litter, peeling bark, and splitting dead wood.

3.4.4 Identification and Taxonomy

Terrestrial vertebrate fauna taxa were identified in the field from calls or direct observations. Species names follow the most up to date taxonomy and nomenclature from the WA Museum Checklist November 2022 (Western Australian Museum, 2022).

4 Results

4.1 Limitations

Limitations and constraints of the flora, vegetation, and fauna survey are detailed below in Table 8. There were no significant limitations associated with the survey.

Table 8: Limitations and Constraints Associated with the Survey

Variable	Degree of Limitation	Potential Constraints on Survey Outcomes
Survey Scope	No limitation	The detailed flora and vegetation survey was undertaken in accordance with EPA guidelines (Environmental Protection Authority, 2016b) and was considered appropriate to support approvals applications. Targeted searching for flora of conservation significance was undertaken. The basic terrestrial vertebrate fauna survey was undertaken in accordance with EPA guidelines (Environmental Protection Authority, 2020).
Availability of Data	No limitation	All data required to complete the scope of works including regional and local contextual information was available
Site Access	No limitation	The Survey Area was able to be accessed by vehicle and on foot.
Survey Intensity and Resources	No limitation	Five flora sites (comprising three quadrats and two relevés) were sampled across the Survey Area. An additional 23 mapping notes were undertaken to aid vegetation mapping and delineation. Sufficient time was allocated to the flora and vegetation survey, given the size and complexity of the Survey Area, and the expected level of survey intensity. The survey effort was considered adequate to assess the flora and vegetation values of the Survey Area and provide information required to support approvals applications. The basic fauna survey comprised 15 fauna habitat assessments and adequately captured the fauna habitat in the Survey Area. Sufficient time and resources were allocated to the biological survey.
Experience	No limitation	The flora and vegetation survey was undertaken by Senior Botanist Brian Vincent. Brian has 20 years' experience conducting surveys of similar scope throughout Western Australia, including the Kimberley region. Identification of flora collections was completed by experienced taxonomist Sharnya Yates at the WAH. Relevant WAH specialists were consulted for difficult

Variable	Degree of Limitation	Potential Constraints on Survey Outcomes
		specimens, and any specimens with novel characteristics were submitted to the WAH for formal identification (accession 8487). The fauna survey was undertaken by Senior Zoologist Jon-Paul Emery, who has 3 years' experience conducting surveys of similar scope throughout Western Australia and the bioregion.
Timing, weather, season	Partial limitation	The basic vertebrate fauna survey was conducted within the recommended period for all vertebrate fauna species for the Northern Climatic Region as per the EPA Technical Guidance (Environmental Protection Authority, 2020). In the three months prior to the survey (October 2022 to December 2022), 52.2 mm of rainfall was recorded, which is 20.9 mm below the long-term average of 75.1 mm for the same time period (Bureau of Meteorology, 2023). There was, however, a significant rainfall event that occurred two weeks before the current survey which resulted in 485 mm rain in three days (January 4th-6th 2023).
Life Forms Sampled	Partial limitation	The Survey Area was traversed by foot and representative sites of all remnant vegetation was sampled. A total of 65 vascular flora taxa were recorded from the Survey Area, comprising 96.92% native flora taxa and 3.07% introduced flora taxa. Of the 65 flora taxa recorded, 18 taxa (27.69%), could not be identified to species level because they were sterile at the time of the survey. The basic vertebrate fauna surveys detected fauna taxa within the Survey Area on an opportunistic basis and was not exhaustive. All vertebrate fauna species were readily identified in the field.
Mapping Reliability	No limitation	Vegetation types were described and mapped based on quadrat, relevé data and additional mapping notes taken during the field survey. High resolution aerial mapping current at the time of the survey was used to differentiate all vegetation greater than 1 ha in size. Draft vegetation mapping was undertaken during the field survey and was refined later using aerial imagery and quadrat data.
Disturbances (fire, flood etc.)	No limitation	No disturbances occurred during the surveys.

Variable	Degree of Limitation	Potential Constraints on Survey Outcomes
Completeness	No limitation	The survey was considered complete for a detailed flora and vegetation survey, all vegetation types were surveyed and delineated within the Survey Area. The basic fauna survey was considered complete.

4.2 Flora and Vegetation

4.2.1 Literature Review

The key findings of the flora and vegetation reports reviewed are summarised in Appendix A.

4.2.2 Database Searches

Database searches identified 19 significant flora species occurring within 50 km, and one species within 75 km, of the Survey Area. (Appendix B, Figure 5), comprising:

- No Threatened species
- Five Priority 1 species
- One Priority 2 species
- Thirteen Priority 3 species
- One Priority 4 species.

One additional species, *Triodia caelestialis* (P3), was identified within 50 km by the literature review but was not included in the flora likelihood table.

No state or Commonwealth listed TECs or State-listed PECs were identified by the database searches as occurring within the Survey Area.

A total 11 State listed PECs occur within 50 km of the Survey Area (Department of Biodiversity Conservation and Attractions, 2022d) (Appendix B, Figure 6):

- Species-rich faunal community of the intertidal mudflats of Roebuck Bay (Vulnerable) - 3 km east of Survey Area.
- Dwarf pindan heath community of Broome coast (Priority 1) - 5 km southwest of the Survey Area.
- Kimberley Vegetation Association 770 (Priority 1) – 2.7 km north of Survey Area.
- Relict dune system dominated by extensive stands of Minyjuru (Mangarr) Sersalisia (formerly Pouteria) sericea. (Priority 1) - 2.7 km northeast of Survey Area.
- Eighty Mile Land System (Priority 3) - 32 km south of Survey Area.
- Gourdon Land System (Priority 3) - 46 km southeast of Survey Area.
- Kimberley Vegetation Association 37 (Priority 3) - 29 km south-southeast of Survey Area.

- Kimberley Vegetation Association 67 (Priority 3) - 45 km east of Survey Area.
- Kimberley Vegetation Association 73 (Priority 3) - 2.8 km east of Survey Area.
- Roebuck Land System (Priority 3) - 13.5 km east of Survey Area.
- Nimalarica Claypan Community (previously Nimalaica) (Priority 4) - 18 km north-northeast of Survey Area.

4.2.3 Likelihood of Occurrence

The pre-survey likelihood of occurrence assessment identified that of the 20 significant flora species identified by the desktop assessment:

- None had previously been recorded within the Survey Area
- Nine were considered to have a high likelihood of occurrence
- Two were considered to have a medium likelihood of occurrence
- Nine were considered to have a low likelihood of occurrence.

Following the survey, the likelihood of occurrence assessment identified that:

- No taxa were recorded within the Survey Area
- No taxa were considered to have a high likelihood of occurrence
- Three taxa were considered to have a medium likelihood of occurrence these were:
  - Glycine pindanica (P3)
  - Goodenia byrnesii (P3)
  - Polymeria sp. Broome (K.F. Kenneally 9759) (P3).
- Seventeen taxa were considered to have a low likelihood of occurrence.

The likelihood of occurrence assessment is provided in Appendix C.

4.2.4 Flora Composition

The survey recorded a total of 65 taxa from 54 genera across 25 families (Appendix D). The dominant families were Fabaceae (11 species), Malvaceae (nine species) and Convolvulaceae (six species). The most dominant genera was *Acacia* (four species).

4.2.5 Flora of Conservation Significance

4.2.5.1 Threatened or Priority Flora

No Priority or Threatened flora species pursuant to the EPBC Act 1999 and/or gazetted as Threatened pursuant to the BC Act 2016 were recorded during the survey.

4.2.5.2 Flora of Other Conservation Significance

Flora may be considered of other conservation significance if it represents a range extension, novel taxon, species that play a keystone role in a community, has relic status, is locally endemic,

or represents the extent of a species range. None of the taxa recorded from the Survey Area are considered flora of other conservation significance.

4.2.6 Introduced Flora

A total of two introduced species were recorded within the Survey Area, representing 3.07% of the total taxa recorded (Table 9Table). One species, **Ziziphus mauritiana*, is listed as a Declared Pest under the BAM Act (Department of Primary Industries and Regional Development, 2021). No WoNS species as listed by the Department of Agriculture Water and the Environment (2021) was recorded.

Table 9: Introduced Flora Species within the Survey Area

Species	Common Name	Status under BAM Act	WONS
**Distimake dissectus* var. *dissectus*	Noyau Vine	Permitted – s11	-
**Ziziphus mauritiana*	Indian jujube	Declared Pest - s22	-

4.2.7 Unconfirmed Flora

18 specimens (approximately 27.69% of the taxa recorded) could not be identified to species level because the taxa were sterile at the time of the survey (Appendix D). Three taxa were identified to family level, ten to genus and three had a tentative identification to species level.

One of the unconfirmed flora taxa was analogous to Priority flora taxa identified by the database searches.

4.2.8 Vegetation Types

Four vegetation types were described and mapped across one broad landform within the Survey Area (Table 10, Figure 7).

Detailed site sheets for each quadrat are provided in Appendix E.

4.2.9 Vegetation Condition

Vegetation condition within the Survey Area ranged from Good to Very Good, with 2.21 ha (12.34%) of cleared areas (tracks) (Figure 8), comprising:

- Very Good (5.95 ha / 33.21%).
- Good-Very Good (8.37 ha / 46.71%).
- Good (1.39 ha / 7.74%).

Evidence of disturbance included trampling, weeds, and clearing for makeshift camps.

Table 10: Vegetation Types Occurring within the Survey Area

Vegetation Unit and Description*	Local Landform	Total Area (ha), Proportion of the Survey Area	Sites	Vegetation Condition	Photograph
BdTm: *Brachychiton diversifolius* subsp. *diversifolius*, *Corymbia greeniana* low open woodland over (*Acacia colei* var. *colei*), *Acacia plectocarpa* subsp. *plectocarpa*, *Persoonia falcata* shrubland over hummock grassland *Triodia microstachya*.	Pindan Plain	8.92 ha	SR01 SR02 SR03	Good-Very Good	
BdGbTm: *Brachychiton diversifolius* subsp. *diversifolius*, *Corymbia greeniana* low open woodland over *Grewia breviflora*, *Acacia colei* var. *colei* closed shrubland over Corchorus? *sidoides* subsp. *sidoides* perennial herbland and *Triodia microstachya* humock grassland.	Pidan Plain	4.85 ha	SRR05	Very Good	

Vegetation Unit and Description*	Local Landform	Total Area (ha), Proportion of the Survey Area	Sites	Vegetation Condition	Photograph
ApTm: *Acacia plectocarpa* subsp. *plectocarpa* isolated trees over *Lysiphyllum cunninghamii* low open woodland over *Grewia breviflora* and (*Persoonia falcata*) shrubland over *Triodia microstachya* open hummock grassland.	Pidan Plain	0.54 ha	SRR04	Very good	
AcCp: *Acacia colei* var. *colei* mid closed shrubland over *Acacia adoxa* var. *subglabra* low open shrubland over *Chrysopogon pallidus* open tussock grassland	Pindan Plain	1.39 ha	Mapping note	Good	

*Brackets indicate species that may or may not be present, but were observed as dominant at some of the sites that make up the vegetation type

4.2.10 Significant Vegetation

4.2.10.1 Threatened and Priority Ecological Communities

No vegetation considered representative of any TECs or PECs was recorded within the Survey Area.

4.2.10.2 Other Significant Vegetation

Vegetation may be significant for a range of reasons, other than a listing as a TEC or a PEC, including (Environmental Protection Authority, 2016a):

- Vegetation extent being below a threshold level
- Scarcity
- Unusual species
- Novel combinations of species
- A role as a refuge
- A role as a key habitat for threatened species or large populations representing a significant proportion of the local to regional total population of a species
- Being representative of the range of a unit (particularly a good local and/or regional example of a unit in 'prime' habitat, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range); and/or
- A restricted distribution.

The vegetation types within the survey area were not considered to be conservation significant.

4.2.11 Survey Adequacy

Three quadrates and two relevés were sampled across the Survey Area, with an additional 23 mapping notes. The flora and vegetation survey effort was in accordance with the scope of works, and in accordance with EPA guidelines for a detailed flora and vegetation survey in the Kimberley bioregion (Environmental Protection Authority, 2016b).

4.3 Vertebrate Fauna

4.3.1 Database Searches

Database searches identified 90 significant terrestrial vertebrate fauna species potentially occurring within the Survey Area (Table 11), comprising:

- 69 bird species
- 14 mammal species
- Seven reptile species
- No amphibian species.

Key findings of the literature review are summarized in Appendix A. Database searches are displayed in their entirety in Appendix B and mapped in Figure 9.

4.3.2 Significant Fauna Likelihood of Occurrence

The likelihood of occurrence assessment within the Survey Area for significant fauna species identified by the databases searches found that:

- One species had a high likelihood of occurrence
- Five species had a medium likelihood of occurrence
- 84 species had a low likelihood of occurrence.

The results of the likelihood of occurrence assessment are presented in Table 11.

Species listed as Marine only under the EPBC Act identified by the desktop assessment, such as the Magpie-lark (*Grallina cyanoleuca*) and Oriental dollarbird (*Eurystomus orientalis*) etc., as well as marine dependent species including fish, sharks, dolphins, and sea turtles have been excluded from the Likelihood table. For a complete list of the database searches including marine only and marine dependent species, see Appendix B.

Table 11: Fauna Likelihood Table

Conservation Status: State - Listed under Biodiversity Conservation Act 2016 or Department of Biodiversity, Conservation and Attractions Conservation, Federal - Listed under Environmental Protection and Biodiversity Conservation Act 1999, EX - Extinct, CR - Critically Endangered, EN - Endangered, VU - Vulnerable, MI - Migratory, CD - Conservation Dependent fauna, OS - Other Specially Protected fauna, MA - Marine, P - Listed as Priority by DBCA.

Source: NM - NatureMap, PMST - EPBC Protected Matters Search Tool, DBCA - DBCA Threatened and Priority Fauna database search, Literature - returned from literature within 15 km of the Survey Area.

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
AVIAN										
Accipitridae	*Elanus scriptus*	Letter-winged Kite	P4		x		2		Low	Two DBCA records within 40 km of the Survey Area, 4.3 and 9.8 km south in 1994.[1] No suitable habitat present in the Survey Area (open country and grasslands of arid and semi-arid interior).[2]
Accipitridae	*Erythrotriorchis radiatus*	Red Goshawk	VU	VU	x	x	1		Low	One DBCA record within 40 km of the Survey Area, 28.9 km north in 1976.[1] Small amounts of marginal habitat present in the Survey Area (tropical and subtropical open-forests and woodlands dominated by eucalypts and paperbarks along streams and near wetlands).[2]
Anatidae	*Spatula querquedula*	Garganey	MI	MI, MA	x		3		Low	Three DBCA records within 40 km of the Survey Area, 16.8 km north in 2001 and 1999.[1] Small amounts of marginal habitat present in the Survey Area (freshwater swamps, open wetlands).[3]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Apodidae	*Apus pacificus*	Pacific Swift	MI	MI, MA	x	x	88		Medium	A total of 88 DBCA records within 40 km of the Survey Area, including 1.5 km east in 2011 and 5.0 km south in 2015.[1] Uses low to very high airspace over varied habitats.[4] May use the Survey Area, but unlikely to rely on habitats within the Survey Area.
Apodidae	*Hirundapus caudacutus*	White-throated Needletail	MI	VU, MI, MA	x		1		Low	One DBCA record within 40 km of the Survey Area, 13.8 km southeast in 2000.[1] Migratory to eastern Australia, rarely occurs in Western Australia.[2]
Ardeidae	*Ixobrychus dubius*	Australian Little Bittern	P4		x		3		Low	Three DBCA records within 40 km of the Survey Area, including 16.8 km north in 2001.[1] No suitable habitat present in the Survey Area (freshwater swamps, lakes and rivers with dense beds of *Baumea*, *Typha* and other tall rushes).[3]
Charadriidae	*Charadrius bicinctus*	Double-banded Plover	MI	MI, MA		x			Low	Only returned by PMST which searches by modelled distribution.[5] Suitable habitat present in the Survey Area (coastal and near coastal areas, freshwater wetlands).[2]
Charadriidae	*Charadrius dubius*	Little Ringed Plover	MI	MI, MA	x		6		Low	Six DBCA records within 40 km of the Survey Area, including 4.8 km south in 2013 and 3.4 km southeast in 2007.[1] Suitable habitat present in the Survey Area (freshwater wetlands, lakes, ponds).[4]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Charadriidae	*Charadrius leschenaultii*	Greater Sand Plover	VU	VU, MI, MA	x	x	692	x	Low	A total of 692 DBCA records within 40 km of the Survey Area, including 1.8 km southwest in 2015 and 13.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (tidal flats, beaches).[2]
Charadriidae	*Charadrius mongolus*	Lesser Sand Plover	EN	EN, MI, MA	x	x	368		Low	A total of 368 DBCA records within 40 km of the Survey Area, including 8.3 km southeast in 2017 and 1.8 km southwest in 2014.[1] No suitable habitat present in the Survey Area (tidal flats).[2]
Charadriidae	*Charadrius veredus*	Oriental Plover	MI	MI, MA	x	x	105		Low	A total of 105 DBCA records within 40 km of the Survey Area, including 2.4 km south in 2015 and 2.5 km south in 2012.[1] No suitable habitat present in the Survey Area (grasslands, thinly vegetated plains).[2]
Charadriidae	*Pluvialis fulva*	Pacific Golden Plover	MI	MI, MA	x	x	319	x	Low	A total of 319 DBCA records within 40 km of the Survey Area, including 1.2 km west in 2010 and 13.9 km southeast in 2017.[1] No suitable habitat present in the Survey Area (coastal areas, short sparse grassland).[2]
Charadriidae	*Pluvialis squatarola*	Grey Plover	MI	MI, MA	x	x	444	x	Low	A total of 444 DBCA records within 40 km of the Survey Area, including 1.8 km southwest in 2015 and 3.1 km east in 2011.[1] No suitable habitat present in the Survey Area (strictly coastal areas, tidal flats).[2]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Cuculidae	*Cuculus saturatus optatus*	Horsfield's Cuckoo, Oriental Cuckoo	MI	MI, MA	x	x	10		Low	Ten DBCA records within 40 km of the Survey Area, including 4.9 km south in 2009 and 11.4 km southeast in 2015.[1] Limited suitable habitat present in the Survey Area (open woodlands).[3]
Estrildidae	*Chloebia gouldiae*	Gouldian Finch	P4	EN	x	x	2		Low	Two vouchered specimen DBCA records within 40 km of the Survey Area, 4.3 km south.[1] No suitable habitat present in the Survey Area (grassy open forests and woodlands near drinkable water, stony hills with *Eucalyptus brevifolia* when breeding).[3]
Falconidae	*Falco hypoleucos*	Grey Falcon	VU	VU	x	x	10		Low	Ten DBCA records within 40 km of the Survey Area, including 13.9 km southeast in 2014 and 4.2 km south in 1997.[1] Small amounts of marginal habitat present in the Survey Area (open plains with treed watercourses in arid inland).[2]
Falconidae	*Falco peregrinus*	Peregrine Falcon	OS		x		29		Medium	A total of 29 DBCA records within 40 km of the Survey Area, including 2.9 km south in 2015 and 2.8 km southwest in 2005.[1] Suitable habitat present in the Survey Area (most environments with suitable nest sites: commonly uses stick nests built by other species).[2] May use the Survey Area for hunting.
Fregatidae	*Fregata ariel*	Lesser Frigatebird	MI	MI, MA	x	x	112	x	Low	One DBCA record within the Survey Area in 2015. A total of 111 DBCA records within 40 km of the Survey Area, including 0.04 km west in 2017 and 0.7 km southwest in 2018.[1] No suitable habitat present in the Survey Area (oceanic).[3]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Fregatidae	*Fregata minor*	Greater Frigatebird	MI	MI, MA	x	x	2		Low	Two DBCA records within 40 km of the Survey Area, 6.7 km southwest and 4.3 km south in 2012.[1] No suitable habitat present in the Survey Area (oceanic).[3]
Glareolidae	*Glareola maldivarum*	Oriental Pratincole	MI	MI, MA	x	x	76		Low	A total of 76 DBCA records within 40 km of the Survey Area, including 1.7 km south in 2002 and 3.1 km east in 2014.[1] No suitable habitat present in the Survey Area (open plains, wetlands).[4]
Hirundinidae	*Cecropis daurica*	Red-rumped Swallow	MI	MI, MA	x	x	11		Low	A total of 11 DBCA records within 40 km of the Survey Area, including 17.0 km southeast in 2015 and 13.4 km east in 2000.[1] Non-breeding migrant to northern Australia, rarely occurs in Western Australia.
Hirundinidae	*Hirundo rustica*	Barn Swallow	MI	MI, MA	x	x	165	x	Medium	A total of 165 DBCA records within 40 km of the Survey Area, including 5.0 km south in 2015 and 0.2 km east in 2011.[1] Suitable habitat present in the Survey Area (coastal areas, wetlands, urban areas near water).[2] Forages over open country, often congregates in areas with high densities of flying insects.
Laridae	*Anous stolidus*	Common Noddy	MI	MI, MA	x	x	15		Low	A total of 15 DBCA records within 40 km of the Survey Area, including 8.6 km south in 2013 and 5.1 km southwest in 2000.[1] No suitable habitat present in the Survey Area (oceanic).[4]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Laridae	*Anous tenuirostris melanops*	Australian Lesser Noddy	EN	VU, MA		x			Low	Only returned by PMST which searches by modelled distribution.[5] Breeds on Abrolhos Island and Black Noddy on Ashmore Reef, infrequently storm-blown to coast of mainland WA.[2]
Laridae	*Chlidonias leucopterus*	White-winged Black Tern	MI	MI, MA	x		191		Low	A total of 191 DBCA records within 40 km of the Survey Area, including 0.8 km west in 2007 and 5.0 km south in 2015.[1] No suitable habitat present in the Survey Area (fresh to saline wetlands, coastal areas, swamps).[2 3]
Laridae	*Gelochelidon nilotica*	Gull-billed Tern	MI	MI, MA	x		282	x	Low	A total of 282 DBCA records within 40 km of the Survey Area, including 8.3 km southeast in 2017 and 2.1 km south in 2003.[1] No suitable habitat present in the Survey Area (coastal areas, tidal creeks, swamps).[3]
Laridae	*Hydroprogne caspia*	Caspian Tern	MI	MI, MA	x		549		Low	A total of 549 DBCA records within 40 km of the Survey Area, including 1.1 km south in 2003 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (fresh to saline lakes, temporary wetlands, tidal creeks, brackish pools).[2 3]
Laridae	*Onychoprion anaethetus*	Bridled Tern	MI	MI, MA	x		10		Low	Ten DBCA records within 40 km of the Survey Area, including 4.3 km south in 2001 and 8.2 km south in 2012.[1] No suitable habitat present in the Survey Area (tropical and subtropical seas).[4]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Laridae	*Sterna dougallii*	Roseate Tern	MI	MI, MA	x		42		Low	A total of 42 DBCA records within 40 km of the Survey Area, including 6.6 km southwest in 2015 and 4.2 km southwest in 2001.[1] No suitable habitat present in the Survey Area (tropical and subtropical seas and coastlines).[4]
Laridae	*Sterna hirundo*	Common Tern	MI	MI, MA	x		140		Low	A total of 140 DBCA records within 40 km of the Survey Area, including 0.8 km west in 2007 and 5.0 km north in 2015.[1] No suitable habitat present in the Survey Area (near-shore waters, beaches, coastal rock platforms).[3]
Laridae	*Sterna sumatrana*	Black-naped Tern	MI	MI, MA			1		Low	One DBCA record within 40 km of the Survey Area, 3.2 km east in 1981.[1] No suitable habitat present in the Survey Area (oceanic).[3]
Laridae	*Sternula albifrons*	Little Tern	MI	MI, MA	x	x	337		Low	A total of 337 DBCA records within 40 km of the Survey Area, including 5.0 km north in 2015 and 2.2 km northwest in 2003.[1] No suitable habitat present in the Survey Area (sheltered coastal waters, beaches, sandbars, estuaries, mangroves, near-coastal saltworks).[2 3]
Laridae	*Thalasseus bergii*	Greater Crested Tern	MI	MI, MA	x		465	x	Low	A total of 465 DBCA records within 40 km of the Survey Area, including 6.5 km southwest in 2018 and 1.1 km west in 2015.[1] No suitable habitat present in the Survey Area (coastal areas, salt ponds and lakes, tidal creeks).[3 4]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Motacillidae	*Motacilla cinerea*	Grey Wagtail	MI	MI, MA	x	x	2		Low	Two DBCA records within 40 km of the Survey Area, 14.0 km southeast in 2015 and 17.5 km southeast in 2012.[1] Suitable habitat present in the Survey Area (fresh sandy or rocky streams, mown grass).[4]
Motacillidae	*Motacilla tschutschensis*	Eastern Yellow Wagtail	MI	MI, MA	x	x	3		Low	Three DBCA records within 40 km of the Survey Area, including 4.3 km south in 2003 and 2002.[1] Suitable habitat present in the Survey Area (damp short grass flats, swamp edges, mowed grass).[3]
Pandionidae	*Pandion haliaetus*	Osprey	MI	MI, MA	x	x	457	x	Low	One DBCA record within the Survey Area in 2015. A total of 456 DBCA records within 40 km of the Survey Area, including 6.5 km southwest in 2018 and 0.7 km southwest in 2013.[1] No suitable habitat present in the Survey Area (coastal areas, wetlands, river pools).[3 4]
Phaethontidae	*Phaethon lepturus*	White-tailed Tropicbird	MI	MI, MA		x			Low	Only returned by PMST which searches by modelled distribution.[5] No suitable habitat present in the Survey Area (oceanic).[2]
Psittaculidae	*Polytelis alexandrae*	Princess Parrot	P4	VU	x	x	1		Low	One DBCA record within 40 km of the Survey Area, 4.2 km south in 1999.[1] No suitable habitat present in the Survey Area (spinifex with *Eucalyptus*, *Acacia*, desert oaks, *Hakeas* around salt lakes).[6]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Rostratulidae	*Rostratula australis*	Australian Painted Snipe	EN	EN, MA	x	x	12		Low	A total of 12 DBCA records within 40 km of the Survey Area, including 18.5 km east in 2011 and 34.4 km east in 2017.[1] Poor quality habitat present in the Survey Area (well vegetated surrounds and shallows of wetlands).[4]
Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	MI	MI, MA	x	x	558	x	Low	A total of 558 DBCA records within 40 km of the Survey Area, including 1.8 km southwest in 2015 and 4.9 km south in 2017.[1] No suitable habitat present in the Survey Area (coastal and interior wetlands, narrow muddy edges of billabongs, river pools).[3 4]
Scolopacidae	*Arenaria interpres*	Ruddy Turnstone	MI	MI, MA	x	x	744	x	Low	A total of 744 DBCA records within 40 km of the Survey Area, including 1.2 km west in 2010 and 2.4 km south in 2015.[1] No suitable habitat present in the Survey Area (coastal areas, tidal flats, beaches, rocky shorelines).[2]
Scolopacidae	*Calidris acuminata*	Sharp-tailed Sandpiper	MI	MI, MA	x	x	273		Low	A total of 273 DBCA records within 40 km of the Survey Area, including 5.0 km south in 2015 and 0.8 km west in 2007.[1] No suitable habitat present in the Survey Area (fresh and salt wetlands, lakes, soaks, temporary floodwaters).[4]
Scolopacidae	*Calidris alba*	Sanderling	MI	MI, MA	x	x	114		Low	A total of 114 DBCA records within 40 km of the Survey Area, including 1.8 and 2.7 km south in 2015.[1] No suitable habitat present in the Survey Area (beaches, sandy tidal flats).[2]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scolopacidae	*Calidris canutus*	Red Knot	EN	EN, MI, MA	x	x	650		Low	A total of 650 DBCA records within 40 km of the Survey Area, including 5.2 km southwest in 2015 and 0.6 km south in 2014.[1] No suitable habitat present in the Survey Area (coastal areas, extensive firm tidal flats).[2]
Scolopacidae	*Calidris falcinellus*	Broad-billed Sandpiper	MI	MI, MA	x	x	222		Low	A total of 222 DBCA records within 40 km of the Survey Area, including 6.3 km south in 2015 and 5.0 km south in 2014.[1] No suitable habitat present in the Survey Area (near-coastal salt lakes, drying freshwater lakes).[3]
Scolopacidae	*Calidris ferruginea*	Curlew Sandpiper	CR	CR, MI, MA	x	x	654	x	Low	A total of 654 DBCA records within 40 km of the Survey Area, including 8.3 km southeast in 2017 and 2.4 km south in 2015.[1] No suitable habitat present in the Survey Area (fresh to brackish wetlands,).[4]
Scolopacidae	*Calidris melanotos*	Pectoral Sandpiper	MI	MI, MA	x	x	5		Low	Five DBCA records within 40 km of the Survey Area, including 17.4 km east in 2014 and 5.0 km south in 2009.[1] Suitable habitat present in the Survey Area (coastal fresh to saline wetlands, inland permanent and temporary wetlands).[4]
Scolopacidae	*Calidris pugnax*	Ruff	MI	MI, MA	x		11		Low	A total of 11 DBCA records within 40 km of the Survey Area, including 4.2 km south in 2000 and 17.4 km east in 2014.[1] Suitable habitat present in the Survey Area (shallow wetlands, freshwater lakes, flood lands, dry grassland).[3]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scolopacidae	*Calidris ruficollis*	Red-necked Stint	MI	MI, MA	x	x	745	x	Low	A total of 745 DBCA records within 40 km of the Survey Area, including 1.8 km southwest in 2015 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (shallow wetlands, temporary floodwaters).[4]
Scolopacidae	*Calidris subminuta*	Long-toed Stint	MI	MI, MA	x		51		Low	A total of 51 DBCA records within 40 km of the Survey Area, including 2.3 km northeast in 2005 and 21.6 km east in 2015.[1] No suitable habitat present in the Survey Area (muddy fringes of fresh wetlands).[2]
Scolopacidae	*Calidris tenuirostris*	Great Knot	CR	CR, MI, MA	x	x	813	x	Low	A total of 813 DBCA records within 40 km of the Survey Area, including 0.9 km west in 2010 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (tidal flats, beaches).[2]
Scolopacidae	*Gallinago megala*	Swinhoe's Snipe	MI	MI, MA	x	x	9		Low	Nine DBCA records within 40 km of the Survey Area, including 2.5 km southeast in 2004 and 13.9 km southeast in 2012.[1] Suitable habitat present in the Survey Area (freshwater wetlands, streams).[3]
Scolopacidae	*Gallinago stenura*	Pin-tailed Snipe	MI	MI, MA	x	x	3		Low	Three DBCA records within 40 km of the Survey Area, including 3.1 km east in 2011 and 2.5 km southeast in 2004.[1] Suitable habitat present in the Survey Area (shallow freshwaters, river pools, floodwaters).[3]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scolopacidae	*Limnodromus semipalmatus*	Asian Dowitcher	MI	MI, MA	x	x	227		Low	A total of 227 DBCA records within 40 km of the Survey Area, including 3.1 km east in 2011 and 9.5 km southeast in 2015.[1] No suitable habitat present in the Survey Area (beaches, mudflats, sewage ponds).[2]
Scolopacidae	*Limosa lapponica*	Bar-tailed Godwit	MI	MI, MA	x	x	874	x	Low	A total of 874 DBCA records within 40 km of the Survey Area, including 13.1 km southeast in 2017 and 2.1 km south in 2003.[1] No suitable habitat present in the Survey Area (coastal areas, tidal flats).[2]
Scolopacidae	*Limosa lapponica menzbieri*	Bar-tailed Godwit	CR	MI, MA, CR	x	x	12		Low	A total of 12 DBCA records within 40 km of the Survey Area, including 9.4 km southeast in 2009 and 4.3 km south in 2003.[1] No suitable habitat present in the Survey Area (coastal tidal flats).[2]
Scolopacidae	*Limosa limosa*	Black-tailed Godwit	MI	MI, MA	x	x	494	x	Low	A total of 494 DBCA records within 40 km of the Survey Area, including 3.1 km east in 2011 and 13.7 km southeast in 2017.[1] No suitable habitat present in the Survey Area (shallow inland wetlands).[2]
Scolopacidae	*Numenius madagascariensis*	Eastern Curlew	CR	CR, MI, MA	x	x	618	x	Low	A total of 618 DBCA records within 40 km of the Survey Area, including 10.4 km southeast in 2017 and 3.1 km east in 2014.[1] No suitable habitat present in the Survey Area (tidal flats, beaches, saltmarshes).[2]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scolopacidae	*Numenius minutus*	Little Curlew	MI	MI, MA	x	x	145		Low	A total of 145 DBCA records within 40 km of the Survey Area, including 2.4 km south in 2015 and 16.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (lawns, dry grassland, fresh wetlands).[2]
Scolopacidae	*Numenius phaeopus*	Whimbrel	MI	MI, MA	x	x	907	x	Low	A total of 907 DBCA records within 40 km of the Survey Area, including 2.9 km south in 2014 and 5.30km south in 2018.[1] No suitable habitat present in the Survey Area (coastal areas, tidal flats, mangroves).[2]
Scolopacidae	*Phalaropus lobatus*	Red-necked Phalarope	MI	MI, MA	x		5		Low	Five DBCA records within 40 km of the Survey Area, including 17.6 and 30.6 km east in 1999.[1] No suitable habitat present in the Survey Area (near-coastal salt lakes).[3]
Scolopacidae	*Tringa brevipes*	Grey-tailed Tattler	MI, P4	MI, MA	x	x	769	x	Low	A total of 769 DBCA records within 40 km of the Survey Area, including 1.8 km southwest in 2014 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (coastal areas, tidal flats, rocky shorelines).[2]
Scolopacidae	*Tringa glareola*	Wood Sandpiper	MI	MI, MA	x	x	109		Low	A total of 109 DBCA records within 40 km of the Survey Area, including 4.8 km south in 2015 and 2.3 km northeast in 2005.[1] No suitable habitat present in the Survey Area after heavy rains (freshwater wetlands with emergent sedges and taller fringing vegetation).[2]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scolopacidae	*Tringa nebularia*	Common Greenshank	MI	MI, MA	x	x	831	x	Low	A total of 831 DBCA records within 40 km of the Survey Area, including 3.4 km south in 2015 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (permanent and temporary wetlands, floodplains).[4]
Scolopacidae	*Tringa stagnatilis*	Marsh Sandpiper	MI	MI, MA	x	x	205		Low	A total of 205 DBCA records within 40 km of the Survey Area, including 12.3 km southeast in 2015 and 2.3 km northeast in 2005.[1] No suitable habitat present in the Survey Area (shallow, fresh to brackish inland wetlands).[2]
Scolopacidae	*Tringa totanus*	Common Redshank	MI	MI, MA	x	x	98		Low	A total of 98 DBCA records within 40 km of the Survey Area, including 4.8 km south in 2008 and 8.2 km southeast in 2015.[1] No suitable habitat present in the Survey Area (sheltered tidal flats).[2]
Scolopacidae	*Xenus cinereus*	Terek Sandpiper	MI	MI, MA	x	x	551	x	Low	A total of 551 DBCA records within 40 km of the Survey Area, including 2.3 km northeast in 2005 and 8.3 km southeast in 2017.[1] No suitable habitat present in the Survey Area (tidal flat, saltwork ponds).[2]
Threskiornithidae	*Plegadis falcinellus*	Glossy Ibis	MI	MI, MA	x		124		Low	A total of 124 DBCA records within 40 km of the Survey Area, including 2.8 km south in 2015 and 21.6 km east in 2017.[1] No suitable habitat present in the Survey Area (shallow fresh waters, dry grasslands).[2]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Tytonidae	*Tyto novaehollandiae kimberli*	Northern Masked Owl	P1	VU		x	1		Low	Three historical DBCA record within 40 km of the Survey Area, including 2.6 km southeast in 1909.[1] No suitable habitat present in the Survey Area (Eucalypt open forests with tree hollows for nesting and nearby closed monsoon forest for roosting).[2]
MAMMALIAN										
Dasyuridae	*Dasyurus hallucatus*	Northern Quoll	EN	EN	x		1		Low	One DBCA record within 40 km of the Survey Area, 3.1 km southeast in 2015.[1] No suitable habitat present in the Survey Area (rocky escarpments, eucalypt forest and woodland).[7]
Dasyuridae	*Phascogale tapoatafa kimberleyensis*	Kimberley Brush-tailed Phascogale	VU	VU	x		1		Low	One historical DBCA record within 40 km of the Survey Area, 30.4 km east.[1] No suitable habitat present in the Survey Area (coastal and near coastal areas in the tropical north from Kalumburu to Broome).[8]
Emballonuridae	*Saccolaimus saccolaimus nudicluniatus*	Bare-rumped Sheath-tailed Bat	P3	VU		x			Low	Only returned by PMST which searches by modelled distribution.[5] No suitable habitat present in the Survey Area (coastal eucalypt woodland with tree hollows).[7]
Macropodidae	*Lagorchestes conspicillatus leichardti*	Spectacled Hare-wallaby	P4		x				Low	Ten NatureMap records within 50 km of the Survey Area.[9] No suitable habitat present in the Survey Area (tropical grasslands).[7]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Megadermatidae	*Macroderma gigas*	Ghost Bat	VU	VU		x			Low	Only returned by PMST which searches by modelled distribution.[5] Suitable habitat present in the Survey Area (vine thickets).[7 10]
Molossidae	*Ozimops cobourgianus*	Northern Coastal Free-tailed Bat	P1		x		2		Medium	Two DBCA records within 40 km of the Survey Area, 1.6 km south and 8.2 km northeast in 2016.[1] No suitable roosting habitat present in the Survey Area (*Avicennia marina* tree hollows).[10] May use the Survey Area for feeding.
Muridae	*Hydromys chrysogaster*	Water Rat	P4		x		1		Low	One DBCA record within 40 km of the Survey Area, 8.3 km south in 1971.[1] No suitable habitat present in the Survey Area (permanent fresh to brackish water bodies).[7]
Muridae	*Mesembriomys macrurus*	Golden-backed Tree-rat	P4		x		1		Low	One historical DBCA record within 40 km of the Survey Area, 10.8 km north.[1] Outside current known range Restricted to NW Kimberley, where it inhabits tropical woodlands, vine thickets and rainforest in rugged valleys.[10]
Muridae	*Xeromys myoides*	Water Mouse		VU		x			Low	Only returned by PMST which searches by modelled distribution.[5] Outside range, restricted to the coastal Top End of the NT and the QLD coast from Gold Coast to Prosperine.[10]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Peramelidae	*Isoodon auratus auratus*	Golden Bandicoot	VU	VU	x		1		Low	One historical DBCA record within 40 km of the Survey Area, 30.4 km east.[1] No suitable habitat present in the Survey Area (sand-dune and sandplain country with spinifex formations in arid zone, sandplains with *Acacia* and eucalypt woodlands over tussock grasses in tropical semiarid zone, rugged sandstone-spinifex country and volcanic country in tropical, subhumid north-western Kimberley).[10]
Phalangeridae	*Trichosurus vulpecula arnhemensis*	Northern Brushtail Possum	VU	VU	x	x	11	x	Medium	A total of 11 DBCA records within 40 km of the Survey Area, including 1.7 km south in 2016 and 3.9 km southeast in 2015.[1] Habitat within the Survey Area is of low quality due to low density of hollows.
Phalangeridae	*Wyulda squamicaudata*	Scaly-tailed Possum	P4		x		1		Low	One DBCA record within 40 km of the Survey Area, 5.9 km southwest in 1970.[1] Outside current known range. Patchily distributed in coastal NW Kimberley in low open woodland, riparian forest, and vine thickets where tumbled boulders provide shelter.[10]
Potoroidae	*Bettongia lesueur graii*	Burrowing Bettong, Boodie	EX	EX	x		1		Low	Extinct on mainland Australia, *B. lesueur leseur* has been reintroduced to the mainland from Dorre and Barrow Island populations.[11]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Thylacomyidae	*Macrotis lagotis*	Greater Bilby, Dalgyte	VU	VU	x	x	231	x	High	A total of 231 DBCA records within 40 km of the Survey Area, including 7.7 km northeast in 2018 and 3.8 km south in 2015.[1] Limited suitable habitat present in the Survey Area (dunes, hummock grasslands, massive red earths with *Acacia* shrubland).[7]
REPTILIAN										
Crocodylidae	*Crocodylus johnstoni*	Freshwater Crocodile	OS	MA		x			Low	Only returned by PMST which searches by modelled distribution.[5]Suitable habitat present in the Survey Area (freshwater rivers and billabongs).[12]
Crocodylidae	*Crocodylus porosus*	Saltwater Crocodile	MI	MI, MA		x			Low	Only returned by PMST which searches by modelled distribution.[5] No suitable habitat present in the Survey Area (coastal rivers, swamps and inland along major drainage systems from western Pacific to Indian Ocean).[12]
Elapidae	*Simoselaps minimus*	Dampierland burrowing snake	P2		x		1		Low	One DBCA record within 40 km of the Survey Area, 6.0 km south in 2005.[1] No suitable habitat present in the Survey Area (coastal dunes and sandy junction between dunes and adjacent *Acacia* shrubland).[12]

Family	Taxon	Common Name	Conservation Status		Source				Likelihood of Occurrence	Justification
			State	Federal	NM	PMST	DBCA	Literature		
Scincidae	*Ctenotus angusticeps*	Northwestern coastal Ctenotus	P3		x		27		Low	A total of 27 DBCA records within 40 km of the Survey Area, including 4.0 and 4.5 km east in 2017.[1] No suitable habitat present in the Survey Area Outside current known range. Patchily distributed along NW coast, between Airlie Island and just N of Broome. On the mainland it inhabits coastal mudflats vegetated with samphire.[12]
Scincidae	*Lerista separanda*	Dampierland plain slider	P2		x		3		Low	Three DBCA records within 40 km of the Survey Area, 6.0 km south in 2005.[1] No suitable habitat present in the Survey Area (sandy southwest Kimberley coast).[12]
Scincidae	*Liopholis kintorei*	Great Desert Skink	VU	VU	x	x	1		Low	One historical DBCA record within 40 km of the Survey Area, 30.6 km southeast.[1] Outside known range. Inhabits arid flats vegetated with spinifex in central WA.[12]
Varanidae	*Varanus sparnus*	Dampierland Goanna	P1		x				Low	Four NatureMap records within 50 km of the Survey Area.[9] Restricted to the Dampier Peninsular; pindan shrubland composed of low *Corymbia* over mixed *Acacia* shrubs and *Triodia* on reddish brown sandy loams.[12]

1 (Department of Biodiversity Conservation and Attractions, 2022e), 2 (Menkhorst et al., 2017), 3 (Johnstone & Storr, 1998), 4 (Morcombe, 2003), 5 (Department of Agriculture Water and the Environment, 2022a), 6 (Pizzey & Knight, 2001), 7 (van Dyck & Strahan, 2008), 8 (Threatened Species Scientific Committee, 2017), 9 (Department of Biodiversity Conservation and Attractions, 2022b), 10 (Menkhorst & Knight, 2010), 11 (Department of Environment and Conservation, 2012), 12 (Wilson & Swan, 2017)

4.3.3 Fauna Habitat

One broad fauna habitat (excluding cleared areas) was identified and mapped within the Survey Area (Figure 10). Habitat condition remained consistent throughout the Survey Area, with the most prolific disturbances being tracks and weeds. A description, extent within the Survey Area and a representative photo is provided in Table 12. Small discrepancies in fauna habitat extents (i.e., not adding up to the exact area extent of the Survey Area) are due to rounding. Fauna habitat assessments are presented in Appendix F.

Table 12: Fauna Habitat Type Descriptions with the Survey Area

Fauna Habitat	Total Area, Proportion of the Survey Area	Habitat Description	Representative Photo
Acacia shrubland (Pindan Vegetation)	15.7 ha, 87.7%	*Corymbia greeniana*, *Bauhinia cunninghamii, Brachychiton diversifolius subsp. diversifolius* low isolated to sparse trees over *Acacia eriopoda* tall open shrubland over Sorghum sp. mid sparse to open tussock grassland and *Triodia schinzii* mid sparse to open hummock grassland. In some areas vegetation condition was impacted by tracks and weeds. Peeling bark, spinifex hummocks, and woody debris provide shelter for small reptiles and mammals. Isolated trees provide shelter and foraging habitat for birds. Peregrine Falcons and Pacific Swifts may use this habitat for hunting. Greater Bilbies may use this habitat for foraging and shelter. Northern Brushtail Possums may use this habitat for foraging and shelter, however, it is of low quality due to the low number of hollows. Northern Free-tailed Bats may use this habitat for foraging.	
Cleared Areas	2.2 ha, 12.3%	Cleared land for existing roads	

4.3.4 Fauna Assemblage

The terrestrial vertebrate fauna survey recorded a total of 25 fauna species from 19 families, including 21 bird, one mammal, and three reptile species. A full inventory of fauna species recorded during the field survey is provided in Appendix G.

Birds

A total of 21 bird species from 15 families were recorded throughout the Survey Area. The most recorded species was the Brown Honeyeater (*Lichmera indistincta*) followed by the Singing Honeyeater (*Gavicalis virescens*) and the Little Friarbird (*Philemon citreogularis*) each with 13 individuals. The most speciose bird family was the Meliphagidae (Honeyeaters) with four species.

Mammals

One introduced mammal was seen within the Survey Area, the Cat (*Felis catus*).

Reptiles

A total of three reptile species from three families were recorded throughout the Survey Area. The most recorded species was the Sand Goanna (*Varanus gouldii*) with three individuals seen.

Amphibians

No amphibians were recorded during the field survey.

4.3.5 Significant Fauna

No significant fauna species (Threatened or Priority), or evidence of these species such as tracks, scats, nests, diggings, burrows, or direct sightings were recorded within or directly surrounding the Survey Area.

The post survey results identified one significant taxon as having a high likelihood of occurrence within the Survey Area, the Greater Bilby (*Macrotis lagotis*) - VU (BC Act); VU (EPBC Act).

Five conservation significant taxa were assessed as having a medium likelihood of occurrence within the Survey Area:

- Grey Falcon (*Falco hypoleucos*) - VU (BC Act); VU (EPBC Act)
- Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) - VU (BC Act); VU (EPBC Act)
- Pacific Swift (*Apus pacificus*) - MI (BC Act); MI, MA (EPBC Act)
- Peregrine Falcon (*Falco peregrinus*) - OS (DBCA)
- Northern Free-tailed Bat (*Ozimops cobourgianus*) – P4 (DBCA).

A further 84 significant taxa were assessed as having a low likelihood of occurrence within the Survey Area.

5 Discussion

5.1 Flora and Vegetation

5.1.1 Flora Composition

The suite of flora taxa recorded during the survey is considered typical for the respective areas (Beard 1976) and aligns with the database search results obtained.

Floristic diversity was considered within the expected range for the bioregions for the timing of the survey undertaken. Despite the below-average rainfall recorded for the three months prior to commencing the survey, a significant rainfall event resulted in 485.0 mm rain in three days (January 4th- 6th 2023), prior to the survey. However, the timing of the survey may have been too soon for some species, to respond to the rainfall event.

Floristic diversity of annual and ephemeral species was considered low, and the quality of several specimen collections was poor due to the absence of identifiable features at the time of the surveys. Additional annual and ephemeral species may be recorded later in the wet season.

The vegetation in the survey area was typical of the pindan vegetation of the region. Vegetation type boundaries were mainly defined by the fire regimes that have occurred in the Survey Area. The species composition of the vegetation was generally homogeneous, with the exception being structural differences as a result of post fire successional shrubs dominating in recently (1-5 years) burnt patches. Also, more wet tropical elements of the flora, for example *Grewia pindanica*, tend to be absent from recently burnt areas as these species are intolerant to high fire frequency (Bowman M. J. S., 2000).

5.1.2 Survey Adequacy

The flora and vegetation survey effort was in accordance with the scope of works, and appropriate for a detailed flora and vegetation survey in the Kimberley region. The inventory of vascular flora was compiled using site data and opportunistic observations made while traversing between sites and during systematic targeted searching within the Survey Area.

As the Survey Area was dissected by tracks, the placement of quadrats was restricted. Also as discussed above the Survey Area included vegetation at different stages of recovery after fire resulting in variations to vegetation structure. These changes were captured using releves and mapping notes.

5.1.3 Significant Flora

No Threatened flora species pursuant to the EPBC Act 1999 and/or gazetted as Threatened Flora pursuant to the BC Act 2016 were recorded within the Survey Area. No DBCA listed Priority species were recorded in the Survey Area.

Three flora taxa were considered to have a medium likelihood of occurrence following the survey: *Glycine pindanica* (P3), *Goodenia byrnesii* (P3), and *Polymeria* sp. Broome (K.F. Kenneally

9759) (P3). These taxa are low shrubs to climbers, and may be present within the Survey Area as isolated individuals, given the database records in close proximity.

5.1.3.1 Other Significant Flora

No taxa recorded in the Survey Area were considered flora of other conservation significance.

5.1.4 Introduced Flora

Two weed species were recorded in the Survey Area; however, none are listed as WoNS or DPs. The weed species recorded, **Distimake dissectus* var. *dissectus* has legal status of Permitted – s11, and do not have an assigned control category.

**Ziziphus mauritiana* legal status of Declered Pest – s22, and therfore should have some form of management applied that will alleviate the harmful impact of the species, reduce the numbers or distribution of the organism or prevent or contain the spread of the species (Biosecurity and Agriculture Management Act, 2007).

**Distimake dissectus* var. *dissectus* and **Ziziphus mauritiana* were only recorded in Quadrat 3 (Q03), which was closest of the quadrats to a main road verge.

5.1.5 Vegetation Types

Mapping reliability is considered to be high across the Survey Area.

The entirety of the Survey Area comprised of flat plains, with red brown pindan sands, and the vegetation was considered representative of broad scale vegetation mapping for the area.

Vegetation types across the Survey Area displayed only minor differences in species composition and density, which is likely to be attributed to historic fire regimes. Vegetation type AcCp was considered to have been historically burnt, with upper canopy trees only represented by dead stags, with the dominant taxa within this vegetation being *Acacia colei* var. *colei*. Given time this vegetation type is likely to mature and resemble the adjacent vegetation within the Survey Area.

5.1.6 Significant Vegetation

The ecological community, *Corymbia paractia dominated community on dunes* (P1) was recorded by a survey (S. Reynolds, 2018) that was undertaken less than 1 km southwest of the Survey Area. One specimen of *Corymbia* could not be identified to species level, and therefore it is not possible to confirm the absence of *Corymbia paractia* (P1) in the survey area. However given *Corymbia paractia* (P1) was not recorded in a previous survey (S. Reynolds, 2018), it is considered unlikely.

5.2 Vertebrate Fauna

5.2.1 Fauna Habitat

The *Acacia* Shrubland fauna habitat identified within the Survey Area is typical of the Dampierland bioregion and consistent with the habitats found by previous studies in the region

(360 Environmental Pty Ltd, 2017; AECOM Australia Pty Ltd, 2017b; Bamford Consulting, 2010; Docherty, 2019; Ecoscape (Australia) Pty Ltd, 2017; Focused Vision, 2019; GHD, 2009, 2010, 2015, 2019; Spectrum Ecology, 2020). The *Acacia* Shrubland fauna habitat extended outside the Survey Area, forming part of a larger ecosystem.

The *Acacia* Shrubland provides habitat for numerous native fauna species including conservation significant species: Greater Bilbies, Grey Falcons, Northern Brushtail Possums, Pacific Swifts, Peregrine Falcons, and Northern Free-tailed Bats. This habitat may flood during the wet season, providing a temporary water source and increased habitat opportunities for fauna species.

Habitat condition remained consistent throughout the Survey Area, with the most prolific disturbances being tracks and weeds.

5.2.2 Significant Fauna

5.2.2.1 High Likelihood

Greater Bilby (*Macrotis lagotis*) - VU (BC Act); VU (EPBC Act)

The Greater Bilby is a solitary and nocturnal type of bandicoot, characterised by its distinct rabbit like ears and long face with a pointed snout (Department of Biodiversity Conservation and Attractions, 2017a). The range of the Greater Bilby has declined northwards, with wild subpopulations now restricted predominantly to the Tanami Desert in the Northern Territory and the Gibson, Little Sandy, and Great Sandy Deserts as well as parts of the Pilbara and Kimberley/Dampierland region in Western Australia (Department of Biodiversity Conservation and Attractions, 2017a; R. I. Southgate, 1990). The Greater Bilby is described as occupying a wide range of vegetation types, including open tussock grassland on upland hills, mulga woodland/shrubland growing on ridges and rises, and spinifex growing on sandplains and dunes, drainage systems, salt lake systems, and other alluvial areas (Department of Biodiversity Conservation and Attractions, 2017a; Pavey, 2006).

Greater Bilby is omnivorous, consuming a range of invertebrates, including beetles, termites, and root-dwelling larvae, as well as plant material including seeds and bulbs. Many of the plant taxa containing root-dwelling larvae consumed by Greater Bilbies are *Acacia* species, thus some species can be used as indicators of Greater Bilby presence and likelihood of occurrence (Dziminski & Carpenter, 2017; R. Southgate et al., 2018). The following flora species identified during the field survey have had consistent and repeatable observations of Greater Bilbies digging into the roots to obtain root dwelling larvae; *A. colei* (Warralong, Warrawagine, Warburton ranges, Pilbara, Dampier Peninsula, La Grange) and *Dodonaea hispidula* (Dampier Peninsula) (Dziminski & Carpenter, 2017; R. Southgate et al., 2018).

No sightings or secondary signs (burrows, tracks, and scats) of the Greater Bilby were recorded during the field survey. The desktop assessment identified numerous nearby records of the Greater Bilby and the species may use habitats within the Survey Area for foraging and shelter. The closest certain records occurred of the Bilby approximately 200 m from the Survey Area in

1998 and 3.8 km from the Survey Area in 2015 (Department of Biodiversity Conservation and Attractions, 2022e). There are also numerous secondary signs including tracks, scats, and burrows in 2018 during fauna surveys within 10 km of the Survey Area. The soils within the Survey Area are a sandy loam, and therefore suited to the deep, complex burrows the species uses for daytime shelter (Menkhorst & Knight, 2010). As all records mentioned above are found in the same continuous vegetation type (*Acacia* Shrubland), and many of the observed habitat components are suitable for Greater Bilbies, they may utilise the *Acacia* Shrubland habitat in the Survey Area.

5.2.2.2 Medium Likelihood

Grey Falcon (*Falco hypoleucos*) - VU (BC Act); VU (EPBC Act)

The Grey Falcon is an elusive and endemic bird of the arid interior (Schoenjahn et al., 2019). It is distributed sparsely over Australia's arid and semi-arid zones and is absent from Cape York Peninsula, south of the Great Dividing Range in Victoria, and south of 26°S in Western Australia (BirdLife International, 2016; Johnstone & Storr, 1998). The Grey Falcon is restricted largely to areas of the highest annual average temperatures where there is average annual rainfall of less than 500 mm. It favours lightly timbered and untimbered lowland plains that are crossed by tree lined watercourses, but frequents other habitats, including grassland and sand dune habitats (BirdLife International, 2016; Johnstone & Storr, 1998). The Grey Falcon was not recorded during the field survey. The Grey Falcon is unlikely to use the Survey Area for nesting, however, all habitats within the Survey Area may be used for hunting.

Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) - VU (BC Act); VU (EPBC Act)

The Northern Brushtail Possum is known to occur discontinuously from the Gulf of Carpentaria hinterland near Borroloola, NT westward to the Kimberley, WA. It is a nocturnal semi-arboreal marsupial, occurring mainly in tall eucalypt open forests with large hollow-bearing trees, particularly where the understorey includes some shrubs that bear fleshy fruits but is also known to inhabit mangrove communities, rainforests, and semi-urban areas (Department of Agriculture and Environment, 2021; Menkhorst & Knight, 2010).

There were nine records returned from the DBCA database within 6 km of the Survey Area from 2009 to 2016. All records were certain in their identification. Bamford Consulting (2010) opportunistically recorded five instances of Northern Brushtail Possum scat under Fig trees, below large hollows within Fig trees, and on Fig tree branches within Pindan vegetation in 2009. The closest of these records is 6.3 km south of the Survey Area.

The *Acacia* Shrubland provides suitable habitat for this species. The regional population is unlikely to be dependent on habitats within the Survey Area due to the scarcity of hollows within the Survey Area and the better quality and a greater quantity of suitable habitat outside the Survey Area.

Pacific Swift (*Apus pacificus*) - MI (DBCA); MI, MA (EPBC Act)

The Pacific Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. The Pacific Swift occupies a large airspace range (i.e. low to very high) over varied habitats, ranging from rainforests to semi-deserts (Morcombe, 2003).

The Pacific Swift was not recorded during the field survey. Although the species has the potential to occur in the airspace above the Survey Area, it will not be reliant on the terrestrial habitats of the Survey Area.

Peregrine Falcon (*Falco peregrinus*) - OS (DBCA)

The Peregrine Falcon is an uncommon but wide-ranging bird across Australia (Barrett et al., 2003). It occurs mainly along rivers and ranges as well as wooded watercourses and lakes. It nests primarily on cliffs, granite outcrops and quarries, although is also known to occupy existing raptor and corvid stick nests (Menkhorst et al., 2017). The diet of the Peregrine Falcon has been well studied and primarily includes flocking species such as parrots, pigeons and on the east coast, European Starlings (Olsen & Fuentes, 2008).

The Peregrine Falcon typically nests on cliff ledges or in refurbished nests built by other raptors or corvids (Pizzey & Knight, 2001), therefore is unlikely to use the Survey Area for nesting. All habitats within the Survey Area may be used for hunting.

Northern Free-tailed Bat (*Ozimops cobourgianus*) - P4 (DBCA)

The Northern Free-tailed Bat is restricted to mangroves and adjacent coastal vegetation on two stretches of north Australian coastline, between Exmouth Gulf and Derby in WA, and from Wadeye to Wollogorang in the NT. They are insectivores, foraging in eucalypt or melaleuca woodland and other coastal habitat, and roosting in *Avicennia marina* hollows (Menkhorst & Knight, 2010).

The *Acacia* Shrubland provides suitable habitat for this species. However, there is better quality and a greater quantity of suitable habitat outside the Survey Area and thus local Northern Free-tailed Bat populations are unlikely to be reliant on the habitat within the Survey Area.

6 Conclusion

Flora and Vegetation

- Four vegetation types were present within the Survey Area, across a single landform (pindan plain)
- No DBCA listed Priority flora, were recorded in the survey area
- No Threatened flora species pursuant to the EPBC Act 1999 and/or gazetted as Threatened/Declared Rare Flora pursuant to the BC Act 2016 were recorded during the survey
- No TECs or PECs were recorded within the Survey Area
- Vegetation Condition ranged from Good to Very Good.

Vertebrate Fauna

- *Acacia* Shrubland was the only fauna habitat mapped within the Survey Area aside from cleared areas.
- The *Acacia* Shrubland habitat is found in similar or better quality and quantity in the surrounding area.
- No significant fauna species were recorded during the fauna surveys.
- One introduced species was recorded during the survey, the cat (*Felis catus*).
- The Greater Bilby was the only significant fauna species identified as having a high likelihood of occurrence within the Survey Area. This species is unlikely to be dependent on resources within the Survey Area due to greater availability of better-quality suitable habitat immediately outside the Survey Area.
- Five other significant fauna species (Grey Falcons, Northern Brushtail Possums, Pacific Swifts, Peregrine Falcons, and Northern Free-tailed Bats) were determined to have a medium likelihood of using the Survey Area for foraging but are unlikely to be dependent on resources within the Survey Area due to limited availability of habitat features required for nesting and roosting.

7 Limitations

This report is produced strictly in accordance with the scope of services set out in the contract or otherwise agreed in accordance with the contract. 360 Environmental makes no representations or warranties in relation to the nature and quality of soil and water other than the visual observation and analytical data in this report.

In the preparation of this report, 360 Environmental has relied upon documents, information, data, and analyses ('client's information') provided by the client and other individuals and entities. In most cases where client's information has been relied upon, such reliance has been indicated in this report. Unless expressly set out in this report, 360 Environmental has not verified that the client's information is accurate, exhaustive, or current and the validity and accuracy of any aspect of the report including, or based upon, any part of the client's information is contingent upon the accuracy, exhaustiveness, and currency of the client's information. 360 Environmental shall not be liable to the client or any other person in connection with any invalid or inaccurate aspect of this report where that invalidity or inaccuracy arose because the client's information was not accurate, exhaustive, and current or arose because of any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to 360 Environmental.

Aspects of this report, including the opinions, conclusions, and recommendations it contains, are based on the results of the investigation, sampling and testing set out in the contract and otherwise in accordance with normal practices and standards. The investigation, sampling and testing are designed to produce results that represent a reasonable interpretation of the general conditions of the site that is the subject of this report. However, due to the characteristics of the site, including natural variations in site conditions, the results of the investigation, sampling and testing may not accurately represent the actual state of the whole site at all points.

It is important to recognise that site conditions, including the extent and concentration of contaminants, can change with time. This is particularly relevant if this report, including the data, opinions, conclusions, and recommendations it contains, are to be used a considerable time after it was prepared. In these circumstances, further investigation of the site may be necessary.

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Figures

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Date Drawn:	09-Mar-2023
Drawn By:	PW
Reviewed By:	BV

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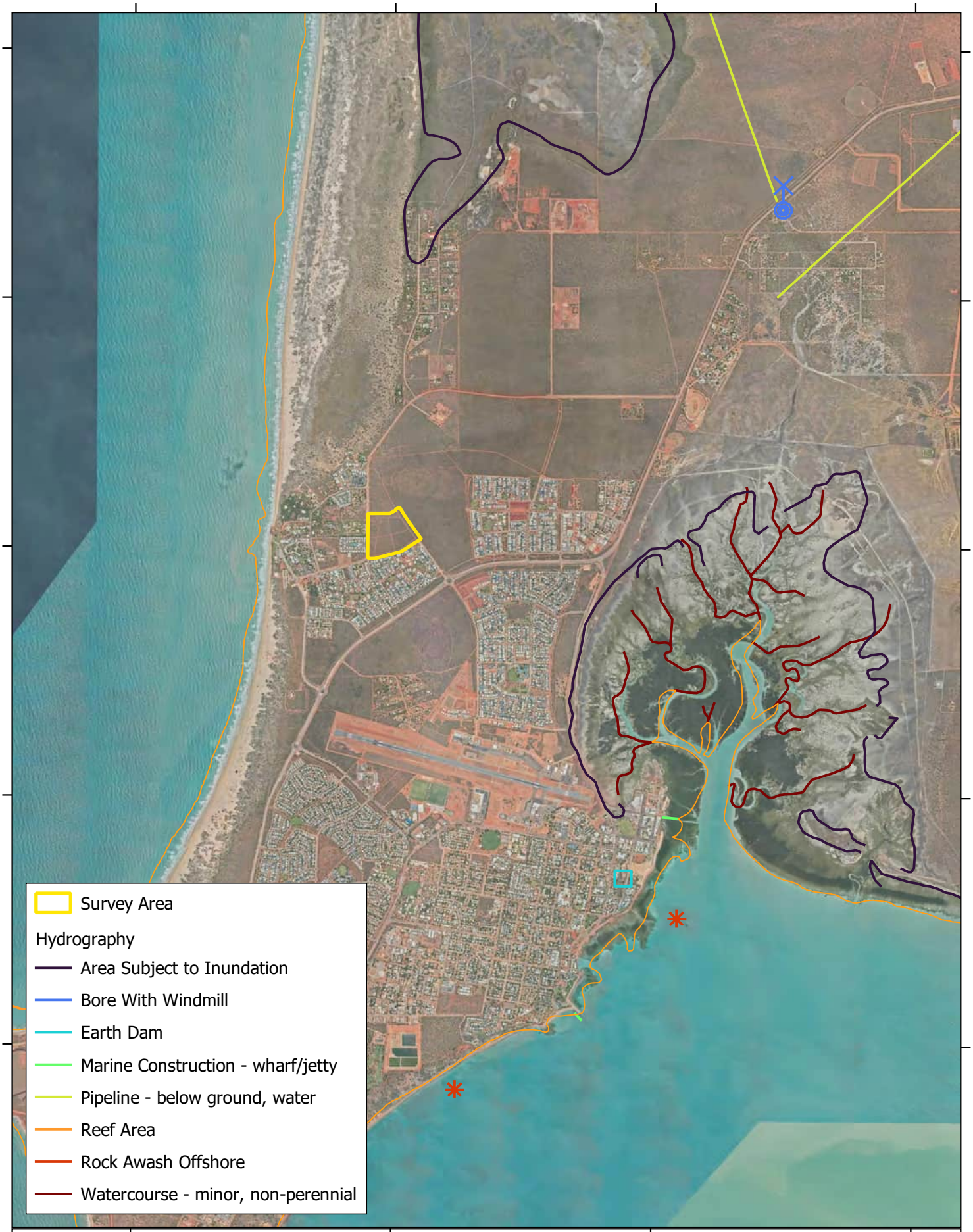
Broome Shire Council
Sanctuary Road Biological Assessment

Survey Area
FIGURE 1



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Hydrography
FIGURE 2

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Sanctuary Road Biological Assessment

ESAs and Conservation Areas
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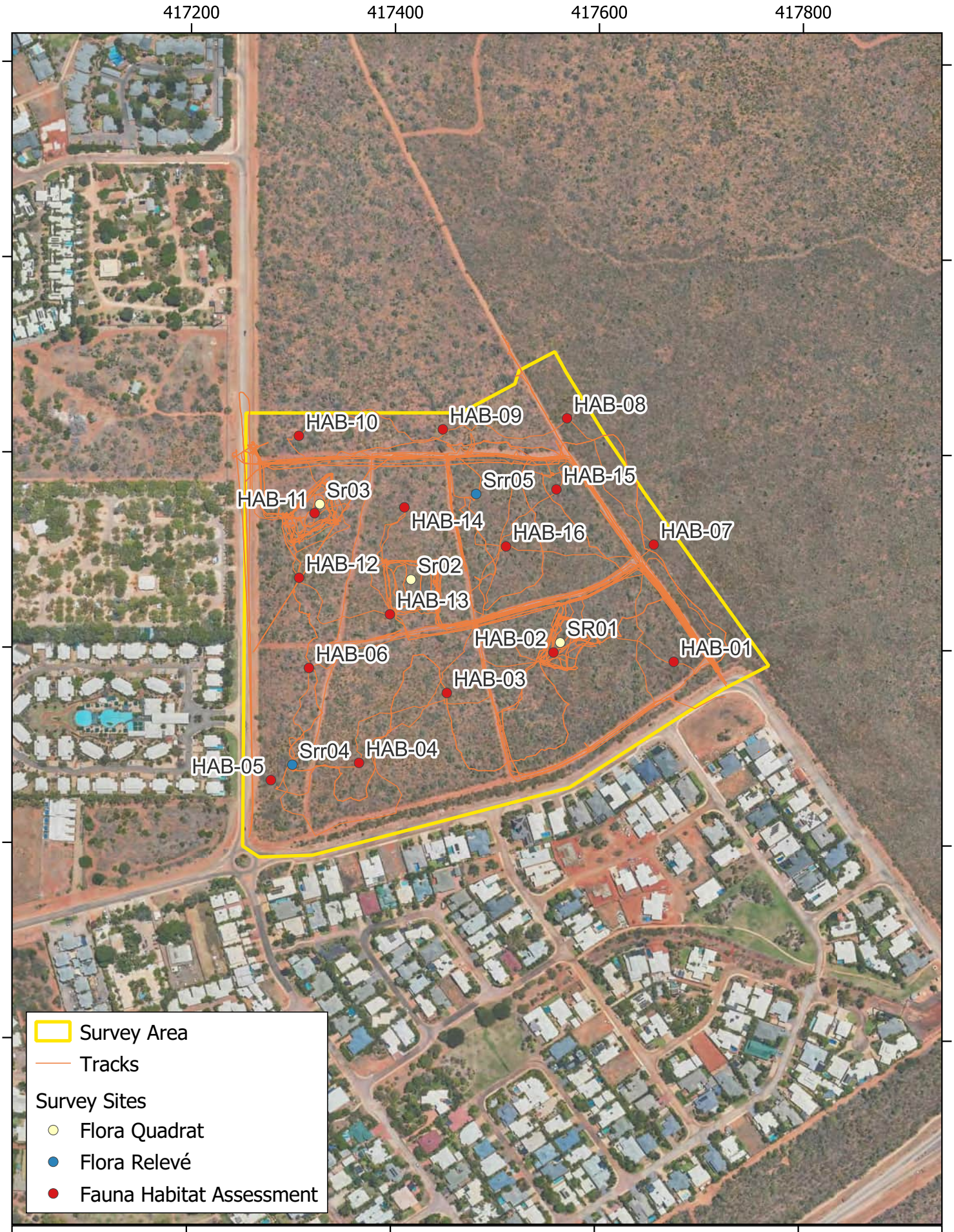

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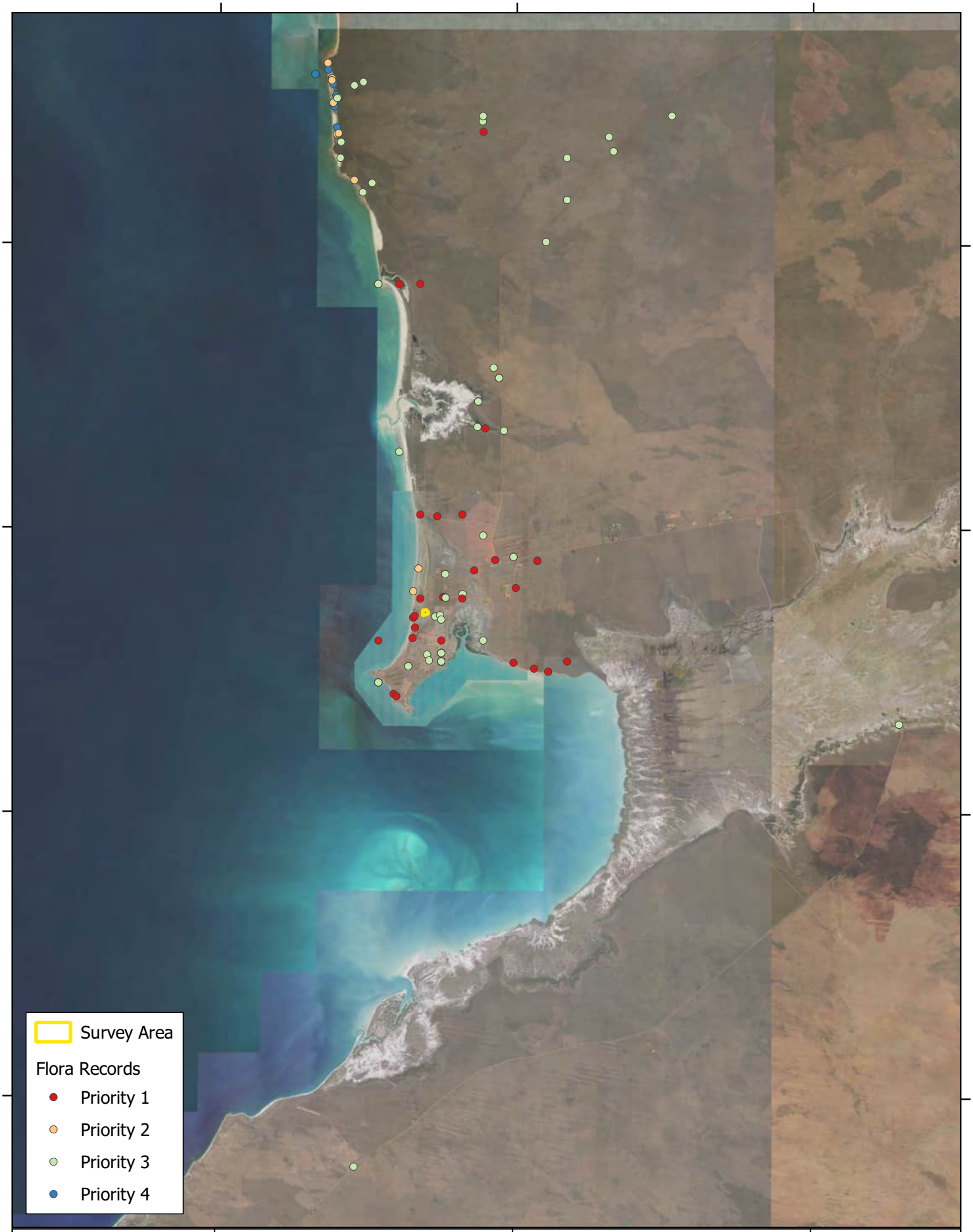
Sanctuary Road Biological Assessment

Survey Effort
FIGURE 4



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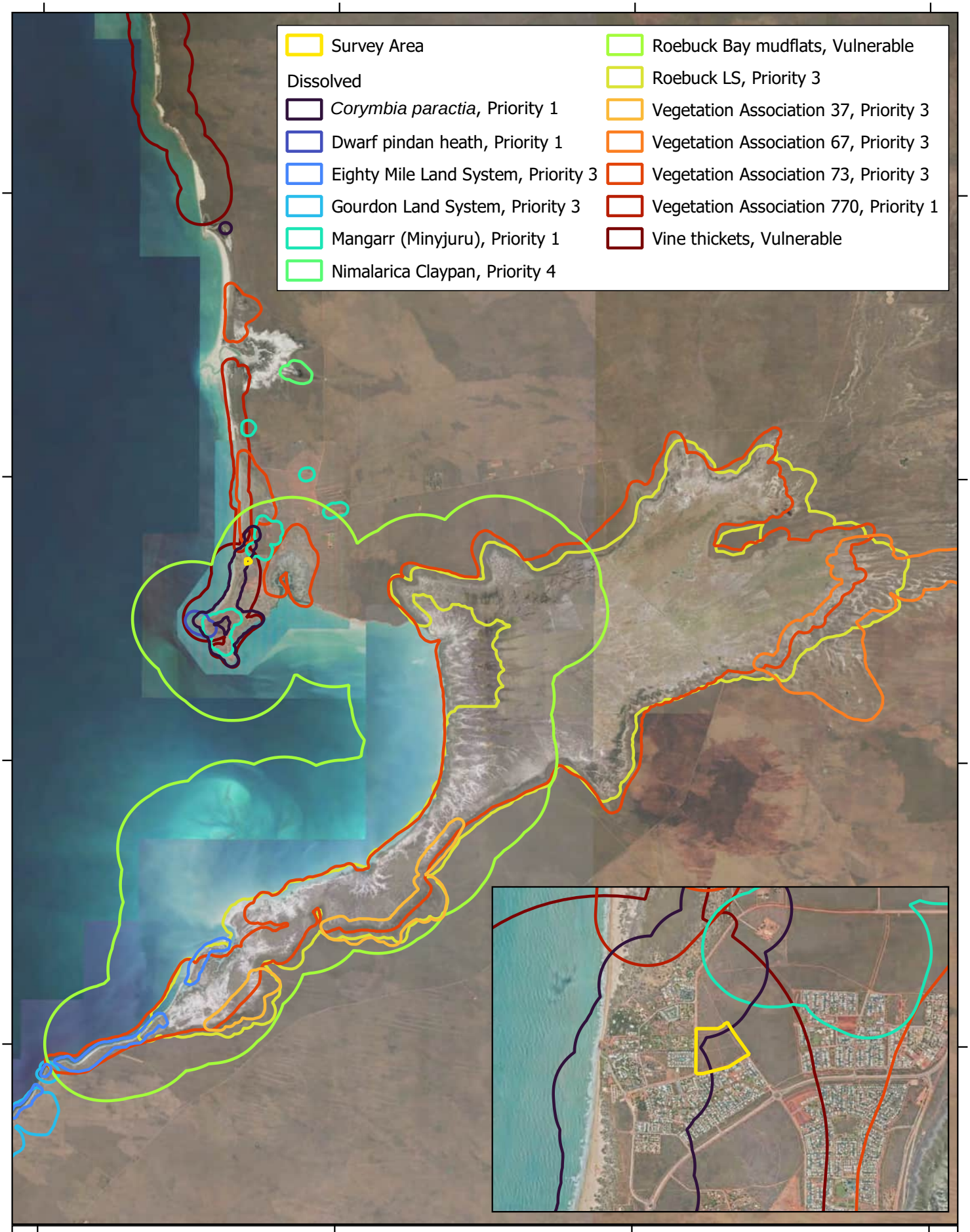
Sanctuary Road Biological Assessment

Threatened and Priority Flora Records
FIGURE 5



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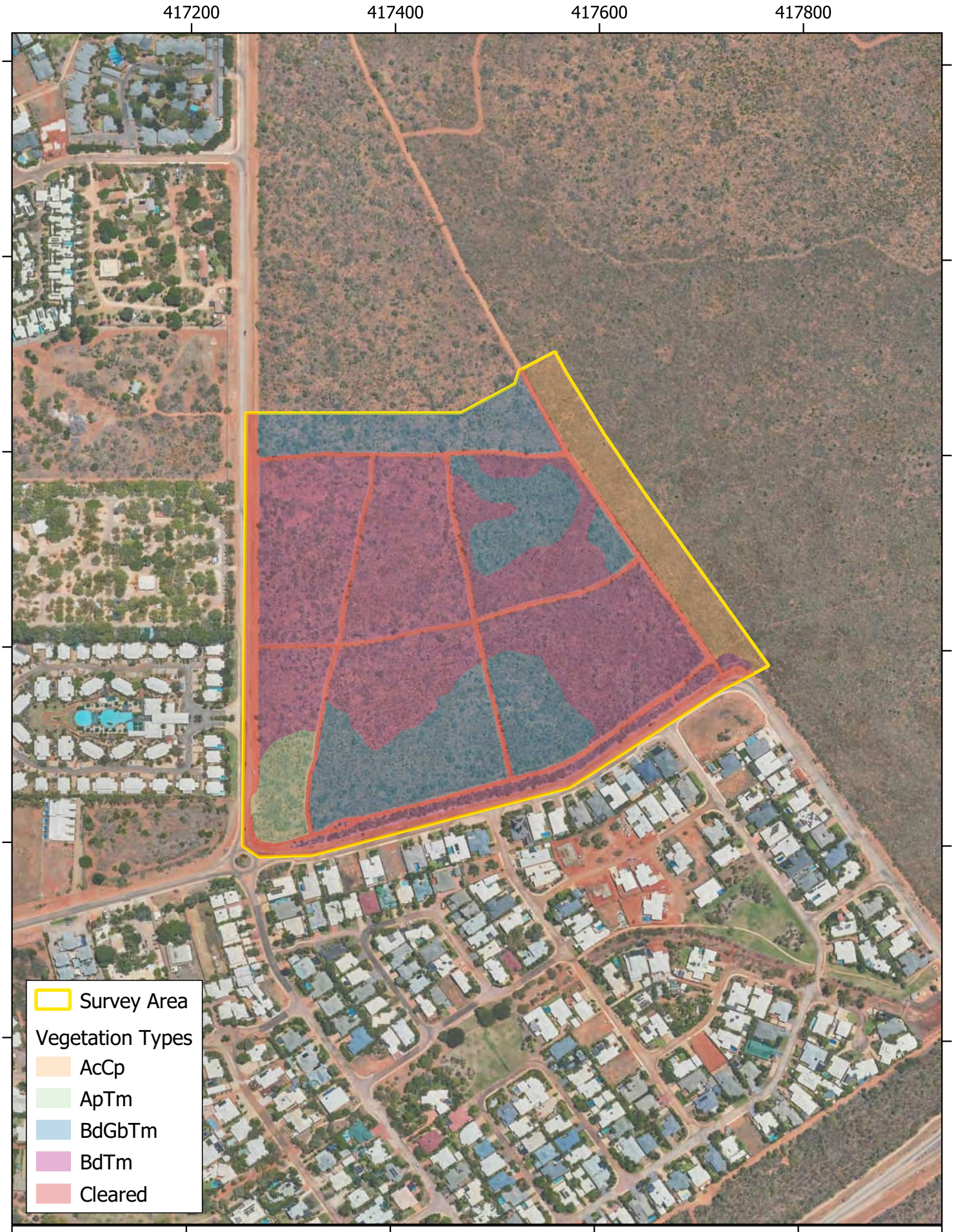
Sanctuary Road Biological Assessment

TEC and PEC Records
FIGURE 6



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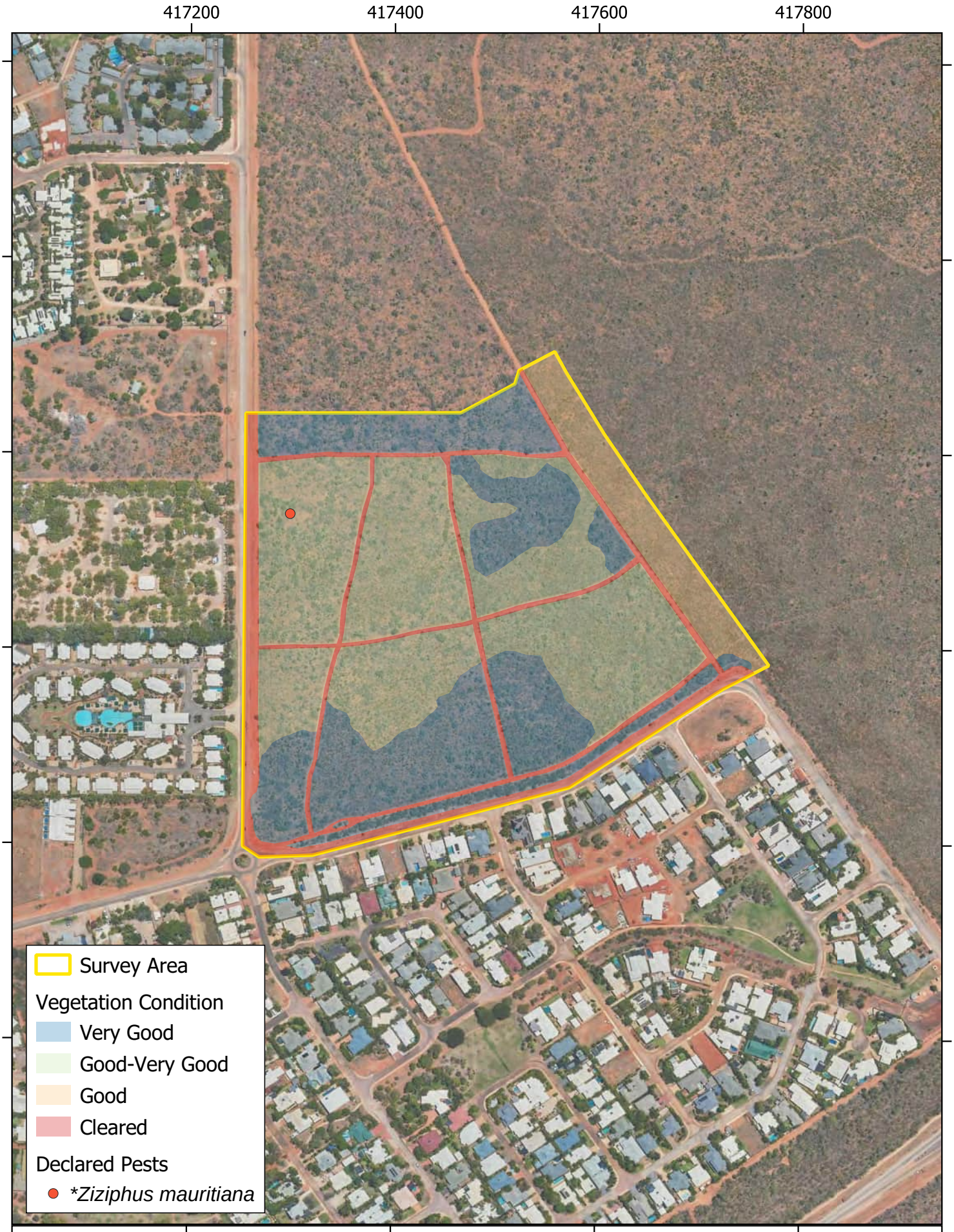
Sanctuary Road Biological Assessment

Vegetation Types
FIGURE 7



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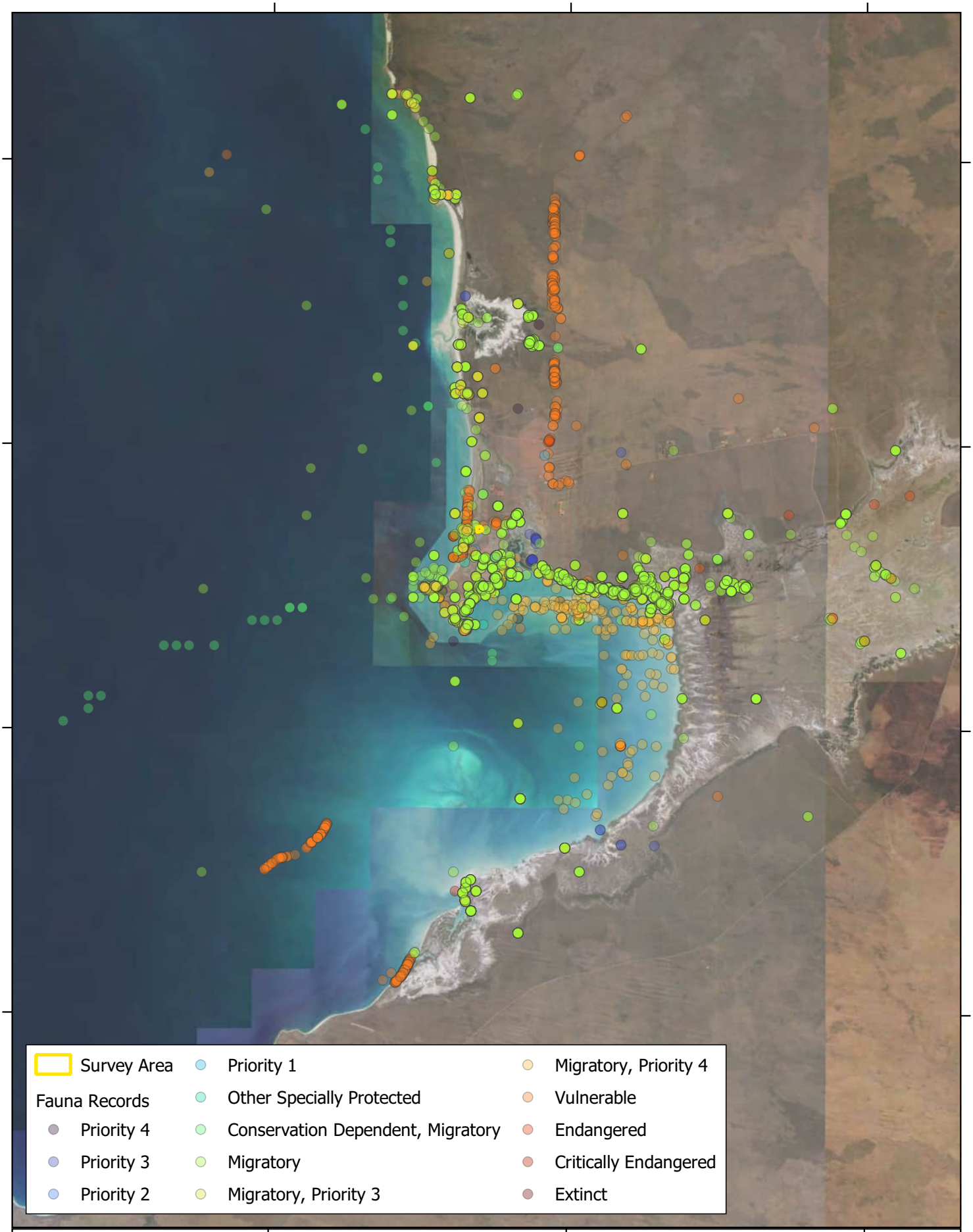
Vegetation Condition and Declared Pests
FIGURE 8



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Broome Shire Council
Sanctuary Road Biological Assessment

Threatened and Priority Flora Records
FIGURE 9

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Sanctuary Road Biological Assessment

Fauna Habitat
FIGURE 10

Appendices

Appendix A
Literature Review

Appendix A1: Flora Literature Review

Report	Project Area	Survey Timing	Survey Effort	Conservation Significant Ecological Communities	Conservation Significant Flora	Introduced Flora
Broome Regional Resource Recovery Facility, Reconnaissance Flora and Level 1 Fauna Survey (Spectrum Ecology, 2020)	9 km NE and 34 km NNE of Survey Area	Nov 2019	Reconnaissance Flora survey	None recorded	None recorded	None recorded
Flora, Vegetation and Fauna Survey, Broome Gold Redevelopment (Docherty, 2019)	5 km south of Survey Area	Dec 2018 & January 2019	Targeted Flora and Vegetation Survey	N/A	None recorded	**Aerva javanica* **Cenchrus ciliaris* **Leucaena leucocephala* **Macroptilium atropurpureum* **Merremia dissecta* **Stylosanthes hamata*
Report for Water Corporation - Mamabulanjin Orchard Flora and Fauna Survey, (GHD, 2019)	13 km NE of Broome	May 2019	Detailed and targeted flora and vegetation survey	None recorded	None recorded	None recorded
Nyamba Buru Yawuru Flora and Fauna Survey (Ecoscape (Australia) Pty Ltd, 2017)	45 km SE of Broome	April/May 2017	Level 2 survey	None recorded	*Triodia caelestialis* (P3)	**Stylosanthes hamata*
Flora and Vegetation Assessment, Cable Beach Foreshore Adaptation Project (Focused Vision, 2019)	1 km W of Survey Area	March 2019	Reconnaissance Flora and Vegetation Assessment	Yes – Monsoon vine thicket TEC	None recorded	**Azadirachta indica* **Casuarina obesa* **Cenchrus ciliaris* **Delonix regia* **Passiflora foetida var. hispida*
Broome to Skuthorpe Line Extension, Flora and Fauna Survey (360 Environmental Pty Ltd, 2022)	18 km ENE of Survey Area	Nov 2021	Reconnaissance Flora Survey and Basic Fauna Survey	None recorded	*Terminalia kumpaja* (P3)	**Aerva javanica* **Amaranthus viridus* **Azadirachta indica* **Passiflora foetida* **Sida cordifolia* **Stylosanthes hamata*

Appendix A2: Fauna Literature Review

Report	Project Area	Survey Timing	Survey Effort	Significant Fauna Recorded	Fauna Habitats
Broome North: Southern Portion - Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2009)	Overlaps the Survey Area	June 2008	Basic fauna survey	• Rainbow Bee-eater (*Merops ornatus*) (conservation status has since been downgraded)	One fauna habitat was identified: • Pindan shrubland with scattered emergent tree species
Broome Regional Resource Recovery Park Reconnaissance Flora & Level 1 Fauna Survey (Spectrum Ecology, 2020)	8.1 km northeast and 34 km east of the Survey Area	November 2019	Basic fauna survey	NA	One fauna habitat was identified: • Pindan shrubland, open to sparse *Acacia* shrubland over tussock grassland
Broome Road Industrial Area - Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2010)	7 km northeast of the Survey Area	April/May 2010 August 2010	Detailed fauna survey Targeted Greater Bilby survey (cage traps, camera traps, nocturnal searches) Targeted bat survey (AnaBat recorders)	• Northern Brushtail Possum (*Trichosurus arnhemensis*) • Black-faced Cuckoo-shrike (*Coracina novaehollandiae*) (conservation status has since been downgraded) • Magpie Goose (*Anseranas semipalmata*) (conservation status has since been downgraded) • Pallid Cuckoo (*Cuculus pallidus*) (conservation status has since been downgraded) • Rainbow Bee-eater (*Merops omatus*) (conservation status has since been downgraded) • Straw-necked Ibis (*Threskiomis spinicoffis*) (conservation status has since been downgraded) • Whistling Kite (*Haliastur sphenurus*) (conservation status has since been downgraded)	Two fauna habitats were identified: • Damp pindan woodland • Pindan woodland
Broome Road Subdivision Area - Conservation Significant Fauna Survey (GHD, 2015)	5.7 km northeast of the Survey Area	December 2014	Targeted ConSig fauna survey (walking transects, camera traps, funnel traps)	• Rainbow Bee-eater (*Merops omatus*) (conservation status has since been downgraded)	One fauna habitat was identified: • Pindan shrubland
Fauna Assessment of the Broome Port Area (Bamford Consulting, 2010)	5.8 km south of the Survey Area	October 2009	Basic fauna survey	• Barn Swallow (*Hirundo rustica*) • Black-tailed Godwit (*Limosa limosa*) • Brown Booby (*Sula leucogaster*) • Common Greenshank (*Tringa nebularia*) • Common Sandpiper (*Actitis hypoleucos*) • Curlew Sandpiper (*Calidris ferruginea*) • Eastern Osprey (*Pandion haliaetus cristatus*) • Far Eastern Curlew (*Numenius madagascariensis*) • Great Knot (*Calidris tenuirostris*) • Greater Crested Tern (*Thalasseus bergii*) • Greater Sand Plover (*Charadrius leschenaultii*) • Grey Plover (*Pluvialis squatarola*)	Nine fauna habitats were identified: • Beaches and mud flats • Coastal shrubland on primary dunes • Mangrove communities • Minor rocky headlands. • Monsoon thickets • Pindan vegetation - Pindan 1 • Pindan vegetation - Pindan 2 • Tall dunes on the eastern margin of the peninsula • Thickets and large shrubs of *Ficus aculeata* var.

Appendix A2: Fauna Literature Review

Report	Project Area	Survey Timing	Survey Effort	Significant Fauna Recorded	Fauna Habitats
				• Grey-tailed Tattler (*Tringa brevipes*) • Gull-billed Tern (*Gelochelidon nilotica*) • Lesser Frigatebird (*Fregata ariel*) • Northern Brushtail Possum (*Trichosurus arnhemensis*) • Pacific Golden Plover (*Pluvialis fulva*) • Red-necked Stint (*Calidris ruficollis*) • Ruddy Turnstone (*Arenaria interpres*) • Terek Sandpiper (*Xenus cinereus*) • Whimbrel (*Numenius phaeopus*) • Rainbow Bee-eater (*Merops ornatus*) (conservation status has since been downgraded)	*indecora*
Flora, Vegetation and Fauna Assessment - Broome Asparagus Farm (AECOM Australia Pty Ltd, 2017)	23 km northeast of the Survey Area	May 2017	Basic fauna survey Targeted Greater Bilby survey (grid searches)	• Potential Greater Bilby (*Macrotis lagotis*) evidence (burrows, scats) • Rainbow Bee-eater (*Merops ornatus*) (conservation status has since been downgraded)	Three fauna habitats were identified: • Cleared sand/red loam tracks • Open woodland and *Acacia* shrubland over spinifex hummock grassland • Open woodland over scattered acacia shrubland and thick *Sorghum* grassland
Flora, Vegetation and Fauna Survey Broome Golf Club Redevelopment (Docherty, 2019)	5.8 km south of the Survey Area	January 2019	Basic fauna survey	Nil	Two fauna habitats were identified: • Coastal shrubland on primary dunes • Monsoon vine thicket
Mamabulanjin Orchard Flora and Fauna Survey (GHD, 2019)	9.3 km northeast of the Survey Area	May 2019	Basic fauna survey Targeted Greater Bilby survey (walking transects)	• Greater Bilby (*Macrotis lagotis*) evidence (tracks, foraging evidence)	One fauna habitat was identified: • Red sandy loam pindan plain supporting tall mixed *Acacia* shrubland
Nyamba Buru Yawuru Flora and Fauna Survey (Ecoscape (Australia) Pty Ltd, 2017)	46 km southeast of the Survey Area	May 2017	Detailed fauna survey Targeted Greater Bilby survey (grid searches, camera traps) Targeted Spectacled Hare-wallaby survey (grid searches, camera traps)	• Dampier Peninsula Goanna (*Varanus sparnus*) • Spectacled Hare-wallaby (*Lagorchestes conspicillatus*) • Rainbow Bee-eater (*Merops ornatus*) (conservation status has since been downgraded)	Two fauna habitats were identified: • *Aristida* and *Chrysopogon* tussock grassland • Shrubland over mixed tussock grassland
Targeted Bilby Survey - Crab Creek Road, Broome (360 Environmental Pty Ltd, 2017)	6.8 km east of the Survey Area	April 2017	Targeted Greater Bilby survey (walking transects)	Nil	NA

Appendix B
Database Searches

Appendix B: NatureMap Search Results

TAXON	CLASS	WA CONS	KINGDOM
Abrus precatorius	DICOT		Plantae
Abrus precatorius subsp. precatorius	DICOT		Plantae
Abutilon hannii	DICOT		Plantae
Abutilon indicum	DICOT		Plantae
Abutilon indicum var. australiense	DICOT		Plantae
Abutilon otocarpum	DICOT		Plantae
Acacia adoxa var. subglabra	DICOT		Plantae
Acacia adoxa x hippuroides	DICOT		Plantae
Acacia ampliceps	DICOT		Plantae
Acacia ampliceps x bivenosa	DICOT		Plantae
Acacia bivenosa	DICOT		Plantae
Acacia colei	DICOT		Plantae
Acacia colei var. colei	DICOT		Plantae
Acacia colei var. ileocarpa	DICOT		Plantae
Acacia eriopoda	DICOT		Plantae
Acacia eriopoda x monticola	DICOT		Plantae
Acacia eriopoda x tumida var. tumida	DICOT		Plantae
Acacia hippuroides	DICOT		Plantae
Acacia monticola	DICOT		Plantae
Acacia monticola x tumida var. kulparn	DICOT	P3	Plantae
Acacia platycarpa	DICOT		Plantae
Acacia plectocarpa subsp. plectocarpa	DICOT		Plantae
Acacia sp.	DICOT		Plantae
Acacia sp. Broome (B.R. Maslin 4918)	DICOT		Plantae
Acacia stigmatophylla	DICOT		Plantae
Acacia stipuligera	DICOT		Plantae
Acacia trachycarpa	DICOT		Plantae
Acacia translucens	DICOT		Plantae
Acacia tumida var. kulparn	DICOT		Plantae
Acacia tumida var. tumida	DICOT		Plantae
Acanthospermum hispidum	DICOT		Plantae
Achyranthes aspera	DICOT		Plantae
Acrachne racemosa	MONOCOT		Plantae
Acrostichum speciosum	FERN		Plantae
Adansonia gregorii	DICOT		Plantae
Adriana tomentosa var. tomentosa	DICOT		Plantae
Aegiceras corniculatum	DICOT		Plantae
Aerva javanica	DICOT		Plantae
Aeschynomene indica	DICOT		Plantae
Ageratum conyzoides	DICOT		Plantae
Albizia lebbeck	DICOT		Plantae
Alstonia linearis	DICOT		Plantae
Alternanthera brasiliana	DICOT		Plantae
Alternanthera pungens	DICOT		Plantae
Alyogyne pinoniana	DICOT		Plantae
Alysicarpus ovalifolius	DICOT		Plantae

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Amaranthus dubius	DICOT		Plantae
Amaranthus sp	DICOT		Plantae
Amaranthus undulatus	DICOT		Plantae
Ammannia baccifera	DICOT		Plantae
Amyema benthamii	DICOT		Plantae
Amyema bifurcata	DICOT		Plantae
Amyema conspicua	DICOT		Plantae
Amyema sanguinea var. sanguinea	DICOT		Plantae
Amyema thalassia	DICOT		Plantae
Androcalva loxophylla	DICOT		Plantae
Annona reticulata	DICOT		Plantae
Anodendron oblongifolium	DICOT		Plantae
Anondendron oblongifolium	DICOT		Plantae
Antigonon leptopus	DICOT		Plantae
Aphyllodium glossocarpum	DICOT	P3	Plantae
Aphyllodium parvifolium	DICOT	P1	Plantae
Aristida holathera var. holathera	MONOCOT		Plantae
Aristida holathera var. latifolia	MONOCOT		Plantae
Aristida hygrometrica	MONOCOT		Plantae
Aristida inaequiglumis	MONOCOT		Plantae
Asystasia gangetica subsp. gangetica	DICOT		Plantae
Atalaya hemiglauca	DICOT		Plantae
Atalaya variifolia	DICOT		Plantae
Avicennia marina	DICOT		Plantae
Azadirachta indica	DICOT		Plantae
Batis argillicola	DICOT		Plantae
Bauhinia cunninghamii	DICOT		Plantae
Bergia ammannioides	DICOT		Plantae
Bidens bipinnata	DICOT		Plantae
Blighia sapida	DICOT		Plantae
Blumea integrifolia	DICOT		Plantae
Blumea saxatilis	DICOT		Plantae
Blumea tenella	DICOT		Plantae
Boerhavia coccinea	DICOT		Plantae
Boerhavia dominii	DICOT		Plantae
Boerhavia gardneri	DICOT		Plantae
Boerhavia paludosa	DICOT		Plantae
Boerhavia sp.	DICOT		Plantae
Bonamia linearis	DICOT		Plantae
Bonamia media	DICOT		Plantae
Bonamia oblongifolia	DICOT	P3	Plantae
Bonamia pannosa	DICOT		Plantae
Bothriochloa bladhii	MONOCOT		Plantae
Bothriochloa pertusa	MONOCOT		Plantae
Brachychiton diversifolius subsp. diversifolius	DICOT		Plantae
Breynia cernua	DICOT		Plantae
Bridelia tomentosa	DICOT		Plantae

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Bruguiera exaristata	DICOT		Plantae
Buchnera asperata	DICOT		Plantae
Buchnera linearis	DICOT		Plantae
Buchnera ramosissima	DICOT		Plantae
Bulbostylis barbata	MONOCOT		Plantae
Butea monosperma	DICOT		Plantae
Byblis filifolia	DICOT		Plantae
Byblis liniflora	DICOT		Plantae
Byblis rorida	DICOT		Plantae
Caesalpinia major	DICOT		Plantae
Caesalpinia sp.	DICOT		Plantae
Cajanus marmoratus	DICOT		Plantae
Calandrinia quadrivalvis	DICOT		Plantae
Calandrinia strophiolata	DICOT		Plantae
Calandrinia tepperiana	DICOT		Plantae
Calliandra sp.	DICOT		Plantae
Callisia repens	MONOCOT		Plantae
Calotropis gigantea	DICOT		Plantae
Calytrix exstipulata	DICOT		Plantae
Camptostemon schultzii	DICOT		Plantae
Canavalia rosea	DICOT		Plantae
Capparis lasiantha	DICOT		Plantae
Capsicum annuum	DICOT		Plantae
Cardamine occulta	DICOT		Plantae
Cardamine sp.	DICOT		Plantae
Carissa lanceolata	DICOT		Plantae
Cartonema parviflorum	MONOCOT		Plantae
Caryota mitis	MONOCOT		Plantae
Cascabela thevetia	DICOT		Plantae
Cassia roxburghii	DICOT		Plantae
Cassytha capillaris	DICOT		Plantae
Cassytha filiformis	DICOT		Plantae
Catharanthus roseus	DICOT		Plantae
Celtis strychnoides	DICOT		Plantae
Cenchrus americanus	MONOCOT		Plantae
Cenchrus biflorus	MONOCOT		Plantae
Cenchrus ciliaris	MONOCOT		Plantae
Cenchrus echinatus	MONOCOT		Plantae
Cenchrus purpurascens	MONOCOT		Plantae
Cenchrus setiger	MONOCOT		Plantae
Centratherum punctatum	DICOT		Plantae
Centrosema molle	DICOT		Plantae
Centrosema pascuorum	DICOT		Plantae
Ceratophyllum demersum	DICOT		Plantae
Ceratopteris thalictroides	FERN		Plantae
Ceriops australis	DICOT		Plantae
Chamaecrista absus var. absus	DICOT		Plantae

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Chamaecrista moorei	DICOT		Plantae
Chamaecrista symonii	DICOT		Plantae
Chloris barbata	MONOCOT		Plantae
Chloris lobata	MONOCOT		Plantae
Chloris pumilio	MONOCOT		Plantae
Chloris virgata	MONOCOT		Plantae
Chrysopogon aciculatus	MONOCOT		Plantae
Chrysopogon pallidus	MONOCOT		Plantae
Cissus rotundifolia	DICOT		Plantae
Citrullus amarus	DICOT		Plantae
Cleome tetrandra var. tetrandra	DICOT		Plantae
Cleome viscosa	DICOT		Plantae
Clerodendrum floribundum	DICOT		Plantae
Clerodendrum floribundum var. coriaceum	DICOT		Plantae
Clerodendrum floribundum var. ovatum	DICOT		Plantae
Clerodendrum tomentosum var. mollissima	DICOT		Plantae
Clerodendrum tomentosum var. tomentosum	DICOT		Plantae
Clitoria ternatea	DICOT		Plantae
Coccinia grandis	DICOT		Plantae
Codonocarpus cotinifolius	DICOT		Plantae
Conyza bonariensis	DICOT		Plantae
Corchorus aestuans	DICOT		Plantae
Corchorus incanus subsp. incanus	DICOT		Plantae
Corchorus olitorius	DICOT		Plantae
Corchorus sidoides subsp. sidoides	DICOT		Plantae
Corchorus sidoides subsp. vermicularis	DICOT		Plantae
Corchorus tridens	DICOT		Plantae
Cordia sebestena	DICOT		Plantae
Corymbia bella	DICOT		Plantae
Corymbia dendromerinx	DICOT		Plantae
Corymbia flavescens	DICOT		Plantae
Corymbia greeniana	DICOT		Plantae
Corymbia greeniana x polycarpa	DICOT		Plantae
Corymbia greeniana x zygophylla	DICOT		Plantae
Corymbia opaca	DICOT		Plantae
Corymbia paractia	DICOT	P1	Plantae
Corymbia polycarpa	DICOT		Plantae
Corymbia zygophylla	DICOT		Plantae
Corynotheca micrantha	MONOCOT		Plantae
Corynotheca micrantha var. gracilis	MONOCOT		Plantae
Cressa australis	DICOT		Plantae
Crinum arenarium	MONOCOT		Plantae
Crotalaria brevis	DICOT		Plantae
Crotalaria crispata	DICOT		Plantae
Crotalaria cunninghamii	DICOT		Plantae
Crotalaria cunninghamii subsp. cunninghamii	DICOT		Plantae
Crotalaria medicaginea	DICOT		Plantae

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Crotalaria medicaginea var. neglecta	DICOT		Plantae
Crotalaria ramosissima	DICOT		Plantae
Crotalaria sp.	DICOT		Plantae
Croton habrophyllus	DICOT		Plantae
Cryptostegia madagascariensis	DICOT		Plantae
Cucumis anguria var. anguria	DICOT		Plantae
Cucumis maderaspatanus	DICOT		Plantae
Cucumis melo	DICOT		Plantae
Cucumis picrocarpus	DICOT		Plantae
Cullen corallum	DICOT		Plantae
Cullen martinii	DICOT		Plantae
Cullen pustulatum	DICOT		Plantae
Cuscuta campestris	DICOT		Plantae
Cuscuta chinensis	DICOT		Plantae
Cuscuta victoriana	DICOT		Plantae
Cyanostegia cyanocalyx	DICOT		Plantae
Cyanthillium cinereum var. cinereum	DICOT		Plantae
Cyanthillium cinereum var. lanatum	DICOT		Plantae
Cymbidium canaliculatum	MONOCOT		Plantae
Cymbopogon bombycinus	MONOCOT		Plantae
Cymbopogon procerus	MONOCOT		Plantae
Cymodocea angustata	MONOCOT		Plantae
Cynanchum pedunculatum	DICOT		Plantae
Cynanchum viminale subsp. australe	DICOT		Plantae
Cynodon convergens	MONOCOT		Plantae
Cynodon dactylon	MONOCOT		Plantae
Cyperus bifax	MONOCOT		Plantae
Cyperus blakeanus	MONOCOT		Plantae
Cyperus bulbosus	MONOCOT		Plantae
Cyperus compressus	MONOCOT		Plantae
Cyperus conicus	MONOCOT		Plantae
Cyperus rotundus	MONOCOT		Plantae
Cyperus scariosus	MONOCOT		Plantae
Cyperus squarrosus	MONOCOT		Plantae
Cyperus zollingeri	MONOCOT		Plantae
Dactyloctenium aegyptium	MONOCOT		Plantae
Dactyloctenium radulans	MONOCOT		Plantae
Datura metel	DICOT		Plantae
Dendrophthoe acacioides subsp. acacioides	DICOT		Plantae
Denhamia cunninghamii	DICOT		Plantae
Dentella misera	DICOT		Plantae
Desmodium filiforme	DICOT		Plantae
Desmodium tortuosum	DICOT		Plantae
Dichrostachys spicata	DICOT		Plantae
Digitaria bicornis	MONOCOT		Plantae
Digitaria brownii	MONOCOT		Plantae
Digitaria ciliaris	MONOCOT		Plantae

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Digitaria ctenantha	MONOCOT		Plantae
Digitaria radicosa	MONOCOT		Plantae
Diospyros humilis	DICOT		Plantae
Distimake aegyptius	DICOT		Plantae
Distimake davenportii	DICOT		Plantae
Distimake dissectus var. dissectus	DICOT		Plantae
Dodonaea hispidula var. arida	DICOT		Plantae
Dodonaea hispidula var. phylloptera	DICOT		Plantae
Dolichandra unguis-cati	DICOT		Plantae
Dolichandrone occidentalis	DICOT		Plantae
Drosera broomensis	DICOT		Plantae
Drosera fragrans	DICOT		Plantae
Drosera serpens	DICOT		Plantae
Dysphania plantaginella	DICOT		Plantae
Echinochloa frumentacea	MONOCOT		Plantae
Eclipta platyglossa subsp. borealis	DICOT		Plantae
Eclipta prostrata	DICOT		Plantae
Ectrosia danesii	MONOCOT		Plantae
Ehretia saligna	DICOT		Plantae
Ehretia saligna var. saligna	DICOT		Plantae
Eleusine indica	MONOCOT		Plantae
Eleutheranthera ruderalis	DICOT		Plantae
Emilia sp.	DICOT		Plantae
Enneapogon pallidus	MONOCOT		Plantae
Enteropogon dolichostachyus	MONOCOT		Plantae
Epipremnum sp.	MONOCOT		Plantae
Eragrostis cilianensis	MONOCOT		Plantae
Eragrostis cumingii	MONOCOT		Plantae
Eragrostis eriopoda	MONOCOT		Plantae
Eragrostis falcata	MONOCOT		Plantae
Eragrostis minor	MONOCOT		Plantae
Eragrostis setifolia	MONOCOT		Plantae
Eragrostis sp.	MONOCOT		Plantae
Eragrostis tenuifolia	MONOCOT		Plantae
Eriachne ciliata	MONOCOT		Plantae
Eriachne melicacea	MONOCOT		Plantae
Eriachne obtusa	MONOCOT		Plantae
Eriachne pindanica	MONOCOT		Plantae
Eriachne pulchella subsp. dominii	MONOCOT		Plantae
Eruca sativa	DICOT		Plantae
Erythrina vespertilio	DICOT		Plantae
Erythrophleum chlorostachys	DICOT		Plantae
Eucalyptus jensenii	DICOT		Plantae
Eucalyptus microtheca	DICOT		Plantae
Eucalyptus tectifica	DICOT		Plantae
Eupatorium sp.	DICOT		Plantae
Euphorbia australis var. subtomentosa	DICOT		Plantae

Appendix B: NatureMap Search Results

Euphorbia coghlanii	DICOT		Plantae
Euphorbia cyathophora	DICOT		Plantae
Euphorbia hassallii	DICOT		Plantae
Euphorbia heterophylla	DICOT		Plantae
Euphorbia hirta	DICOT		Plantae
Euphorbia maculata	DICOT		Plantae
Euphorbia mitchelliana	DICOT		Plantae
Euphorbia myrtoides	DICOT		Plantae
Euphorbia schultzii	DICOT		Plantae
Euphorbia sp.	DICOT		Plantae
Euphorbia thymifolia	DICOT		Plantae
Euphorbia trigonosperma	DICOT		Plantae
Euphorbia vaccaria var. vaccaria	DICOT		Plantae
Evolvulus alsinoides var. decumbens	DICOT		Plantae
Evolvulus alsinoides var. villosicalyx	DICOT		Plantae
Exocarpos latifolius	DICOT		Plantae
Faidherbia albida	DICOT		Plantae
Ficus aculeata var. indecora	DICOT		Plantae
Fimbristylis ammobia	MONOCOT		Plantae
Fimbristylis caespitosa	MONOCOT		Plantae
Fimbristylis cymosa	MONOCOT		Plantae
Fimbristylis oxystachya	MONOCOT		Plantae
Fimbristylis schultzii	MONOCOT		Plantae
Fimbristylis sericea	MONOCOT		Plantae
Flaveria trinervia	DICOT		Plantae
Flueggea virosa	DICOT		Plantae
Flueggea virosa subsp. melanthesoides	DICOT		Plantae
Frankenia ambita	DICOT		Plantae
Galactia tenuiflora	DICOT		Plantae
Gamochaeta pensylvanica	DICOT		Plantae
Gardenia pyriformis	DICOT		Plantae
Gardenia pyriformis subsp. keartlandii	DICOT		Plantae
Gardenia sp.	DICOT		Plantae
Glycine pindanica	DICOT	P3	Plantae
Glycine tomentella	DICOT		Plantae
Glycosmis macrophylla	DICOT		Plantae
Glycosmis trifoliata	DICOT		Plantae
Gmelina philippensis	DICOT		Plantae
Gnaphalium polycaulon	DICOT		Plantae
Gomphrena canescens	DICOT		Plantae
Gomphrena canescens subsp. canescens	DICOT		Plantae
Gomphrena celosioides	DICOT		Plantae
Gomphrena flaccida	DICOT		Plantae
Gomphrena pusilla	DICOT	P2	Plantae
Gomphrena sp.	DICOT		Plantae
Gomphrena tenella	DICOT		Plantae
Gonocarpus leptothecus	DICOT		Plantae

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Goodenia armitiana	DICOT		Plantae
Goodenia byrnesii	DICOT	P3	Plantae
Goodenia lamprosperma	DICOT		Plantae
Goodenia scaevolina	DICOT		Plantae
Goodenia sepalosa var. sepalosa	DICOT		Plantae
Goodenia sp.	DICOT		Plantae
Gossypium australe	DICOT		Plantae
Gossypium hirsutum	DICOT		Plantae
Gossypium populifolium	DICOT		Plantae
Gossypium rotundifolium	DICOT		Plantae
Grevillea pyramidalis subsp. pyramidalis	DICOT		Plantae
Grevillea refracta	DICOT		Plantae
Grevillea refracta subsp. refracta	DICOT		Plantae
Grevillea wickhamii subsp. aprica	DICOT		Plantae
Grevillea wickhamii subsp. macrodonta	DICOT		Plantae
Grewia breviflora	DICOT		Plantae
Grewia retusifolia	DICOT		Plantae
Grewia sp.	DICOT		Plantae
Guaiacum officinale	DICOT		Plantae
Guilleminea densa	DICOT		Plantae
Gymnanthera oblonga	DICOT		Plantae
Gyrocarpus americanus	DICOT		Plantae
Gyrocarpus americanus subsp. pachyphyllus	DICOT		Plantae
Gyrostemon tepperi	DICOT		Plantae
Hakea arborescens	DICOT		Plantae
Hakea macrocarpa	DICOT		Plantae
Halgania sp. A Kimberley Flora (H.A. Johnson	DICOT		Plantae
Halodule pinifolia	MONOCOT		Plantae
Halodule sp.	MONOCOT		Plantae
Halodule uninervis	MONOCOT		Plantae
Halophila decipiens	MONOCOT		Plantae
Halophila minor	MONOCOT		Plantae
Halophila ovalis	MONOCOT		Plantae
Halophila sp.	MONOCOT		Plantae
Halophila spinulosa	MONOCOT		Plantae
Heliotropium curassavicum	DICOT		Plantae
Heliotropium foliatum	DICOT		Plantae
Heliotropium leptaleum	DICOT		Plantae
Heliotropium ovalifolium	DICOT		Plantae
Hemichroa diandra	DICOT		Plantae
Herissantia crispa	DICOT		Plantae
Heteropogon contortus	MONOCOT		Plantae
Hibiscus apodus	DICOT		Plantae
Hibiscus austrinus	DICOT		Plantae
Hibiscus austrinus var. austrinus	DICOT		Plantae
Hibiscus geranioides	DICOT		Plantae
Hibiscus leptocladus	DICOT		Plantae

Appendix B: NatureMap Search Results

Hibiscus panduriformis	DICOT	P1	Plantae
Hybanthus aurantiacus	DICOT		Plantae
Hydrilla verticillata	MONOCOT		Plantae
Hypoestes floribunda var. distans	DICOT		Plantae
Hypoestes floribunda var. varia	DICOT		Plantae
Ichnocarpus frutescens	DICOT		Plantae
Indigofera colutea	DICOT		Plantae
Indigofera haplophylla	DICOT		Plantae
Indigofera hirsuta	DICOT		Plantae
Indigofera linifolia	DICOT		Plantae
Indigofera linnaei	DICOT		Plantae
Indigofera monophylla	DICOT		Plantae
Indigofera oblongifolia	DICOT		Plantae
Indigofera trita	DICOT		Plantae
Ipomoea batatas	DICOT		Plantae
Ipomoea cairica	DICOT		Plantae
Ipomoea coptica	DICOT		Plantae
Ipomoea muelleri	DICOT		Plantae
Ipomoea pes-caprae	DICOT		Plantae
Ipomoea pes-caprae subsp. brasiliensis	DICOT		Plantae
Ipomoea pes-caprae subsp. pes-caprae	DICOT		Plantae
Ipomoea pes-tigridis	DICOT		Plantae
Ipomoea polymorpha	DICOT		Plantae
Ipomoea triloba	DICOT		Plantae
Isotropis atropurpurea	DICOT		Plantae
Jacksonia aculeata	DICOT		Plantae
Jacquemontia paniculata	DICOT		Plantae
Jacquemontia sp. Broome (A.A. Mitchell 3028	DICOT	P1	Plantae
Jacquinia pungens	DICOT		Plantae
Jasminum didymum	DICOT		Plantae
Jasminum didymum subsp. didymum	DICOT		Plantae
Jasminum didymum subsp. lineare	DICOT		Plantae
Jasminum molle	DICOT		Plantae
Jatropha gossypiifolia	DICOT		Plantae
Josephinia eugeniae	DICOT		Plantae
Khaya anthotheca	DICOT		Plantae
Landoltia punctata	MONOCOT		Plantae
Lawsonia inermis	DICOT		Plantae
Lemna aequinoctialis	MONOCOT		Plantae
Leptochloa fusca subsp. fusca	MONOCOT		Plantae
Leptosema anomalum	DICOT		Plantae
Leucaena leucocephala subsp. leucocephala	DICOT		Plantae
Lithomyrtus retusa	DICOT		Plantae
Lobelia arnhemiaca	DICOT		Plantae
Lolium perenne	MONOCOT		Plantae
Lophostemon grandiflorus subsp. grandifloru	DICOT	P3	Plantae
Lumnitzera racemosa	DICOT		Plantae

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Lysiana spathulata	DICOT		Plantae
Lysiana spathulata subsp. parvifolia	DICOT		Plantae
Lysiana spathulata subsp. spathulata	DICOT		Plantae
Macroptilium atropurpureum	DICOT		Plantae
Mallotus nesophilus	DICOT		Plantae
Marsdenia angustata	DICOT		Plantae
Marsdenia viridiflora	DICOT		Plantae
Marsdenia viridiflora subsp. tropica	DICOT		Plantae
Marsilea hirsuta	FERN		Plantae
Mecardonia procumbens	DICOT		Plantae
Medicago polymorpha	DICOT		Plantae
Melaleuca alsophila	DICOT		Plantae
Melaleuca cajaputi subsp. cajaputi	DICOT		Plantae
Melaleuca cajuputi	DICOT		Plantae
Melaleuca cajuputi subsp. cajuputi	DICOT		Plantae
Melaleuca dealbata	DICOT		Plantae
Melaleuca nervosa	DICOT		Plantae
Melaleuca nervosa subsp. crosslandiana	DICOT		Plantae
Melaleuca viridiflora	DICOT		Plantae
Melhania oblongifolia	DICOT		Plantae
Melicope elleryana	DICOT		Plantae
Mesosphaerum suaveolens	DICOT		Plantae
Microstachys chamaelea	DICOT		Plantae
Miliusa brahei	DICOT		Plantae
Mimosa diplotricha	DICOT		Plantae
Mimusops elengi	DICOT		Plantae
Mitracarpus hirtus	DICOT		Plantae
Mitrasacme exserta	DICOT		Plantae
Mitrasacme hispida	DICOT		Plantae
Mnesithea formosa	MONOCOT		Plantae
Momordica balsamina	DICOT		Plantae
Moringa drouhardii	DICOT		Plantae
Muellerolimon salicorniaceum	DICOT		Plantae
Murdannia graminea	MONOCOT		Plantae
Myoporum montanum	DICOT		Plantae
Najas tenuifolia	MONOCOT		Plantae
Nauclea orientalis	DICOT		Plantae
Neobassia astrocarpa	DICOT		Plantae
Newcastelia cladotricha	DICOT		Plantae
Nicotiana heterantha	DICOT		Plantae
Notoleptopus decaisnei	DICOT		Plantae
Nymphaea violacea	DICOT		Plantae
Ocimum americanum	DICOT		Plantae
Ocimum basilicum	DICOT		Plantae
Oldenlandia corymbosa var. corymbosa	DICOT		Plantae
Oldenlandia mitrasacmoides	DICOT		Plantae
Oldenlandia mitrasacmoides subsp. mitrasac	DICOT		Plantae

Appendix B: NatureMap Search Results

Operculina aequisepala	DICOT		Plantae
Operculina brownii	DICOT		Plantae
Opilia amentacea	DICOT		Plantae
Owenia reticulata	DICOT		Plantae
Oxalis corniculata	DICOT		Plantae
Pachyrhizus erosus	DICOT		Plantae
Pandanus spiralis	MONOCOT		Plantae
Panicum decompositum	MONOCOT		Plantae
Panicum effusum	MONOCOT		Plantae
Panicum mindanaense	MONOCOT		Plantae
Panicum seminudum var. cairnsianum	MONOCOT		Plantae
Paspalidium rarum	MONOCOT		Plantae
Paspalum distichum	MONOCOT		Plantae
Paspalum vaginatum	MONOCOT		Plantae
Passiflora foetida	DICOT		Plantae
Passiflora foetida var. hispida	DICOT		Plantae
Pavetta kimberleyana	DICOT		Plantae
Peltophorum pterocarpum	DICOT		Plantae
Peperomia pellucida	DICOT		Plantae
Perotis rara	MONOCOT		Plantae
Persicaria hydropiper	DICOT		Plantae
Persoonia falcata	DICOT		Plantae
Phyla nodiflora	DICOT		Plantae
Phyla nodiflora var. nodiflora	DICOT		Plantae
Phyllanthus amarus	DICOT		Plantae
Phyllanthus eremicus	DICOT		Plantae
Phyllanthus exilis	DICOT		Plantae
Phyllanthus maderaspatensis	DICOT		Plantae
Phyllanthus reticulatus	DICOT		Plantae
Phyllanthus sp.	DICOT		Plantae
Phyllanthus sp. C	DICOT		Plantae
Phyllanthus tenellus	DICOT		Plantae
Phyllanthus urinaria	DICOT		Plantae
Physalis angulata	DICOT		Plantae
Pilea microphylla	DICOT		Plantae
Pistia stratiotes	MONOCOT		Plantae
Pittosporum moluccanum	DICOT	P4	Plantae
Planchonia careya	DICOT		Plantae
Pluchea ferdinandi-muelleri	DICOT		Plantae
Pluchea longiseta	DICOT		Plantae
Pluchea rubelliflora	DICOT		Plantae
Pluchea tetranthera	DICOT		Plantae
Polycarpaea corymbosa	DICOT		Plantae
Polycarpaea longiflora	DICOT		Plantae
Polygala tepperi	DICOT		Plantae
Polymeria ambigua	DICOT		Plantae
Polymeria sp. Broome (K.F. Kenneally 9759)	DICOT	P3	Plantae

Appendix B: NatureMap Search Results

Portulaca bicolor	DICOT		Plantae
Portulaca filifolia	DICOT		Plantae
Portulaca napiformis	DICOT		Plantae
Portulaca oleracea	DICOT		Plantae
Portulaca pilosa	DICOT		Plantae
Portulaca sp.	DICOT		Plantae
Praxelis clematidea	DICOT		Plantae
Premna acuminata	DICOT		Plantae
Prosopis sp.	DICOT		Plantae
Psydrax attenuata var. tenella	DICOT		Plantae
Psydrax pendulina	DICOT		Plantae
Pterocaulon intermedium	DICOT		Plantae
Pterocaulon paradoxum	DICOT		Plantae
Pterocaulon serrulatum var. velutinum	DICOT		Plantae
Pterocaulon sphacelatum	DICOT		Plantae
Pterostylis sp. inland (A.C. Beauglehole 11880	MONOCOT		Plantae
Ptilotus calostachyus	DICOT		Plantae
Ptilotus corymbosus	DICOT		Plantae
Ptilotus exaltatus	DICOT		Plantae
Ptilotus fusiformis	DICOT		Plantae
Ptilotus lanatus	DICOT		Plantae
Ptilotus polystachyus	DICOT		Plantae
Pupalia micrantha	DICOT		Plantae
Raphanus raphanistrum	DICOT		Plantae
Rhizophora stylosa	DICOT		Plantae
Rhynchosia australis	DICOT		Plantae
Rhynchosia minima	DICOT		Plantae
Ruellia sp.	DICOT		Plantae
Ruellia tuberosa	DICOT		Plantae
Salsola australis	DICOT		Plantae
Santalum album	DICOT		Plantae
Santalum lanceolatum	DICOT		Plantae
Sauropus trachyspermus	DICOT		Plantae
Scaevola parvifolia	DICOT		Plantae
Scaevola parvifolia subsp. parvifolia	DICOT		Plantae
Schenkia australis	DICOT		Plantae
Schinus terebinthifolia	DICOT		Plantae
Schizachyrium fragile	MONOCOT		Plantae
Schizachyrium pachyarthron	MONOCOT		Plantae
Schoenus falcatus	MONOCOT		Plantae
Scleria brownii	MONOCOT		Plantae
Scleria sp.	MONOCOT		Plantae
Scutellaria indica	DICOT		Plantae
Senna costata	DICOT		Plantae
Senna glutinosa subsp. glutinosa	DICOT		Plantae
Senna goniodes	DICOT		Plantae
Senna notabilis	DICOT		Plantae

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Senna occidentalis	DICOT		Plantae
Senna oligoclada	DICOT		Plantae
Senna planitiicola	DICOT		Plantae
Seringia exastia	DICOT		Plantae
Seringia katatona	DICOT		Plantae
Seringia nephrosperma	DICOT		Plantae
Sersalisia sericea	DICOT		Plantae
Sesbania cannabina	DICOT		Plantae
Sesbania erubescens	DICOT		Plantae
Sesbania formosa	DICOT		Plantae
Sesbania simpliciuscula var. fitzroyensis	DICOT		Plantae
Sesbania sp.	DICOT		Plantae
Sesuvium portulacastrum	DICOT		Plantae
Setaria apiculata	MONOCOT		Plantae
Setaria dielsii	MONOCOT		Plantae
Setaria surgens	MONOCOT		Plantae
Setaria verticillata	MONOCOT		Plantae
Sida cordifolia	DICOT		Plantae
Sida fibulifera	DICOT		Plantae
Sida hackettiana	DICOT		Plantae
Sida rohlenae subsp. occidentalis	DICOT		Plantae
Sida sp.	DICOT		Plantae
Sida sp. Pindan (B.G. Thomson 3398)	DICOT		Plantae
Sida spinosa	DICOT		Plantae
Solanum americanum	DICOT		Plantae
Solanum beaugleholei	DICOT		Plantae
Solanum cunninghamii	DICOT		Plantae
Solanum dioicum	DICOT		Plantae
Solanum dioicum sens. lat.	DICOT		Plantae
Solanum diversiflorum	DICOT		Plantae
Solanum esuriale	DICOT		Plantae
Solanum pseudocapsicum	DICOT		Plantae
Solanum torvum	DICOT		Plantae
Soliva sessilis	DICOT		Plantae
Sonchus asper x oleraceus	DICOT		Plantae
Sonchus oleraceus	DICOT		Plantae
Sorghum interjectum	MONOCOT		Plantae
Sorghum plumosum	MONOCOT		Plantae
Sorghum stipoideum	MONOCOT		Plantae
Sorghum timorense	MONOCOT		Plantae
Spermacoce breviflora	DICOT		Plantae
Spermacoce dolichosperma	DICOT		Plantae
Spermacoce hillii	DICOT		Plantae
Spermacoce occidentalis	DICOT		Plantae
Spermacoce sp.	DICOT		Plantae
Spinifex longifolius	MONOCOT		Plantae
Sporobolus australasicus	MONOCOT		Plantae

Appendix B: NatureMap Search Results

Sporobolus mitchellii	MONOCOT		Plantae
Sporobolus virginicus	MONOCOT		Plantae
Stachytarpheta cayennensis	DICOT		Plantae
Stackhousia intermedia	DICOT		Plantae
Stemodia florulenta	DICOT		Plantae
Stemodia lathraia	DICOT		Plantae
Streptoglossa macrocephala	DICOT		Plantae
Streptoglossa odora	DICOT		Plantae
Striga curviflora	DICOT		Plantae
Strobilanthes alternata	DICOT		Plantae
Stylidium pindanicum	DICOT	P3	Plantae
Stylosanthes hamata	DICOT		Plantae
Stylosanthes scabra	DICOT		Plantae
Suaeda arbusculoides	DICOT		Plantae
Surreya diandra	DICOT		Plantae
Tamarindus indica	DICOT		Plantae
Tecticornia auriculata	DICOT		Plantae
Tecticornia halocnemoides	DICOT		Plantae
Tecticornia halocnemoides subsp. tenuis	DICOT		Plantae
Tecticornia indica subsp. indica	DICOT		Plantae
Tecticornia indica subsp. julacea	DICOT		Plantae
Tecticornia indica subsp. leiostachya	DICOT		Plantae
Tecticornia sp.	DICOT		Plantae
Tephrosia andrewii	DICOT	P3	Plantae
Tephrosia crocea	DICOT		Plantae
Tephrosia leptoclada	DICOT		Plantae
Tephrosia remotiflora	DICOT		Plantae
Tephrosia rosea	DICOT		Plantae
Tephrosia rosea var. rosea	DICOT		Plantae
Tephrosia simplicifolia	DICOT		Plantae
Tephrosia sp. D Kimberley Flora (R.D. Royce 1	DICOT		Plantae
Terminalia ferdinandiana	DICOT		Plantae
Terminalia grandiflora	DICOT		Plantae
Terminalia hadleyana	DICOT		Plantae
Terminalia hadleyana x petiolaris	DICOT		Plantae
Terminalia kumpaja	DICOT	P3	Plantae
Terminalia latipes	DICOT		Plantae
Terminalia petiolaris	DICOT		Plantae
Tetragonia coronata	DICOT	P3	Plantae
Thaumastochloa major	MONOCOT		Plantae
Thaumastochloa pubescens	MONOCOT		Plantae
Themeda quadrivalvis	MONOCOT		Plantae
Thespesia populneoides	DICOT		Plantae
Thespidium basiflorum	DICOT	P1	Plantae
Thrinax parviflora	MONOCOT		Plantae
Timonius timon	DICOT		Plantae
Tinospora smilacina	DICOT		Plantae

Appendix B: NatureMap Search Results

Trachymene oleracea subsp. oleracea	DICOT		Plantae
Trianthema pilosum	DICOT		Plantae
Trianthema portulacastrum	DICOT		Plantae
Trianthema triquetrum	DICOT		Plantae
Trianthema turgidifolium	DICOT		Plantae
Tribulopis angustifolia	DICOT		Plantae
Tribulus angustifolia	DICOT		Plantae
Tribulus cistoides	DICOT		Plantae
Tribulus occidentalis	DICOT		Plantae
Tribulus sp.	DICOT		Plantae
Tribulus terrestris	DICOT		Plantae
Trichodesma zeylanicum	DICOT		Plantae
Trichodesma zeylanicum var. latisepaleum	DICOT		Plantae
Tridax procumbens	DICOT		Plantae
Trifolium cernuum	DICOT		Plantae
Triodia caelestialis	MONOCOT		Plantae
Triodia epactia	MONOCOT		Plantae
Triodia microstachya	MONOCOT		Plantae
Triodia schinzii	MONOCOT		Plantae
Triphasia trifoliata	DICOT		Plantae
Triumfetta pentandra	DICOT		Plantae
Uraria lagopodioides	DICOT		Plantae
Urochloa argentea	MONOCOT		Plantae
Urochloa mosambicensis	MONOCOT		Plantae
Urochloa piligera	MONOCOT		Plantae
Urochloa praetervisa	MONOCOT		Plantae
Urochloa pubigera	MONOCOT		Plantae
Urochloa subquadripara	MONOCOT		Plantae
Velleia panduriformis	DICOT		Plantae
Ventilago viminalis	DICOT		Plantae
Verbesina encelioides	DICOT		Plantae
Verbesina encelioides var. encelioides	DICOT		Plantae
Vigna radiata var. sublobata	DICOT		Plantae
Vincetoxicum carnosum	DICOT		Plantae
Vincetoxicum cinerascens	DICOT		Plantae
Wahlenbergia sp.	DICOT		Plantae
Waltheria indica	DICOT		Plantae
Whiteochloa airoides	MONOCOT		Plantae
Whiteochloa cymbiformis	MONOCOT		Plantae
Wrightia saligna	DICOT		Plantae
Xerochloa barbata	MONOCOT		Plantae
Xerochloa imberbis	MONOCOT		Plantae
Xerochloa sp.	MONOCOT		Plantae
Yakirra australiensis	MONOCOT		Plantae
Yakirra australiensis var. intermedia	MONOCOT		Plantae
Yakirra pauciflora	MONOCOT		Plantae
Ziziphus mauritiana	DICOT		Plantae

Appendix B: NatureMap Search Results

Zornia albiflora	DICOT		Plantae
Zornia chaetophora	DICOT		Plantae
Zornia muelleriana subsp. congesta	DICOT		Plantae
Zornia prostrata var. prostrata	DICOT		Plantae

Appendix B: Threatened and Priority Flora Database Search Results

Taxon	ConsStatus	WARank	PopNumber	Location	District	Vesting	CountDate	InFlower	HabNotes	SoilCondit	Landform	SoilType	SoilColor	AssSpecies
Glycine pindanica	3		1	Road Verge, Broome Road [ca. 1.5km E along Broome Rd from intersection with Broome-Cape Leveque Rd]. Shire of Broome.	WEST KIMBERLEY	LGA	09-02-2005 0:00	Y	Road Verge, with old disturbed soil, bare areas	MOIST		SAND	BROWN	
Glycine pindanica	3		3	Exact location unknown [UCL or private property (College)?]. Broome townsite (corner of Port Drive and Guy Street), [3 Port Drive, lot 949 or UCL]. Shire of Broome.	WEST KIMBERLEY	UNKNOWN	15-03-1987 0:00	Y	In pindan (Acacia shrubland).					Acacia eriopoda
Glycine pindanica	3		4	Private/Freehold. Lot 976 Gregory St [3 Gregory St, workshop/residence], Broome. Shire of Broome.	WEST KIMBERLEY	PRI	08-03-1986 0:00	N	Pindan.					
Glycine pindanica	3		5	Private/Freehold. Broome caravan park [14 Wattle Dr, lot 1207], Broome. Shire of Broome.	WEST KIMBERLEY	PRI	15-04-1985 0:00	N	On pindan bu salt marsh. In Scrub.					Atalaya hemiglauca
Gomphrena pusilla	2		2	4 km north from Cable Beach Reserve parking area, Broome. Lot 259 Wattle Drive, Waterbank.	WEST KIMBERLEY	NON	18-04-1992 0:00	N	Behind fordune on fine beach sand. With Ipor		RI_DUNE	SAND		
Goodenia byrnesii	3		4	UCL, Broome Peninsular, [S of Gantheaume Point Rd and W of Port Dr]. Shire of Broome.	WEST KIMBERLEY	NON	09-04-2008 0:00	Y	Open woodland over sparse shrubland, over g		SLOPE	SAND	ORANGE	Corymbia dampieri,Corymbia zygophylla,Acacia colei var. colei,Acacia eriopoda
Pittosporum moluccanum	4		1	c.50km N of Broome. Pastoral lease- Waterbank station.	WEST KIMBERLEY	NON	05-01-1989 0:00	N	Coastal Vine Thicket	DRY	RI_DUNE	SAND	WHITE	Diospyros ferrea,Mimusops elengi,CELTIS PHILIPPINENSIS,Terminalia petiolaris

Appendix B: Western Australian Herbarium Flora Database Search Results

Taxon	Cons_Code	Plant_Desc	Site	Vegetation	Frequency	Locality	Date
Acacia monticola x *tumida* var. *kulparn*	3	Flowering in abundance. No fruit set in 1983. T. Willing has been checking this plant for 2-3 years but fruit never seems to set.				A short way off Kavite road in near coastal bushland S of Riddell Beach, Broome	07-06-1983
Acacia monticola x *tumida* var. *kulparn*	3	Semi-prostrate shrub. No fruit set in 1983. T. Willing has been checking this plant for 3-4 years but fruit never seems to set.	On exposed clifftop site.			Fringing POint road on the seaward side between the lighthouse and the turf club, Broome, Dampier Peninsula	09-06-1983
Acacia monticola x *tumida* var. *kulparn*	3					Broome, near junction of Cable Beach Road and Gupungi Road	11-07-1981
Acacia monticola x *tumida* var. *kulparn*	3	Near prostrate shrub.				Gantheaume Point, Broome	14-03-1982
Acacia monticola x *tumida* var. *kulparn*	3	Bark grey, cracking on lower stems to reveal red-brown colour. Shrub has semi "minnie-ritchie" tendencies.				Cable Beach Road near junction with Gupungi Road, Broome	03-06-1981
Acacia monticola x *tumida* var. *kulparn*	3	Ascending shrub 4 m tall more or less infundibular with foliage concentrated towards the ends of the branches. Sparsely flowered. Bark grey and fibrous, either splitting in a herring bone fashion or peeling in strips not dissimilar to "Minnie Ritchie".				Junction of Cable Beach Road and Gupungi Road, Broome	19-06-1981
Acacia monticola x *tumida* var. *kulparn*	3	Large shrub; shy flowerer, pods not seen.			only one of its kind in this locality.	Broome, Point Road near junction with Gupungi Road	05-04-1981
Acacia monticola x *tumida* var. *kulparn*	3	Low sprawling, rather openly branched shrub c. 0.7 m tall. Flowers light golden. Phyllodes dark green, badly eaten. Branchlets reddish. Bark grey longitudinally cracked (not peeling in a "Minni Ritchi" manner)	Coastal cliffs.			Gantheaume Point, Broome	19-06-1981
Aphyllodium glossocarpum	3	Creeping subshrub, growing up to 0.4 m tall.	Margin of track in a pindan plain.	Disturbed Acacia eriopoda and Corymbia greeniana low woodland with a weedy understorey.	1 plant seen.	Track on outside of and on N side of the current Broome tip, ca. 10 km E of the centre of Broome, Kimberley Region	04-04-2017
Aphyllodium glossocarpum	3	Shrub 2 m tall with numerous slender stems arising from ground level. Flowers pale purple, arranged in terminal racemes. Branchlets fragile, breaking easily. Leaflets complanate.				19.5 km from Beagle Bay Mission turn off on the road to Cape Leveque,	12-06-1981
Aphyllodium parvifolium	1	Spreading prostrate subshrub; leaves greyish green; flowers mauve with deeper mauve on keel.	In greyish pindan soil immediately adjacent to creek.			Near Barred Creek, 33 km N of Broome, Dampierland Peninsula	03-04-1988
Bonamia oblongifolia	3		Pindan sandplain.	Eucalyptus miniata, Corymbia dampieri, C. greeniana, Terminalia ferdinandiana scattered low trees over Acacia eriopoda (Santalum lanceolatum) tall open scrub over Distichostemon hispidulus var. aridus open shrubland. Associated Species: Digitaria brownii		James Price Point flora and vegetation survey, 45.2 km north north-west of Broome in the Kimberley region	10-03-2009
Bonamia oblongifolia	3		Low-lying, semi-swampy area verging on pindan.	Lophostemon grandiflorus subsp. grandiflorus, Melaleuca dealbata low open woodland over Acacia colei var. colei open heath. Associated Species: Capparis lasiantha, Acacia platycarpa, Abrus precatorius, Tephrosia rosea var. rosea, Cyperus bifax.		James Price Point flora and vegetation survey, 49.2 km north north-west of Broome in the Kimberley region	12-03-2009
Bonamia oblongifolia	3	Decumbent herb, 0.15 m high. Flowers present, pale lilac colour.	Pindan plain gently sloping towards the coast. Pindan soil, red clayey sand.	Acacia eriopoda open to mid-dense tall shrubland, with other scattered tall shrubs (Acacia colei var. colei, Grevillea refracta subsp. refracta and Grevillea pyramidalis subsp. pyramidalis), with mixed medium shrubs and sparse tussock grasses. Acacia mon	scattered to uncommon in the vegetation.	James Price Point coastal area, c. 1 km inland, c. 50 km N of Broome, Dampier Peninsula, Kimberley region. Site of the proposed onshore state Browse LNG Precinct	22-11-2014
Corymbia paractia	1	Tree to 6 m, bark smooth, white with some scaly bark at base, upper limbs smooth, flowers white.	Behind beach.	On edge of coastal vine thicket.		Cable Beach, Broome, Dampierland	24-05-1986
Corymbia paractia	1	Tree very straggly to 4 m with some flaky rough bark to 0.4 m.				Near racecourse, Broome	17-10-1988
Corymbia paractia	1	"Mallee" 3 m tall with thin, flaky grey bark to 0.5 m; leaves smooth.		With E. confertiflora.		1 km E of Racecourse, Broome	17-10-1988
Corymbia paractia	1	Tree-mallee 5 m tall. Bark smooth, pale grey or white. Leaves more or less dull, green. Flowers white.	In red sand.	With Corymbia dampieri.		Cable Beach, Broome	12-10-1996
Corymbia paractia	1	Tree to 6 m, bark smooth, white with some scaly bark at base, upper limbs smooth white, flowers white.	Behind beach.	On edge of coastal vine thicket. Growing adjacent to KFK 9758, Eucalyptus papuana.		Cable Beach, Broome, Dampierland	24-05-1986
Corymbia paractia	1	Tree to 10 m; trunk stout, knobbly; bark often persistent on lower trunk; flowers white.				Paul's Nursery, behind Cable Beach Club, Cable Beach, Broome	/12/1993
Corymbia paractia	1	Tree, bark cream, flowers white.	In pindan sand.	In grassed woodland beside fresh water creek with Terminalia ferdinandiana, Acacia eriopoda, A. holosericea, and Lysiphyllum cunninghamii.		Barred Creek picnic ground, Cape Boileau, Dampierland Peninsula, W Kimberley,	15-12-1984
Corymbia paractia	1	Spreading 2-trunked tree 4 m tall, smooth bark.		With bloodwood.		6 km N of Broome P.O. [Post Office]	18-10-1988
Corymbia paractia	1					Roebuck Bay	/12/1889
Corymbia paractia	1	Multi-stemmed tree to 5 m; bark slightly tessellated becoming white and smooth; flowers white.				1.7 km towards Cable Beach from intersection of Port Drive and Cable Beach Road, Broome, Dampierland Peninsula	12-04-1988
Corymbia paractia	1	Tree 2 m. Flowers white.	Sandy pindan behind coastal dunes.	With Terminalia ferdinandiana, T. petiolaris, Gyrocarpus americanus Planchonia careya.		Kim Male's old beach house, Cable Beach, Broome, Dampierland Peninsula, W Kimberley	24-12-1984
Corymbia paractia	1	Small tree to 4 m, sprawling, spreading, weeping, green somewhat coarse foliage. Trunk smooth white, some persistent bark.	Flat. Behind dunes. Red sand.	Acacia colei and Terminalia species.		6.5 km along the Gantheume Point Track	12-12-2015
Corymbia paractia	1	7 m twin-trunked ghost gum.	Red pindan.	Growing with Acacia colei, Flueggea virosa and Myoporum montanum.		E side of Crab Creek Road, immediately N of cliff-top T-junction, Broome	11-12-2015
Corymbia paractia	1	8 m twin-trunked ghost gum.	Red pindan.	Growing with Acacia eriopoda, Abrus precatorius, Brachychiton diversifolius and Bridelia tomentosa.		1.8 km E of T-junction on N (inland) side of Crab Creek Road, Broome	11-12-2015
Corymbia paractia	1	Mallee to 6 m, bark rough on trunk becoming smooth and white on upper branches, leaves pendulous, flowers white.	In red pindan soil.	With Terminalia ferdinandiana.		Near Gantheaume Point, Broome	01-12-1992
Corymbia paractia	1	5 m multi-stemmed ghost gum.	Red pindan.	Growing with Santalum lanceolatum, Acacia eriopoda and Brachychiton diversifolius.		3 km E of T-junction on Crab Creek Road, between Crab Creek and Roebuck Bay cliff, Broome	11-12-2015
Corymbia paractia	1	6.5 m tree. Flowers and immature fruits.				W side of Broome Highway, near OTC building	11-12-2013
Corymbia paractia	1	9 m tree. Flowerbuds.				E side of Waterbank Homestead Road near Coconut Well	06-12-2013
Corymbia paractia	1	White trunked Corymbia.		Open forest of Melaleuca cajuputi over woodland of Timonius timon, over fernland of Arcrostichum sp.		200m N of track running along the southern edge of Nimalarragun wetland, 1.4 km W of the Beagle Bay Broome Road, c. 20 km NNE of Broome townsite	10-05-2018
Corymbia paractia	1	White trunked Corymbia.		Low open woodland of Corymbia opaca, Melaleuca alsophilum and Corymbia paractia over low isolated clumps of Bauhinia cunninghamii and Acacia colei over closed grassland of Chrysopogon pallidus and Sorghum sp. over sparse forbland of Buchnera spp., Caland		N of Nimalarragun wetland, 200 m upslope of tidal creek, c. 20 km N of Broome, c. 5 km E of Willie Creek Pearl Farm, 1.35 km to W along track that turns NW, 560 m along SW track off Manari Road, 200 m from the intersection of Beagle Bay- Broome Road and	11-05-2018
Corymbia paractia	1	Tree to 5 m, bark rough for c. 0.5 m at the base then smooth and white.	In Pindan soil in a swale behind fore dunes.	In open Corymbia woodland with an Acacia-Grevillea understorey.	frequent.	Broome, reserve opposite intersection of Gubinge Road and De Marchi Road	29-05-2014
Corymbia paractia	1	Tree to 6 m, bark rough on trunk becoming smooth and white on upper branches, leaves pendulous, flowers white.	In transition zone between Holocene coastal dunes and red pindan soils.			Station Hill, Cable Beach, Broome	01-12-1992
Corymbia paractia	1	Tree to 6 m, bark rough on trunk becoming smooth and white on upper branches, leaves stiff, flowers white.	In red pindan soil.			Adjacent to Broome racecourse near Gantheaume Point	01-12-1992
Corymbia paractia	1	Multi-stemmed tree 3 m high. Smooth whitish bark.	Red sandy loam near coast.	Acacia heath, Corymbia zygophylla.	spasmodic.	On coastal track, between Gantheaume Point and Entrance Point, W of Broome, W Kimberley	12-06-2002
Corymbia paractia	1	Tree 30 - 35 ft, trunk 2 ft 9 inches. Bark smooth white with occasional rough grey flaky patches.	Red sand.			Broome	04-05-1944
Corymbia paractia	1	Mallee to 8 m, leaves large ovate, stiff, dark green. Trunks mottled, smoother above to creamy, in fruit.	Flat. Red sand dunes.	Acacia colei and Terminalia species.		Cable Beach near surf club entrance in Broome	11-12-2015
Corymbia paractia	1	Mallee to 8 m, leaves large ovate, stiff, dark green. Trunks mottled, smoother above to creamy, in fruit.	Flat. Red sand dunes.	Acacia colei and Terminalia species.		Cable Beach near surf club entrance in Broome	11-12-2015
Glycine pindanica	3	Scrambling herbaceous perennial up to 0.2m tall.	Disturbed pindan adjacent to road on top of a stony rise.	Acacia eriopoda woodland.		North of Broome on Quondong Point rd turn of to cut line 101 N opposite Black tank and continue to next rise past Nowhere Creek.	18-04-1993
Glycine pindanica	3	Perennial scrambling herbaceous herb with pink flowers.	Small drainage sump associated with gravel pit on pindan plain.	Euc. jensenii woodland.		About 60 km N of Broome on Beagle Bay rd on crest of pindan dune & on E side of road	03-06-1993
Glycine pindanica	3	Climbing pea.	Pindan.			Lot 976 Gregory Street, Broome	08-03-1986
Glycine pindanica	3	Leaves long and narrow in threes. Flowers mauve-purple, small, few.	In disturbed pindan soil of roadside edges.			Ca 42 km N of Broome along One Arm Point road	25-02-1994
Glycine pindanica	3	Prostrate creeping ground cover to 8 cm high. Flowers small, purplish mauve.	In red sand.	Eucalyptus jensenii woodland; under Bloodwood sp. and Acacia holosericea.	occasional.	53 km from Broome on road to Beagle Bay, Dampierland	14-04-1985
Glycine pindanica	3	Prostrate herb.	In regrowth in borrow pit.	A grove of Eucalyptus jensenii.		The New Roadhouse, along the Beagle Bay road, ca 60 km N of Broome	04-06-1993
Glycine pindanica	3	Pea creeper. Flowers blue.	On pindan bu salt marsh.	In scrub with Atalaya hemiglauca.		Broome caravan park, Broome, Dampierland Peninsula, W Kimberley	/04/1985
Glycine pindanica	3	Prostrate with wiry, trailing branches. Pinnules subglaucous, complanate.	On roadside in red-brown sand.	Mixed woodland.		61.5 km N of Broome on the road to Beagle Bay Mission	20-06-1981
Glycine pindanica	3	Spreading prostrate creeper. Stems hairy. Leaves in threes, very long and thin, long taper to point. No flowers. Pods with 2-4 seed, also cleistagamous pods, white.	Disturbed sand bank of roadside, drainage ditch.	Mixed woodland.		40 km from Broome along road to Cape Leveque	30-05-1993
Glycine pindanica	3	Green and near ripe pods present.	In deep red sand on roadside verge. Freely drained, open site.	With woodland of Eucalypt and Acacia nearby.		44 km N of Broome Post Office towards Beagle Bay	29-09-1993
Glycine pindanica	3	Prostrate shrub growing to 0.05 m tall and 1.0 m in diameter.		Dense Thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon, 10 plants along 100 m road side.	Adjacent to Gubinge Road, 600 m W of Magabala Road, 1.2 km due W of Broome Road, 1.8 km SE of Station Hill, 2.8 km N of Broome (PO)	30-03-2005
Glycine pindanica	3	Prostrate shrub growing to 0.05 m tall and 1.0 m in diameter.		Dense Thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon, 10 plants along 100 m road side.	Adjacent to Gubinge Road, 200 m W of Magabala Road, 830 m due W of Broome Road, 2.1 km SE of Station Hill, 2.9 km N of Broome (PO)	30-03-2005
Glycine pindanica	3	Prostrate shrub growing to 0.1 m tall and 2.0 m in diameter.		Dense Thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon, 10 plants in 100 m diameter area.	SE corner of Fairway Drive and Magabala Road intersection 970 m due W of Broome Road, 2.4 km NE of Station Hill, 4.4 km N of Broome (PO)	22-02-2005
Glycine pindanica	3	Creeping perennial; leaves greyish green; flowers mauve.		In pindan (Acacia shrubland dominated by A. eriopoda).	common.	Broome townsite (corner of Port Drive and Guy Street)	15-03-1987
Glycine pindanica	3	Big thick taproot. Leaves in threes, very long. To 95 x 7 mm long, tapering both ends. Flowers not seen. Pods with only 2-4 black seeds.	Disturbed sand on roadside.	Eucalyptus miniata woodland.		Ca 0.5 km N of Nowhere Creek, Dampier Peninsula, W Kimberley	18-04-1993
Glycine pindanica	3	Shrub 0.10 m high and 2 m wide. Perennial, prostrate and compact. Violet flower.	Plain. Road verge. Brown wet sand with old disturbed soil.	Bare areas.	2-5 plants.	Broome-Derby Road, 6.2 km E of [Fairway Road]; Broome	09-02-2005
Gomphrena pusilla	2	15 cm high.	Coastal dune slope. Calcareous sand, sandstone.	Crotalaria cunninghamii subsp. cunninghamii, Tephrosia rosea scattered shrubs over Indigofera linnaei, Gomphrena pusilla scattered herbs over Ipomoea pes- caprae subsp. brasiliensis, Cassytha filiformis, Canavalia rosea creepers. Condition very good, som		147.2 km SW of Cape Leveque, 53.1 km N of Broome and 159.5 km W of Derby in the Dampier Peninsula, Site 686_vou7.	05-05-2011
Gomphrena pusilla	2	20 cm high.	Pale orange sand with shell grit. Fire > 12 years.	Mixed evergreen vine thicket and dune vegetation. Terminalia petiolaris, Bauhinia cunninghamii, Diospyros humilis, Mimusops elengi, Celtis philippensis low open forest over Breynia cernua, Flueggea virosa subsp. melanthesoides open shrubland with Abrus p		51.5 km N of Broome, 148.3 km SW of Cape Leveque and 159.2 km W of Derby in the Dampier Peninsula. Site 686_vou17.	29-04-2011
Gomphrena pusilla	2		Ridge of sand dune. Sandy area between vine thickets, see K. Kenneally's transect A.	Indigofera colutea (Tephrosia rosea var. rosea) low open shrubland over Enneapogon pallidus very open tussock grassland. Associated Species: Indigofera colutea, Boerhavia gardneri, Indigofera linifolia, Tephrosia rosea var. rosea.		Along the W coast of the Dampier Peninsula, 51 km N of Broome, 132 km W-SW of Valentine Island, in the Kimberley region	23-03-2010
Gomphrena pusilla	2			Indigofera colutea (Tephrosia rosea var. rosea) low open shrubland over Enneapogon pallidus very open tussock grassland. Associated Species: Indigofera colutea, Boerhavia gardneri, Indigofera linifolia, Tephrosia rosea var. rosea.		Along the W coast of the Dampier Peninsula, 46 km N of Broome, 133 km W-SW of Valentine Island	23-03-2010

Appendix B: Western Australian Herbarium Flora Database Search Results

Gomphrena pusilla	2			Terminalia petiolaris low open woodland over Mimusops elengi, Grewia breviflora tall shrubland over Glycosmis trifoliata, Flueggea virosa subsp. melanthesoides scattered shrubs over Enneapogon pallidus scattered tussock grasses. Associated Species: Mimus		Along the west coast of the Dampier Peninsula, 51 km north of Broome, 132 km west-southwest of Valentine Island, in the Kimberley region	28-03-2010
Gomphrena pusilla	2		Deflation basin on crest of dune; pale tan sand over orange sand.			Along the west coast of the Dampier Peninsula, 46 km north of Broome, 133 km west-southwest of Valentine Island, in the Kimberley region	29-03-2010
Gomphrena pusilla	2		Primary dune; face and crest to back of dune (not swale).	Crotalaria cunninghamii, Tephrosia rosea var. rosea low shrubland over Spinifex longifolius open grassland with Canavalia rosea, Ipomoea pes-caprae subsp. brasiliensis trailing vines. Associated Species: Cullen martinii, Tinospora smilacina, Fimbristylis		James Price Point flora and vegetation survey, 41.8 km north north-west of Broome in the Kimberley region	07-03-2009
Gomphrena pusilla	2	Small herb to 15 cm high.	Behind foredune; fine beach sand.	With Ipomoea sp., Acacia sp. and Spinifex sp.	common.	4 km N from Cable Beach Reserve parking area, Broome,	18-04-1992
Gomphrena pusilla	2		Coastal sand dunes.	Crotalaria cunninghamii open shrubland over Spinifex longifolius open hummock grassland. Associated Species: Spinifex longifolius, Crotalaria cunninghamii, Enneapogon pallidus, Tephrosia rosea var. rosea, Indigofera linnaei.	100+ in a 50 x 50 m area.	Along the west coast of the Dampier Peninsula, 49 km north of Broome, 132 km west-southwest of Valentine Island, in the Kimberley region	28-03-2010
Gomphrena pusilla	2	Sprawling herb, stems tinged maroon, flowers white, tinged mauve.				Barred Creek, 35 km N of Broome, Dampierland,	02-06-1986
Goodenia byrnesii	3		Orange brown silty sand.	Open woodland of Corymbia dampierii and Corymbia zygophylla over sparse Shrub- land of Acacia colei var. colei and Acacia eriopoda over grassland dominated by Triodia acutispicula, Triodia microstachya or Triodia pungens on orange to red pindan soil on l		Broome Peninsula	09-04-2008
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Creeping herb to 0.3 m.	Brown orange sand on plain.	Corymbia greeniana low open woodland with Bauhinia cunninghamii, Triodia acutispicula, Sorghum plumosum and Chrysopogon pallidus.		Proposed Temporary Workers' Accommodation Camp, ca 12 km NE of Broome	02-06-2011
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Creeping herb to 0.3 m.	Brown orange sand on plain.	Corymbia greeniana low open woodland with Bauhinia cunninghamii, Triodia acutispicula, Sorghum plumosum and Chrysopogon pallidus.		Proposed Temporary Workers Accommodation Camp, ca 12 km NE of Broome	02-06-2011
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Low spreading shrub to ca. 0.3 m.	Pindan plain. Red sand loam.	Acacia plectocarpa subsp. plectocarpa, Acacia tumida var. kulparn and Hakea macrocarpa shrubland with scattered Corymbia confertiflora and Corymbia greeniana trees over Dolichandrone occidentalis and Bauhinia cunninghamii sparse shrubland over Acacia ado	less than 2% cover.	Crab Creek Road, ca. 6 km NE of Broome, 3.05 km S of Broome Road, ca. 100 m E of Crab Creek Road	30-04-2019
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Low shrub growing to 0.1 m tall and 1.0 m in diameter.		Dense thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon - 5 plants in 20 m diameter area.	100 m W of Fairway Drive and Magabala Road intersection, 1.2 km due W of Broome Road, 2.2 km NE of Station Hill, 4.4 km N of Broome (PO)	29-03-2005
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Low shrub growing to 0.1 m tall and 1.0 m in diameter.		Dense Thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon - 10 plants in 20 m diameter area.	100 m W of Fairway Drive and Magabala Road intersection, 1.2 km due W of Broome Road, 2.2 km NE of Station Hill, 4.4 km N of Broome (PO)	30-03-2005
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Low erect shrub growing to 0.1 m tall and 1.0 m in diameter.		Dense Thicket dominated by Acacia spp. growing to 4 m tall; over Dwarf Scrub with Open Low Grass (Muir 1977).	locally uncommon - 5 plants in 100 m diameter area.	SE corner of Fairway Drive and Magabala Road intersection, 970 m due W of Broome Road, 2.4 km NE of Station Hill, 4.4 km N of Broome (PO)	22-02-2005
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1			Pindan woodland with Acacia eriopoda and Chrysopogon pallidus.		Corner of Cape Leveque and Broome Roads, Broome	04-02-2017
Jacquemontia sp. Broome (A.A. Mitchell 3028)	1	Scrambling herbaceous perennial up to 0.4 m tall with light mauve flowers.	Disturbed pindan.	Acacia eripoda woodland.	sparse.	N of Broome on Quondong Point road turn off to cut line 101 N opposite Black tank and continue onto Nowhere Creek. Burrow pit in base of creek	18-04-1993
Lophostemon grandiflorus subsp. grandiflorus	3		Drainage basin. Salmon coloured sandy loam.	Melaleuca dealbata, Lophostemon grandiflorus subsp. grandiflorus low woodland over Acacia colei var. colei, Tephrosia rosea var. clementii shrubland over Abutilon otocarpum low open shrubland. Condition poor.		49.8 km N of Broome, 159 km W of Derby and 149.2 km SW of Cape Leveque on the Dampier Peninsula, Site 633_vou2.	28-11-2010
Lophostemon grandiflorus subsp. grandiflorus	3		Drainage basin. Grey brown sand. Fire > 12 years.	Semi-deciduous vine thicket. Corymbia bella, Lophostemon grandiflorus subsp. grandiflorus, Melaleuca dealbata low open forest of Diospyros humilis, Terminalia petiolaris tall open shrubland over Flueggea virosa subsp. melanthesoides scattered shrubs with		44.5 km N of Broome, 153.5 km SW of Cape Leveque and 159.6 km W of Derby in the Dampier Peninsula, Site 686_vou16.	20-05-2011
Lophostemon grandiflorus subsp. grandiflorus	3	Tree to 6 m. Flowers pale yellow. Bark box-type.		Coastal vine thicket dominated by Lophostemon.		S of James Price Point	14-11-2009
Lophostemon grandiflorus subsp. grandiflorus	3					Site 27, Manari Road, S of James Price Point, Dampier Peninsula, N of Broome	01-05-2011
Paranotis halfordii	3	Herb 50 cm, flowers pink, 4 petalled.	Growing near creek in grey sandy clay. On salt marsh with salt couch.	Sedgeland.	occasional.	Barred Creek, Dampierland Peninsula, W Kimberley	24-02-1985
Pittosporum moluccanum	4	Small tree to 5 m, dense, glossy leaves, orange fruits.	Hilly, white sand.	Vine thickets, woodland. With Celtis philippensis, Mimusops elengi, Eucalytpus spp.		2.2 km S of James Price Point on main road, then 50 m on track towards beach from old road deviation	29-08-2006
Pittosporum moluccanum	4		Sand dune. Pale orange beach sand with shell grit. Fire >12 years.	Mixed patch of evergreen vine thicket of Terminalia petiolaris, Bauhinia cunninghamii low open forest over Diospyros humilis, Croton habrophyllus, Grewia breviflora, Santalum lanceolatum, tall open scrub over Tephrosia aff. rosea, Euphorbia coghlanii, Cr		148 km SW of Cape Leveque, 51.6 km N of Broome and 159.2 km W of Derby in the Dampier Peninsula. Site 686_vou6.	29-04-2011
Pittosporum moluccanum	4		Coastal sand dune crest and swales. Calcareous pale orange sand.	Terminalia petiolaris, Mumusops elengi, Sersalisia sericea, Pittosporum moluccanum tall open scrub over Croton habrophyllus, Diospyros humilis, Tylophora cinerascens, Caesalpinia major open scrub over mixed herbs and grasses. Condition excellent.		151.4 km SW of Cape Leveque, 47.4 km N of Broome and 159.4 km W of Derby in the Dampier Peninsula, Site 686_vou8.	12-05-2011
Pittosporum moluccanum	4		Vine thicket in coastal dune pocket (leeward side of dune).	Mimusops elengi, Diospyros humilis, Glycosmis trifoliata, Terminalia petiolaris low woodland over Enneapogon pallidus very open tussock grassland. Associated Species: Cymbopogon ambiguus, Santalum lanceolatum, Tephrosia rosea var. rosea, Grewia breviflor		James Price Point flora and vegetation survey, 50.5 km north north-west of Broome in the Kimberley region	11-03-2009
Pittosporum moluccanum	4				11 individual plants observed within the study area.	James Price Point on the Dampier Peninsula, c. 60 km N of Broome	05-05-2011
Pittosporum moluccanum	4				11 individual plants observed within the study area.	James Price Point on the Dampier Peninsula, c. 60 km N of Broome	05-05-2011
Pittosporum moluccanum	4	Small tree 6 m; flowers white, slightly scented.	In sand dune scrub in white sand.	Scrub with Celtis philippinensis.	occasional.	James Price Point, Dampierland Peninsula, W Kimberley	02-03-1985
Pittosporum moluccanum	4	Tree to 2 m, bark smooth, grey, fruits orange.	In secondary sand dune.			2 km S of Prices Point (200 m off track) on road to Broome, Dampier Peninsula	25-09-1984
Pittosporum moluccanum	4	Tree to 6 m. Leaves in terminal clusters; fruits orange, splitting to reveal seeds.	On lee side of primary sand dune in white sand.	With Lysiphyllum cunninghamii, Celtis phillippinensis and Terminalia petiolaris.		3 km S of James Price Point, Dampier Peninsula, W Kimberley	07-10-1984
Pittosporum moluccanum	4	Tree or shrub to 4 m, with well-formed rounded canopy, the leaves clustered at the ends of the branches, leaves upper surface glossy green, lower dull green, flowers white, fragrant.		In coastal vine thicket.		0.5 km W of Moorak Bore, 50 km due N of Broome, Dampierland Peninsula	14-08-1985
Polymeria sp. Broome (K.F. Kenneally 9759)	3		Poorly defined drainage line on a plain. Pale orange pindan sand.	Post-fire: Acacia eriopoda, A. monticola (Grevillea pyramidalis subsp. pyramidalis, Hakea macrocarpa) tall open shrubland over Distichostemon hispidula var. aridus open shrubland Pre-fire: Eucalyptus miniata tall open woodland over Acacia eriopoda (A. mo		Along the west coast of the Dampier Peninsula, 51 km north of Broome, 130 km west-southwest of Valentine Island, in the Kimberley region	27-03-2010
Polymeria sp. Broome (K.F. Kenneally 9759)	3		Near-coastal plain.	Acacia eriopoda shrubland over Gyrostemon tepperi low open shrubland over Eragrostis aff. eriopoda, Aristida holathera var. holathera, A. hygrometrica open tussock grassland. Associated Species: Hakea arborescens, Hakea macrocarpa, Santalum lanceolatum,		James Price Point flora and vegetation survey, 41.3 km north north-west of Broome in the Kimberley region	09-03-2009
Polymeria sp. Broome (K.F. Kenneally 9759)	3		Coastal plain.	Terminalia ferdinandiana scattered shrubs over *Cenchrus ciliaris, Heteropogon contortus tussock grassland. Associated Species: Hakea macrocarpa, Santalum lanceolatum, Carissa lanceolata, Cajanus marmoratus, Flueggea virosa subsp. melanthesoides.		James Price Point flora and vegetation survey, 40.4 km north north-west of Broome in the Kimberley region	06-03-2009
Polymeria sp. Broome (K.F. Kenneally 9759)	3	Trailing herb, leaves greyish green, flowers mauve.	In red pindan soil on road verge and in drain.			Corner Hunter & Clementson Streets, Broome, Dampierland	25-05-1986
Stylidium pindanicum	3	Annual herb to 25 cm. Flowers pink.	Clay flat.	Open woodland with Eucalyptus tectifica over grassland.	common.	E side of Cape Leveque Road behind Nimalaragun Stock Dam, Dampier Peninsula, NE of Broome	07-05-2011
Stylidium pindanicum	3			Low open woodland of Corymbia opaca, Melaleuca alsophilum and Corymbia paractia over low isolated clumps of Bauhinia cunninghamii and Acacia colei over closed grassland of Chrysopogon pallidus and Sorghum sp., over sparse forbland of Buchnera sp., Caland		N of Nimalarragun wetland, 200 m upslope of tidal creek, c. 20 km N of Broome, c. 5 km E of Willie Creek Pearl Farm. 1.35 km to W along track that turns NW 560 m along SW track off Manari Road 200 m from the intersection of Beagle Bay Broome Road and Man	11-05-2018
Stylidium pindanicum	3	Annual herb to 20 cm. Flowers pink.	Clay flat.	Open woodland with Eucalyptus tectifica over grassland.	locally common.	Head of creek on S side, c. 1 km W of Cape Leveque Road on small track opposite Nimalaragun Stock Dam, Dampier Peninsula, NE of Broome	04-05-2011
Tephrosia andrewii	3	Perennial rotund shrub with orange flowers up to 0.5m tall	Pindan	Tall shrubland	uncommon.	Where Barn Hill homestead track hits Great Northern Highway	06-04-1993
Tephrosia valleculata	3		Gravel pit.			Roebuck Plains Station, gravel pit off highway, S of Ram Bore	03-03-1992
Terminalia kumpaja	3	Tree to 6 m, bark brown, fissured, fruits (old) collected from ground.				Poinciana Well, Dampierland, N of Broome	11-09-1978
Terminalia kumpaja	3	Small tree to 3 m. Flowers white.	Pindan, sandy.	Scrub of Acacia holosericea and A. eriopoda.		Coconut Well road, 2.5 km from Beagle Bay Road, Dampier Peninsula	18-10-1984
Terminalia kumpaja	3	Tree to 4.5 m, bark deeply fissured and corky.				2 km N of Broome, on Broome-Derby Road, W Kimberley	18-06-1984
Terminalia kumpaja	3					Broome district	/01/1933
Terminalia kumpaja	3					Broome district	/01/1933
Terminalia kumpaja	3		Pindan plain. Light reddish brown sandy clay loam.	Bauhinia cunninghamii, Corymbia zygophylla, C. greeniana scattered low trees to low open woodland over Acacia eriopoda, Ficus aculeata var. indecora tall shrubland over Dodonaea hispidula, Breynia cernua open shrubland over Corchorus sidoides subsp. sido	4 plants.	25 km NNE of Broome, 46 km W of Kilto and 90 km SSW of Beagle Bay	02-05-2018
Terminalia kumpaja	3		Pindan plain. Light reddish brown sandy clay loam.	Bauhinia cunninghamii, Corymbia zygophylla, C. greeniana scattered low trees to low open woodland over Acacia eriopoda, Ficus aculeata var. indecora tall shrubland over Dodonaea hispidula, Breynia cernua open shrubland over Corchorus sidoides subsp. sido	4 plants.	25 km NNE of Broome, 46 km W of Kilto and 90 km SSW of Beagle Bay	02-05-2018
Thespidium basiflorum	1			forest Melaleuca		Coconut Well 15km N of Broome Dampier Peninsula	15-06-1985
Thespidium basiflorum	1		black soil with white sand	forest Melaleuca acacioides		Coconut Well N of Broome Dampier Peninsula	19-05-1985

Appendix B: Threatened and Priority Ecological Communities Database Search Results

COM_ID	COM_NAME	STATE_CATG	COMM_CATG	BUFFER
Corymbia paractia	Corymbia paractia dominated community on dunes	Priority 1		500
Dwarf pindan heath	Dwarf pindan heath community of Broome coast	Priority 1		750
Eighty Mile Land System	Eighty Mile Land System	Priority 3		200
Gourdon Land System	Gourdon Land System	Priority 3		500
Vegetation Association 37	Kimberley Vegetation Association 37	Priority 3		500
Vegetation Association 67	Kimberley Vegetation Association 67	Priority 3		500
Vegetation Association 73	Kimberley Vegetation Association 73	Priority 3		500
Vegetation Association 770	Kimberley Vegetation Association 770	Priority 1		500
Vine thickets	Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula	Vulnerable	Endangered	2000
Nimalarica Claypan	Nimalarica Claypan Community (prevously Nimalaica)	Priority 4		500
Mangarr (Minyjuru)	Relict dune system dominated by extensive stands of Minyjuru (Mangarr) Sersalisia (formerly Pouteria) sericea.	Priority 1		500
Roebuck LS	Roebuck Land System	Priority 3		500
Roebuck Bay mudflats	Species-rich faunal community of the intertidal mudflats of Roebuck Bay	Vulnerable		5000

Appendix B2: Fauna Database Search Results

Conservation Status: State - Listed under Biodiversity Conservation Act 216 or Department of Biodiversity, Conservation and Attractions Conservation, Federal - Listed under Environmental Protection and Biodiversity Conservation Act 1999, CR - Critically Endangered, EN - Endangered, VU - Vulnerable, IA/MI - Migratory, CD - Conservation Dependent fauna, OS - Other Specially Protected fauna, MA - Marine, P - Listed as Priority by DBCA.

Source: NM - NatureMap, PMST - EPBC Protected Matters Search Tool, DBCA - DBCA Threatened and Priority Fauna database search.

Literature (within 15 km of the Survey Area)**:** A - Broome North: Southern Portion Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2009), B - Broome Road Industrial Area Preliminary Environmental Impact Assessment and Biological Survey (GHD, 2010), C - Broome Road Subdivision Area Conservation Significant Fauna Survey (GHD, 2015), D - Fauna Assessment of the Broome Port Area (Bamford Consulting, 2010), E - Flora, Vegetation and Fauna Survey Broome Golf Club Redevelopment (Docherty, 2019), F - Mamabulanjin Orchard Flora and Fauna Survey (GHD, 2019).

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Amphibians												
Cyclorana australis	Giant Frog			X								
Cyclorana longipes	Long-footed Frog			X								
Litoria caerulea	Green Tree Frog			X						X		
Litoria nasuta	Striped Rocket Frog			X								
Litoria rothii	Northern Laughing Tree Frog			X								
Litoria rubella	Little Red Tree Frog			X					X			
Notaden nichollsi	Desert Spadefoot			X								
Platyplectrum ornatum	Ornate Burrowing Frog			X								
Rhinella marina	Cane Toad			X								
Uperoleia aspera	Derby Toadlet			X								
Uperoleia mjobergii	West Kimberley Toadlet			X								
Uperoleia talpa	Ratcheting Toadlet			X								
Arachnids												
Eriophora biapicata				X								
Missulena occatoria				X								
Nephila edulis				X								
Birds												
Acanthagenys rufogularis	Spiny-cheeked Honeyeater			X								
Acanthiza apicalis	Inland Thornbill			X								
Accipiter cirrocephalus	Collared Sparrowhawk			X				X				
Accipiter cirrocephalus cirrocephalus				X								
Accipiter fasciatus	Brown Goshawk		MA	X						X		
Accipiter fasciatus didimus			MA	X								
Accipiter fasciatus fasciatus			MA	X								
Accipiter novaehollandiae	Grey Goshawk			X								
Acrocephalus australis	Australian Reed Warbler		MA	X								
Actitis hypoleucos	Common Sandpiper	MI	MI, MA	X	X	X				X		
Aegotheles cristatus	Australian Owlet-nightjar			X								
Anas castanea	Chestnut Teal			X								
Anas gracilis	Grey Teal			X						X		
Anas platyrhynchos domesticus				X								

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Anas superciliosa	Pacific Black Duck			X						X		
Anhinga novaehollandiae	Australasian Darter			X								
Anous stolidus	Common Noddy, Brown Noddy	MI	MI, MA	X	X	X						
Anous stolidus pileatus		MI	MI, MA	X								
Anous tenuirostris melanops	Australian Lesser Noddy	EN	VU, MA		X							
Anseranas semipalmata	Magpie Goose		MA	X	X			X				
Anthus cervinus	Red-throated Pipit		MA	X								
Antigone rubicunda	Brolga			X								
Aprosmictus erythropterus	Red-winged Parrot			X				X	X	X	X	X
Apus pacificus	Pacific Swift	MI	MI, MA	X	X	X						
Apus pacificus pacificus		MI	MI, MA	X								
Aquila audax	Wedge-tailed Eagle			X				X				
Ardea alba	Great Egret		MA	X								
Ardea alba modesta	Eastern Grey Egret		MA	X								
Ardea intermedia	Intermediate Egret		MA	X								
Ardea intermedia intermedia			MA	X								
Ardea pacifica	White-necked Heron			X								
Ardea sumatrana	Great-billed Heron			X								
Ardenna pacifica	Wedge-tailed Shearwater	MI	MI, MA	X		X						
Ardenna tenuirostris	Short-tailed Shearwater	MI	MI, MA	X		X						
Ardeotis australis	Australian Bustard			X				X				
Arenaria interpres	Ruddy Turnstone	MI	MI, MA	X	X	X				X		
Arenaria interpres interpres	Ruddy Turnstone	MI	MI, MA	X								
Artamus cinereus	Black-faced Woodswallow			X					X	X		
Artamus cinereus melanops				X				X				
Artamus leucorynchus	White-breasted Woodswallow			X								
Artamus leucorynchus leucopygialis				X				X				
Artamus minor	Little Woodswallow			X								
Artamus personatus	Masked Woodswallow			X								
Artamus superciliosus	White-browed Woodswallow			X								
Aviceda subcristata	Pacific Baza			X								
Aythya australis	Hardhead			X								
Bubulcus coromandus	Eastern Cattle Egret			X								
Bubulcus ibis	Cattle Egret		MA		X							
Bulweria bulwerii	Bulwer's Petrel	MI	MI, MA	X		X						
Burhinus grallarius	Bush Stone-curlew			X				X				
Butorides striata	Striated Heron Mangrove Heron			X						X		
Butorides striata stagnatilis				X								
Cacatua galerita	Sulphur-crested Cockatoo			X								
Cacatua sanguinea	Little Corella			X			X		X	X		
Cacatua sanguinea sanguinea				X				X				

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Cacomantis variolosus	Brush Cuckoo			X					X			
Cacomantis variolosus variolosus				X								
Calidris acuminata	Sharp-tailed Sandpiper	MI	MI, MA	X	X	X						
Calidris alba	Sanderling	MI	MI, MA	X	X	X						
Calidris canutus	Red Knot	EN	EN, MI, MA	X	X	X						
Calidris canutus rogersi		EN	EN, MI, MA	X								
Calidris falcinellus	Broad-billed Sandpiper	MI	MI, MA	X	X	X						
Calidris falcinellus sibirica		MI	MI, MA	X								
Calidris ferruginea	Curlew Sandpiper	CR	CR, MI, MA	X	X	X				X		
Calidris melanotos	Pectoral Sandpiper	MI	MI, MA	X	X	X						
Calidris minuta	Little Stint		MA	X								
Calidris pugnax	Ruff	MI	MI, MA	X		X						
Calidris ruficollis	Red-necked Stint	MI	MI, MA	X	X	X				X		
Calidris subminuta	Long-toed Stint	MI	MI, MA	X		X						
Calidris tenuirostris	Great Knot	CR	CR, MI, MA	X	X	X				X		
Calonectris leucomelas	Streaked Shearwater	MI	MI, MA	X	X	X						
Calyptorhynchus banksii	Red-tailed Black Cockatoo			X				X	X			
Cecropis daurica	Red-rumped Swallow	MI	MI, MA	X	X	X						
Centropus phasianinus	Pheasant Coucal			X						X		
Centropus phasianinus highami				X								
Centropus phasianinus phasianinus				X				X				
Certhionyx variegatus	Pied Honeyeater			X								
Chalcites basalis	Horsfield's Bronze Cuckoo		MA	X						X		
Chalcites minutillus	Little Bronze Cuckoo		MA	X					X			
Chalcites minutillus minutillus			MA	X								
Chalcites osculans	Black-eared Cuckoo		MA	X	X							
Charadrius bicinctus	Double-banded Plover	MI	MI, MA		X							
Charadrius dubius	Little Ringed Plover	MI	MI, MA	X		X						
Charadrius leschenaultii	Greater Sand Plover	VU	VU, MI, MA	X	X	X				X		
Charadrius leschenaultii leschenaultii		VU	VU, MI, MA	X								
Charadrius mongolus	Lesser Sand Plover	EN	EN, MI, MA	X	X	X						
Charadrius mongolus mongolus		EN	EN, MI, MA	X								
Charadrius ruficapillus	Red-capped Plover		MA	X	X					X		
Charadrius veredus	Oriental Plover	MI	MI, MA	X	X	X						
Chenonetta jubata	Australian Wood Duck			X								
Cheramoeca leucosterna	White-backed Swallow			X								
Chlamydera nuchalis	Great Bowerbird			X						X		
Chlamydera nuchalis nuchalis				X				X				
Chlidonias hybrida	Whiskered Tern		MA	X						X		
Chlidonias hybrida javanicus			MA	X								

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Chlidonias leucopterus	White-winged Black Tern	MI	MI, MA	X		X						
Chloebia gouldiae	Gouldian Finch	P4	EN	X	X	X						
Chroicocephalus novaehollandiae	Silver Gull			X						X		
Chroicocephalus novaehollandiae novaehollandiae				X								
Cincloramphus cruralis	Brown Songlark			X								
Cincloramphus mathewsi	Rufous Songlark			X								
Cincloramphus timoriensis	Tawny Grassbird			X								
Circus approximans	Swamp Harrier		MA	X								
Circus assimilis	Spotted Harrier			X								
Cissomela pectoralis	Banded Honeyeater			X								
Cisticola exilis	Golden-headed Cisticola			X				X				
Cladorhynchus leucocephalus	Banded Stilt			X								
Climacteris melanurus	Black-tailed Treecreeper			X								
Climacteris melanurus melanurus				X								
Colluricincla harmonica	Grey Shrikethrush			X				X	X	X		X
Colluricincla harmonica brunnea	Grey Shrikethrush			X								
Colluricincla harmonica kolichisi	Grey Shrikethrush			X								
Colluricincla harmonica rufiventris	Grey Shrikethrush			X								
Columba livia	Domestic Pigeon			X								
Conopophila rufogularis	Rufous-throated Honeyeater			X				X		X		
Coracina novaehollandiae	Black-faced Cuckooshrike		MA	X			X	X	X	X	X	X
Coracina novaehollandiae subpallida			MA	X								
Coracina papuensis	White-bellied Cuckooshrike		MA	X								
Corvus bennetti	Little Crow			X								
Corvus orru	Torresian Crow			X			X	X	X	X		
Corvus orru cecilae	Western Crow			X								
Coturnix pectoralis	Stubble Quail		MA	X								
Cracticus nigrogularis	Pied Butcherbird			X			X	X	X	X	X	X
Cracticus torquatus	Grey Butcherbird			X								
Cracticus torquatus torquatus				X								
Cuculus saturatus	Oriental Cuckoo	MI	MA	X								
Cuculus saturatus optatus	Horsfield's Cuckoo	MI	MI, MA	X	X	X						
Cyanoptila cyanomelana	Blue And White Flycatcher			X								
Cygnus atratus	Black Swan			X								
Dacelo leachii	Blue-winged Kookaburra			X					X	X		X
Dacelo leachii leachii				X				X				
Daphoenositta chrysoptera	Varied Sittella			X								
Daphoenositta chrysoptera leucoptera	Varied Sittella			X								

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Dendrocygna arcuata	Wandering Whistling Duck		MA	X						X		
Dendrocygna eytoni	Plumed Whistling Duck			X						X		
Dicaeum hirundinaceum	Mistletoebird			X					X	X		
Dromaius novaehollandiae	Emu			X								
Ducula bicolor	Pied Imperial Pigeon		MA	X								
Egretta garzetta	Little Egret		MA	X								
Egretta novaehollandiae	White-faced Heron			X								
Egretta picata	Pied Heron			X								
Egretta sacra	Eastern Reef Heron		MA	X						X		
Elanus axillaris	Black-shouldered Kite			X						X		
Elanus scriptus	Letter-winged Kite	P4		X		X						
Elseyornis melanops	Black-fronted Dotterel			X								
Emblema pictum	Painted Finch			X								
Eolophus roseicapilla	Galah			X								
Ephippiorhynchus asiaticus	Black-necked Stork			X								
Epthianura albifrons	White-fronted Chat			X								
Epthianura aurifrons	Orange Chat			X								
Epthianura crocea	Yellow Chat			X								
Epthianura tricolor	Crimson Chat			X								
Erythrogonys cinctus	Red-kneed Dotterel			X								
Erythrotriorchis radiatus	Red Goshawk	VU	VU	X	X	X						
Esacus magnirostris	Beach Stone-curlew		MA	X								
Eurostopodus argus	Spotted Nightjar		MA	X								
Eurystomus orientalis	Oriental Dollarbird		MA	X					X	X		
Eurystomus orientalis pacificus			MA	X								
Falco berigora	Brown Falcon			X				X	X			
Falco berigora berigora	Brown Falcon			X								
Falco cenchroides	Nankeen Kestral		MA	X				X		X		
Falco cenchroides cenchroides	Nankeen Kestral		MA	X								
Falco hypoleucos	Grey Falcon	VU	VU	X	X	X						
Falco longipennis	Australian Hobby			X								
Falco longipennis longipennis				X								
Falco peregrinus	Peregrine Falcon	OS		X		X						
Falco peregrinus macropus		OS		X								
Falco subniger	Black Falcon			X								
Fregata ariel	Lesser Frigatebird	MI	MI, MA	X	X	X				X		
Fregata minor	Greater Frigatebird	MI	MI, MA	X	X	X						
Fulica atra	Eurasian Coot			X								
Gallinago megala	Swinhoe's Snipe	MI	MI, MA	X	X	X						
Gallinago stenura	Pin-tailed Snipe	MI	MI, MA	X	X	X						
Gavicalis virescens	Singing Honeyeater			X				X	X	X		X

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Gelochelidon macrotarsa	Australian Gull-billed Tern			X								
Gelochelidon nilotica	Gull-billed Tern	MI	MI, MA	X		X				X		
Geopelia cuneata	Diamond Dove			X			X	X	X		X	X
Geopelia humeralis	Bar-shouldered Dove			X				X	X	X		
Geopelia striata	Zebra Dove			X					X			
Geopelia striata placida	Peaceful Dove			X				X		X		
Geophaps plumifera	Spinifex Pigeon			X								
Gerygone fusca	Western Gerygone			X								
Gerygone levigaster	Mangrove Gerygone			X								
Gerygone levigaster levigaster				X								
Gerygone olivacea	White-throated Gerygone			X				X	X	X		X
Gerygone olivacea rogersi				X								
Gerygone tenebrosa	Dusky Gerygone			X						X		
Glareola maldivarum	Oriental Pratincole	MI	MI, MA	X	X	X						
Grallina cyanoleuca	Magpie-lark		MA	X			X	X		X	X	
Gymnorhina tibicen	Australian Magpie			X				X	X			
Haematopus fuliginosus	Sooty Oystercatcher			X								
Haematopus longirostris	Pied Oystercatcher			X						X		
Haliaeetus leucogaster	White-bellied Sea-eagle		MA	X	X					X		
Haliastur indus	Brahminy Kite		MA	X					X	X	X	
Haliastur indus girrenera			MA	X								
Haliastur sphenurus	Whistling Kite		MA	X			X	X	X	X		X
Hamirostra melanosternon	Black-breasted Buzzard			X								
Heteromunia pectoralis	Pictorella Mannikin			X								
Heteroscenes pallidus	Pallid Cuckoo		MA	X				X	X			
Hieraaetus morphnoides	Little Eagle			X				X				
Himantopus himantopus	Black-winged Stilt		MA	X	X					X		
Himantopus himantopus leucocephalus	Pied Stilt		MA	X								
Hirundapus caudacutus	White-throated Needletail	MI	VU, MI, MA	X		X						
Hirundo neoxena	Welcome Swallow		MA	X								
Hirundo rustica	Barn Swallow	MI	MI, MA	X	X	X				X		
Hydroprogne caspia	Caspian Tern	MI	MI, MA	X		X						
Hypotaenidia philippensis	Buff-banded Rail		MA	X								
Hypotaenidia philippensis mellori				X								
Irediparra gallinacea	Comb-crested Jacana			X								
Ixobrychus dubius	Australian Little Bittern	P4		X		X						
Ixobrychus flavicollis	Black Bittern			X								
Ixobrychus flavicollis australis				X								
Ixobrychus minutus	Little Bittern			X								
Lalage tricolor	White-winged Triller			X				X				

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Larus fuscus	Lesser Black-backed Gull			X								
Lichmera indistincta	Brown Honeyeater			X						X		X
Lichmera indistincta indistincta				X				X				
Limnodromus semipalmatus	Asian Dowitcher	MI	MI, MA	X	X	X						
Limosa lapponica	Bar-tailed Godwit	MI	MI, MA	X	X	X				X		
Limosa lapponica menzbieri	Bar-tailed Godwit	CR	CR	X	X	X						
Limosa limosa	Black-tailed Godwit	MI	MI, MA	X	X	X				X		
Limosa limosa melanuroides		MI	MI, MA	X								
Lonchura castaneothorax	Chestnut-breasted Mannikin			X								
Lophochroa leadbeateri	Major Mitchell's Cockatoo			X								
Lophoictinia isura	Square-tailed Kite			X				X				
Macronectes halli	Northern Giant Petrel	MI	VU, MI, MA	X		X						
Malacorhynchus membranaceus	Pink-eared Duck			X								
Malurus assimilis	Purple-backed Fairywren	VU		X						X		X
Malurus assimilis bernieri	Shark Bay Purple-backed Fairywren	VU		X								
Malurus assimilis rogersi	Lavender-flanked Fairywren			X								
Malurus elegans	Red-winged Fairywren			X								
Malurus leucopterus	White-winged Fairywren			X								
Malurus melanocephalus	Red-backed Fairywren			X					X	X		
Malurus melanocephalus cruentatus				X				X				
Manorina flavigula	Yellow-throated Miner			X								
Melanodryas cucullata	Hooded Robin			X								
Melanodryas cucullata	Hooded Robin			X								
Melithreptus albogularis	White-throated Honeyeater			X							X	
Melithreptus gularis	Black-chinned Honeyeater			X					X	X		
Melithreptus gularis laetior				X								
Melopsittacus undulatus	Budgerigar			X								
Merops ornatus	Rainbow Bee-eater		MA	X	X		X	X	X	X	X	X
Microcarbo melanoleucos	Little Pied Cormorant			X								
Microeca fascinans	Jacky Winter			X				X				
Microeca flavigaster	Lemon-breasted Flycatcher			X					X			
Microeca flavigaster tormenti	Kimberley Flycatcher			X								
Milvus migrans	Black Kite			X					X	X	X	X
Milvus migrans affinis				X				X				
Mirafra javanica	Horsfield's Bush Lark			X								
Mirafra javanica horsfieldii				X				X				
Motacilla alba	White Wagtail		MA	X								
Motacilla cinerea	Grey Wagtail	MI	MI, MA	X	X	X						
Motacilla tschutschensis	Eastern Yellow Wagtail	MI	MI, MA	X	X	X						
Myiagra alecto	Shining Flycatcher			X								
Myiagra inquieta	Restless Flycatcher			X						X		

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Myiagra inquieta inquieta				X								
Myiagra inquieta nana	Paperbark Flycatcher			X								
Myiagra rubecula	Leaden Flycatcher			X								
Myiagra rubecula concinna				X								
Myiagra ruficollis	Broad-billed Flycatcher			X						X		
Myiagra ruficollis mimikae				X								
Myzomela erythrocephala	Red-headed Honeyeater			X								
Myzomela erythrocephala erythrocephala				X								
Neochmia phaeton	Crimson Finch			X								
Neochmia ruficauda	Star Finch			X								
Neochmia ruficauda clarescens				X								
Nettapus pulchellus	Green Pygmy Goose		MA	X								
Ninox boobook boobook	Southern Boobook		MA	X					X			
Ninox connivens	Barking Owl			X								
Ninox connivens connivens				X		X						
Ninox novaeseelandiae	Morepork							X				
Numenius madagascariensis	Far Eastern Curlew	CR	CR, MI, MA	X	X	X				X		
Numenius minutus	Little Curlew	MI	MI, MA	X	X	X						
Numenius phaeopus	Whimbrel	MI	MI, MA	X	X	X				X		
Nycticorax caledonicus	Nankeen Night Heron		MA	X								
Nycticorax caledonicus australasiae			MA	X								
Nymphicus hollandicus	Cockatiel			X								
Oceanites oceanicus	Wilson's Storm Petrel	MI	MI, MA	X		X						
Oceanodroma leucorhoa	Leach's Storm Petrel			X								
Ocyphaps lophotes	Crested Pigeon			X			X	X	X	X	X	
Onychoprion anaethetus	Bridled Tern	MI	MI, MA	X		X						
Onychoprion anaethetus anaethetus		MI	MI, MA	X								
Onychoprion fuscatus	Sooty Tern		MA	X								
Oreoica gutturalis	Crested Bellbird			X								
Oriolus sagittatus	Olive-backed Oriole			X								
Pachycephala lanioides	White-breasted Whistler			X								
Pachycephala melanura	Mangrove Golden Whistler			X						X		
Pachycephala melanura melanura				X								
Pachycephala rufiventris	Rufous Whistler			X				X	X	X		X
Pachycephala rufiventris rufiventris				X								
Pandion haliaetus	Osprey	MI	MI, MA	X	X	X						
Pandion haliaetus cristatus	Eastern Osprey	MI	MI, MA	X						X		
Papasula abbotti	Abbott's Booby		EN, MA	X	X							
Pardalotus punctatus punctatus				X								
Pardalotus rubricatus	Red-browed Pardalote			X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Pardalotus striatus	Striated Pardalote			X				X				
Pardalotus striatus murchisoni				X								
Pardalotus striatus uropygialis				X								
Pardalotus striatus westraliensis				X								
Passer montanus	Eurasian Tree Sparrow			X								
Pavo cristatus	Common Peafowl			X								
Pelecanoides urinatrix exsul			MA	X								
Pelecanus conspicillatus	Australian Pelican		MA	X								
Petrochelidon ariel	Fairy Martin			X								
Petrochelidon nigricans	Tree Martin		MA	X						X		X
Petroica goodenovii	Red-capped Robin			X								
Phaethon lepturus	White-tailed Tropicbird	MI	MI, MA		X							
Phalacrocorax carbo	Great Cormorant			X								
Phalacrocorax carbo novaehollandiae				X								
Phalacrocorax sulcirostris	Little Black Cormorant			X								
Phalacrocorax varius	Pied Cormorant			X								
Phalaropus lobatus	Red-necked Phalarope	MI	MI, MA	X		X						
Phaps chalcoptera	Common Bronzewing			X								
Phaps histrionica	Flock Bronzewing			X								
Philemon argenticeps	Silver-crowned Friarbird			X					X			
Philemon citreogularis	Little Friarbird			X				X	X	X		X
Philemon citreogularis citreogularis				X								
Pitta moluccensis	Blue-winged Pitta			X								
Platalea flavipes	Yellow-billed Spoonbill			X								
Platalea regia	Royal Spoonbill			X								
Plegadis falcinellus	Glossy Ibis	MI	MI, MA	X		X						
Pluvialis fulva	Pacific Golden Plover	MI	MI, MA	X	X	X				X		
Pluvialis squatarola	Grey Plover	MI	MI, MA	X	X	X				X		
Podargus strigoides	Tawny Frogmouth			X					X	X		X
Podargus strigoides brachypterus				X								
Podargus strigoides phalaenoides				X								
Podiceps cristatus	Great Crested Grebe			X								
Poephila acuticauda	Long-tailed Finch			X				X	X			
Poliocephalus poliocephalus	Hoary-headed Grebe			X								
Poliolimnas cinereus	White-browed Crake			X								
Polytelis alexandrae	Princess Parrot	P4	VU	X	X	X						
Pomatostomus temporalis	Grey-crowned Babbler			X					X	X		X
Pomatostomus temporalis rubeculus				X				X				
Poodytes gramineus	Little Grassbird			X								
Porphyrio melanotus	Australasian Swamphen		MA	X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Porzana fluminea	Australian Spotted Crake			X								
Psitteuteles versicolor	Varied Lorikeet			X								
Ptilinopus regina ewingii				X								
Ptilotula flavescens	Yellow-tinted Honeyeater			X						X		
Ptilotula flavescens flavescens				X								
Ptilotula keartlandi	Grey-headed Honeyeater			X								
Puffinus huttoni	Hutton's Shearwater	EN	MA	X		X						
Purnella albifrons	White-fronted Honeyeater			X								
Radjah radjah	Radjah Shelduck			X								
Rallina fasciata	Red-legged Crake		MA	X								
Recurvirostra novaehollandiae	Red-necked Avocet		MA	X	X							
Rhipidura albiscapa	Grey Fantail			X								
Rhipidura fuliginosa	Grey Fantail			X								
Rhipidura leucophrys	Willie Wagtail			X				X	X	X	X	
Rhipidura leucophrys leucophrys				X								
Rhipidura phasiana	Mangrove Grey Fantail			X								
Rhipidura rufiventris	Northern Fantail			X								
Rhipidura rufiventris isura				X								
Rostratula australis	Australian Painted Snipe	EN	EN, MA	X	X	X						
Scythrops novaehollandiae	Channel-billed Cuckoo		MA	X								
Smicrornis brevirostris	Weebill			X				X				
Spatula querquedula	Garganey	MI	MI, MA	X		X						
Spatula rhynchotis	Australasian Shoveler			X								
Sphecotheres vieilloti	Australasian Figbird			X								
Stercorarius parasiticus	Arctic Skua	MI	MI, MA	X		X						
Sterna dougallii	Roseate Tern	MI	MI, MA	X		X						
Sterna dougallii gracilis		MI	MI, MA	X								
Sterna hirundo	Common Tern	MI	MI, MA	X		X						
Sterna hirundo longipennis		MI	MI, MA	X								
Sterna sumatrana	Black-naped Tern	MI	MI, MA			X						
Sternula albifrons	Little Tern	MI	MI, MA	X	X	X						
Sternula albifrons sinensis	White-shafted Little Tern	MI	MI, MA	X	X							
Sternula nereis	Fairy Tern		MA	X								
Stictonetta naevosa	Freckled Duck			X								
Stiltia isabella	Australian Pratincole		MA	X								
Stizoptera bichenovii	Double-barred Finch			X								X
Stizoptera bichenovii annulosa				X								
Stomiopera unicolor	White-gaped Honeyeater			X								
Sturnus vulgaris	Common Starling			X								
Sugomel niger	Black Honeyeater			X								
Sula leucogaster	Brown Booby	MI	MI, MA	X	X	X				X		

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Sula leucogaster plotus		MI	MI, MA	X								
Synoicus ypsilophorus	Brown Quail			X				X				
Synoicus ypsilophorus australis				X								
Tachybaptus novaehollandiae	Australasian Grebe			X								
Tachybaptus novaehollandiae novaehollandiae				X								
Tachybaptus ruficollis	Little Grebe			X								
Tadorna tadornoides	Australian Shelduck, Mountain Duck			X								
Taeniopygia castanotis	Australian Zebra Finch			X						X		
Thalasseus bengalensis	Lesser Crested Tern		MA	X								
Thalasseus bergii	Greater Crested Tern	MI	MI, MA	X		X				X		
Threskiornis molucca	Australian White Ibis		MA	X						X		
Threskiornis spinicollis	Straw-necked Ibis		MA	X			X	X				
Todiramphus chloris (Wallacea transition point from T. sordidus)	Collared Kingfisher			X								
Todiramphus pyrrhopygius	Red-backed Kingfisher			X								
Todiramphus sanctus	Sacred Kingfisher		MA	X					X	X		
Todiramphus sanctus sanctus			MA	X								
Todiramphus sordidus (Wallacea transition point from T. chloris)	Torresian Kingfisher			X								
Tribonyx ventralis	Black-tailed Native-hen			X								
Trichoglossus moluccanus	Rainbow Lorikeet			X						X		
Trichoglossus rubritorquis	Red-collared Lorikeet			X				X				
Tringa brevipes	Grey-tailed Tattler	MI, P4	MI, MA	X	X	X				X		
Tringa glareola	Wood Sandpiper	MI	MI, MA	X	X	X						
Tringa nebularia	Common Greenshank	MI	MI, MA	X	X	X				X		
Tringa stagnatilis	Marsh Sandpiper	MI	MI, MA	X	X	X						
Tringa totanus	Common Redshank	MI	MI, MA	X	X	X						
Turnix castanotus	Chestnut-backed Buttonquail			X								
Turnix maculosus	Red-backed Buttonquail			X								
Turnix maculosus melanotus				X								
Turnix pyrrhothorax	Red-chested Buttonquail			X								
Turnix velox	Little Buttonquail			X				X				
Tyto javanica delicatula				X								
Tyto longimembris	Eastern Grass Owl			X								
Tyto novaehollandiae kimberli		P1	VU		X	X						
Tyto novaehollandiae novaehollandiae		P3		X		X						
Vanellus miles	Masked Lapwing			X						X		
Vanellus miles miles				X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Vanellus tricolor	Banded Lapwing			X								
Xema sabini	Sabine's Gull		MA	X								
Xenus cinereus	Terek Sandpiper	MI	MI, MA	X	X	X				X		
Zapornia pusilla	Baillon's Crake		MA	X								
Zapornia tabuensis	Spotless Crake		MA	X								
Zosterops lateralis	Grey-breasted White-eye		MA	X								
Zosterops luteus	Yellow White-eye			X								
Fish												
Abudefduf bengalensis				X								
Acanthopagrus latus				X								
Acanthopagrus palmaris				X								
Acanthurus dussumieri				X								
Acanthurus grammoptilus				X								
Acentrogobius gracilis				X								
Acentrogobius nebulosus				X								
Acentrogobius viridipunctatus				X								
Alectis indica				X								
Alionematichthys piger				X								
Ambassis vachellii				X								
Amniataba caudavittata				X								
Amphiprion rubrocinctus				X								
Anguilla bicolor				X								
Anoxypristis cuspidata		MI	MI		X							
Apogon cookii				X								
Apogon doederleini				X								
Apogon pallidofasciatus				X								
Apogon rueppellii				X								
Archamia biguttata				X								
Arothron hispidus				X								
Arothron manilensis				X								
Arrhamphus sclerolepis				X								
Atherinomorus endrachtensis				X								
Bathygobius fuscus				X								
Bathygobius parvus				X								
Batrachomoeus dahli				X								
Batrachomoeus occidentalis				X								
Blennodesmus scapularis				X								
Boleophthalmus caeruleomaculatus				X								
Brachysomophis cirrocheilos				X								
Butis butis				X								
Campichthys tricarinatus			MA		X							

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Caranx bucculentus				X								
Caranx ignobilis				X								
Caranx sexfasciatus				X								
Carcharhinus longimanus	Oceanic Whitetip Shark		MI		X							
Carcharodon carcharias	Grey Nurse Shark	VU	VU, MI		X							
Centriscus scutatus				X								
Centrogenys vaigiensis				X								
Cephalopholis boenak				X								
Chaetodon aureofasciatus				X								
Chaetodontoplus duboulayi				X								
Chanos chanos				X								
Chelmon marginalis				X								
Chelmon muelleri				X								
Chelmon rostratus				X								
Chelonodon patoca				X								
Chiloscyllium punctatum				X								
Chirocentrus dorab				X								
Choerodon cyanodus				X								
Choerodon schoenleinii				X								
Choeroichthys brachysoma			MA		X							
Choeroichthys suillus	Pigsnout Pipefish				X							
Chromileptes altivelis				X								
Conger cinereus				X								
Congrogadus subducens				X								
Corythoichthys flavofasciatus			MA		X							
Cosmocampus banneri			MA		X							
Craterocephalus capreoli				X								
Craterocephalus pauciradiatus				X								
Cyclichthys orbicularis				X								
Cymbacephalus nematophthalmus				X								
Dampierosa daruma				X								
Doryrhamphus dactyliophorus			MA		X							
Doryrhamphus excisus			MA		X							
Doryrhamphus janssi			MA		X							
Drepane punctata				X								
Drombus triangularis				X								
Echeneis naucrates				X								
Elates ransonnetii				X								
Eleutheronema tetradactylum				X								
Elops hawaiensis				X								
Enneapterygius gracilis				X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Enneapterygius larsonae				X								
Epinephelus areolatus				X								
Epinephelus bleekeri				X								
Epinephelus coioides				X								
Epinephelus corallicola				X								
Epinephelus fasciatus				X								
Epinephelus homosinensis				X								
Epinephelus malabaricus				X								
Epinephelus quoyanus				X								
Epinephelus tauvina				X								
Eusurculus pistillum				X								
Eviota bimaculata	Twospot Eviota			X								
Eviota queenslandica				X								
Feroxodon multistriatus				X								
Filicampus tigris			MA	X	X							
Fistularia petimba				X								
Fowleria aurita				X								
Gerres subfasciatus				X								
Gymnothorax favagineus				X								
Gymnothorax pseudothrysoideus				X								
Gymnothorax pseudothyrsoideus				X								
Gymnothorax undulatus				X								
Halicampus brocki	Tasselled Pipefish		MA		X							
Halicampus grayi			MA		X							
Halicampus nitidus			MA		X							
Halicampus spinirostris			MA		X							
Halichoeres melanochir				X								
Halichoeres nigrescens				X								
Haliichthys taeniophorus			MA		X							
Halophryne diemensis				X								
Halophryne ocellatus				X								
Hapalogenys kishinouyei				X								
Hemiramphus robustus				X								
Hemiscyllium trispeculare				X								
Herklotsichthys blackburni				X								
Himantura uarnak				X								
Hippichthys gazella				X								
Hippichthys penicillus			MA	X	X							
Hippocampus angustus	Western Spiny Seahorse		MA	X	X							
Hippocampus histrix			MA		X							
Hippocampus kuda			MA		X							

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Hippocampus planifrons			MA		X							
Hippocampus spinosissimus			MA		X							
Hippocampus trimaculatus			MA		X							
Hypoatherina temminckii				X								
Ichthyscopus insperatus				X								
Ichthyscopus spinosus				X								
Istigobius decoratus				X								
Istigobius diadema				X								
Istigobius nigroocellatus				X								
Istigobius ornatus				X								
Isurus oxyrinchus		MI	MI		X							
Isurus paucus		MI	MI		X							
Johnius amblycephalus				X								
Labracinus lineatus				X								
Lactoria cornuta	Longhorn Cowfish			X								
Lactoria diaphana				X								
Laiphognathus multimaculatus	Manyspot Blenny			X								
Leiognathus equulus				X								
Leptobrama muelleri				X								
Lethrinus laticaudis				X								
Lethrinus punctulatus				X								
Liza alata				X								
Liza subviridis				X								
Liza vaigiensis				X								
Lophiocharon hutchinsi				X								
Lophiocharon trisignatus				X								
Lutjanus carponotatus				X								
Lutjanus erythropterus				X								
Lutjanus lemniscatus				X								
Lutjanus malabaricus				X								
Lutjanus quinquelineatus				X								
Lutjanus russellii				X								
Lutjanus vitta				X								
Marilyna meraukensis				X								
Megalops cyprinoides				X								
Micrognathus micronotopterus			MA	X	X							
Mobula alfredi	Manta Ray	MI	MI		X							
Mobula birostris	Giant Oceanic Manta Ray	MI	MI		X							
Monacanthus chinensis				X								
Mugil cephalus				X								
Nematalosa come				X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Nematalosa vlaminghi				X								
Neosilurus hyrtlii				X								
Netuma proxima				X								
Nibea microgenys				X								
Notograptus guttatus				X								
Omobranchus ferox				X								
Omobranchus lineolatus				X								
Omobranchus rotundiceps				X								
Omobranchus verticalis				X								
Onuxodon fowleri				X								
Onuxodon margaritiferae				X								
Ophichthus rutidoderma				X								
Ophieleotris aporos				X								
Ophiocara porocephala				X								
Opistognathus darwiniensis				X								
Opistognathus inornatus				X								
Opistognathus reticulatus				X								
Orectolobus wardi				X								
Ostracion rhinorhynchos				X								
Pantolabus radiatus				X								
Parablennius tasmanianus				X								
Paracentropogon vespa				X								
Paradiplogrammus enneactis				X								
Paramonacanthus choirocephalus				X								
Paraplagusia sinerama				X								
Paraploactis pulvinus				X								
Paraplotosus albilabris				X								
Paraplotosus butleri				X								
Parascorpaena picta				X								
Pardachirus pavoninus				X								
Parupeneus indicus				X								
Pempheris ypsilychnus				X								
Pentapodus emeryii				X								
Pentapodus porosus				X								
Periophthalmus argentilineatus				X								
Periophthalmus koelreuteri				X								
Pisodonophis cancrivorus				X								
Platybelone argalus				X								
Platycephalus indicus				X								
Plotosus lineatus				X								
Polydactylus macrochir				X								

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Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Polydactylus multiradiatus				X								
Polydactylus sheridani				X								
Pomacanthus sexstriatus				X								
Pomacentrus milleri	Miller's Damsel			X								
Pomadasys argenteus				X								
Priolepis nuchifasciata				X								
Prionobutis microps				X								
Pristis clavata	Dwarf Sawfish	MI, P1	VU, MI		X							
Pristis pristis	Freshwater Sawfish	MI, P3	VU, MI	X	X	X						
Pristis zijsron	Green Sawfish	VU	VU, MI	X	X	X						
Psammoperca waigiensis				X								
Pseudochromis fuscus				X								
Pseudochromis wilsoni	Yellowfin Dottyback			X								
Pseudomonacanthus peroni				X								
Pseudomugil cyanodorsalis				X								
Pterois antennata				X								
Remora remora				X								
Rhina ancylostoma				X								
Rhincodon typus	Whale Shark	MI	VU, MI		X							
Rhizoprionodon acutus				X								
Salarias sexfilum				X								
Sargocentron rubrum				X								
Scaevius milii				X								
Scartelaos histophorus				X								
Scarus ghobban				X								
Scolecenchelys macroptera				X								
Scolopsis monogramma				X								
Scomberoides commersonnianus				X								
Scomberoides lysan				X								
Scomberomorus semifasciatus				X								
Scorpaenopsis neglecta				X								
Selaroides leptolepis				X								
Selenotoca multifasciata				X								
Sillago analis				X								
Sillago burrus				X								
Sillago sihama				X								
Solegnathus hardwickii			MA		X							
Solegnathus lettiensis	Gunther's Pipehorse		MA		X							
Solenostomus cyanopterus			MA		X							
Sphyraena putnamae				X								
Sphyrna lewini	Scalloped Hammerhead		CD		X							

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Spratelloides delicatulus				X								
Spratelloides robustus				X								
Strongylura strongylura				X								
Synanceia horrida				X								
Syngnathoides biaculeatus	Doubleend Pipehorse		MA		X							
Synodus jaculum				X								
Synodus sageneus				X								
Taeniura lymma				X								
Terapon jarbua	Crescent Grunter			X								
Terapon puta				X								
Terapon theraps				X								
Thryssa aestuaria				X								
Thunnus maccoyii	Southern Bluefin Tuna		CD		X							
Toxotes chatareus				X								
Trachinocephalus myops				X								
Trachyrhamphus bicoarctatus			MA		X							
Trachyrhamphus longirostris			MA		X							
Tragulichthys jaculiferus				X								
Trichiurus lepturus				X								
Trichonotus setiger				X								
Urogymnus asperrimus				X								
Valamugil cunnesius				X								
Yongeichthys nebulosus				X								
Invertebrates												
Amblyomma moreliae				X								
Arthrorhabdus paucispinus				X								
Austracantha minax				X								
Backobourkia collina				X								
Buddelundia sp. 1				X								
Cosmophasis baehrae				X								
Cyclosa camelodes				X								
Gea theridioides				X								
Heteropoda renibulbis				X								
Hogna crispipes				X								
Isometrus maculatus				X								
Latrodectus geometricus				X								
Latrodectus hasseltii				X								
Lychas annulatus				X								
Lychas jpp				X								
Lychas multipunctatus				X								
Mopsus mormon				X								

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Neoscona theisii				X								
Oecobius marathaus				X								
Pilbarascutigera incola				X								
Plbarascutigera incola				X								
Rhagada bulgana				X								
Scolopendra laeta				X								
Scolopendra morsitans				X								
Thereuopoda lesueurii				X								
Urodacus granifrons				X								
Urodacus hoplurus				X								
Urodacus koolanensis				X								
Urodacus yaschenkoi				X								
Mammals												
Balaenoptera acutorostrata	Dwarf Minke Whale			X								
Balaenoptera borealis schlegelii	Sei Whale	EN	VU, MI		X							
Balaenoptera edeni	Bryde's Whale	MI	MI		X							
Balaenoptera musculus	Blue Whale				X							
Balaenoptera physalus quoyi	Fin Whale	EN	VU, MI		X							
Bettongia lesueur graii	Burrowing Bettong	EX	EX	X		X						
Bos primigenius taurus	European Cattle			X				X				X
Camelus dromedarius	Dromedary Camel			X								
Canis lupus	Dingo / Dog			X			X	X	X			X
Chaerephon jobensis colonicus	Greater Northern Free-tailed Bat			X						X		
Chalinolobus gouldii	Gould's Wattled Bat			X				X				
Chalinolobus nigrogriseus rogersi	Hoary Wattled Bat			X								
Dasyurus hallucatus	Northern Quoll	EN	EN	X		X						
Delphinus delphis	Common Dolphin				X							
Dugong dugon	Dugong	MI	MI, MA	X	X	X						
Equus ferus caballus	Horse			X								
Felis catus	Cat			X				X	X			X
Grampus griseus	Risso's Dolphin				X							
Hydromys chrysogaster	Water Rat	P4		X		X						
Isoodon auratus auratus	Golden Bandicoot	VU	VU	X		X						
Lagorchestes conspicillatus				X								
Lagorchestes conspicillatus leichardti	Spectacled Hare-wallaby	P4		X								
Macroderma gigas	Ghost Bat	VU	VU		X							
Macrotis lagotis	Bilby, Dalgyte	VU	VU	X	X	X						X
Megaptera novaeangliae australis	Humpback Whale	MI, CD	MI	X	X	X						
Mesembriomys macrurus	Goldenbacked Tree-rat	P4		X		X						
Miniopterus schreibersii				X								

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Mus musculus	House Mouse			X				X				
Notamacropus agilis nigrescens	Agile Wallaby			X			X	X	X	X	X	X
Nyctophilus arnhemensis	Arnhem Long-eared Bat			X								
Nyctophilus daedalus	Pallid Long-eared Bat			X								
Nyctophilus geoffroyi geoffroyi	Lesser Long-eared Bat			X								
Onychogalea unguifera unguifera	Northern Nailtail Wallaby			X								
Orcaella heinsohni	Australian Snubfin Dolphin	MI, P4	MI	X	X	X						
Orcinus orca	Killer Whale	MI	MI		X							
Osphranter robustus	Common Wallaroo			X								
Osphranter rufus	Red Kangaroo, Marlu			X				X				
Ozimops cobourgianus	Northern Coastal Free-tailed Bat	P1		X		X						
Ozimops lumsdenae	Northern Free-tailed Bat			4								
Phascogale tapoatafa kimberleyensis	Kimberley Brush-tailed Phascogale	VU	VU	X		X						
Physeter macrocephalus	Sperm Whale	VU	MI	X								
Pipistrellus westralis	Northern Pipistrelle			X								
Planigale ingrami	Long-tailed Planigale			X								
Planigale maculata	Common Planigale			X								
Pseudomys delicatulus	Delicate Mouse			X				X	X			
Pseudomys hermannsburgensis	Sandy Inland Mouse			X								
Pseudomys nanus nanus	Western Chestnut Mouse			X								
Pseudorca crassidens	False Killer Whale			X	X							
Pteropus alecto gouldii	Black Flying-fox			X						X		
Pteropus scapulatus	Little Red Flying-fox			X								
Rattus rattus	Black Rat			X								
Saccolaimus flaviventris	Yellow-bellied Sheath-tailed Bat			X				X		X		
Saccolaimus saccolaimus nudicluniatus	Bare-rumped Sheath-tailed Bat	P3	VU	X	X							
Scotorepens greyii	Little Broad-nosed Bat			X				X				
Scotorepens sanborni	Northern Broad-nosed Bat			X								
Sminthopsis youngsoni	Lesser Hairy-footed Dunnart			X								
Sousa sahulensis	Indo-pacific Humpback Dolphin	MI, P4	MI	X	X							
Stenella attenuata	Spotted Dolphin	MI	MI		X							
Stenella longirostris roseiventris	Spinner Dolphin	MI, P4	MI	X		X						
Tachyglossus aculeatus acanthion	Short-beaked Echidna			X					X			
Trichosurus vulpecula arnhemensis	Northern Brushtail Possum	VU	VU	X	X	X		X		X		
Tursiops aduncus	Indo-pacific Bottlenose Dolphin	MI	MI	X	X							
Tursiops truncatus truncatus	Bottlenose Dolphin			X	X							
Wyulda squamicaudata	Scaly-tailed Possum	P4		X		X						
Xeromys myoides	Water Mouse		VU		X							
Reptiles												

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Acanthophis pyrrhus	Desert Death Adder			X								
Aipysurus apraefrontalis		CR	CR, MA	X	X	X						
Aipysurus duboisii			MA		X							
Aipysurus eydouxii			MA		X							
Aipysurus foliosquama		CR	CR, MA		X							
Aipysurus laevis			MA	X	X							
Aipysurus mosaicus	Mosaic Sea Snake			X								
Aipysurus tenuis			MA	X	X							
Amalosia rhombifer				X								
Anilios braminus				X								
Anilios diversus				X				X				
Anilios grypus	Long-beaked Blind Snake			X								
Antaresia childreni	Children's Python			X					X			
Aspidites melanocephalus	Black-headed Python			X				X				
Brachyurophis roperi				X				X	X			
Caretta caretta	Loggerhead Turtle	EN	EN, MI, MA		X							
Carlia amax				X				X				
Carlia munda	Shaded-litter Rainbow-skink			X				X	X			
Carlia rufilatus				X								X
Carlia triacantha	Desert Rainbow Skink			X				X				
Chelodina burrungandjii	Northern Long-necked Turtle			X								
Chelonia mydas	Green Turtle	VU	VU, MI, MA	X	X	X						
Chlamydosaurus kingii	Frill-necked Lizard			X					X			
Crenadactylus ocellatus	South-western Clawless Gecko			X					X			
Crocodylus johnstoni	Freshwater Crocodile	OS	MA		X							
Crocodylus porosus	Saltwater Crocodile	MI	MI, MA		X							
Cryptoblepharus metallicus				X								
Cryptoblepharus ruber				X						X		
Cryptoblepharus tytthos				X				X	X			
Ctenophorus caudicinctus	Western Ring-tailed Dragon			X								
Ctenophorus isolepis	Central Military Dragon			X								
Ctenophorus isolepis isolepis	Central Military Dragon			X								
Ctenophorus nuchalis	Central Netted Dragon			X								
Ctenotus angusticeps		P3		X		X						
Ctenotus colletti				X								
Ctenotus inornatus				X				X		X		
Ctenotus pantherinus	Leopard Ctenotus			X					X			
Ctenotus robustus	Robust Striped Ctenotus			X								
Ctenotus saxatilis	Rock Ctenotus			X				X	X			
Ctenotus serventyi	North-western Sandy-loam Ctenotus			X				X				

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Delma borea				X								
Delma desmosa				X								
Delma tincta	Excitable Delma			X								
Demansia angusticeps				X								
Demansia olivacea	Olive Whipsnake			X								
Dermochelys coriacea	Leatherback Turtle	VU	EN, MI, MA		X							
Diplodactylus conspicillatus	Variable Fat-tailed Gecko			X				X				
Diporiphora pindan	Pindan Dragon			X				X	X	X		X
Diporiphora winneckei				X				X				
Emydocephalus annulatus			MA		X							
Ephalophis greyae			MA	X	X							
Eremiascincus isolepis				X				X	X	X		
Eretmochelys imbricata	Hawksbill Turtle	VU	VU, MI, MA	X	X	X						
Fordonia leucobalia	White-bellied Mangrove Snake			X								
Furina ornata	Moon Snake			X								
Gehyra australis				X						X		
Gehyra kimberleyi	Robust Termitaria Gecko			X								X
Gehyra pilbara	Pilbara Dtella			X				X	X			
Gehyra purpurascens				X								
Gehyra variegata	Variegated Gehyra			X								
Gowidon longirostris	Long-nosed Dragon								X			
Hemidactylus frenatus	Asian House Gecko			X						X		
Heteronotia binoei	Bynoe's Gecko			X								X
Hydrelaps darwiniensis			MA	X	X							
Hydrophis curtus					X							
Hydrophis elegans	Elegant Seasnake		MA	X	X							
Hydrophis kingii	Spectacled Seasnake		MA	X	X							
Hydrophis macdowelli			MA		X							
Hydrophis major			MA	X	X							
Hydrophis ocellatus				X								
Hydrophis ornatus					X							
Hydrophis peronii			MA	X	X							
Hydrophis platurus platurus	Yellow-bellied Sea-snake		MA		X							
Hydrophis stokesii			MA	X	X							
Lepidochelys olivacea	Olive Ridley Turtle	EN	EN, MI, MA	X		X						
Lerista apoda				X				X				
Lerista bipes	North-western Sandslider			X				X				
Lerista griffini				X				X	X			X
Lerista labialis				X				X				
Lerista separanda		P2		X		X						
Lialis burtonis	Burton's Snake-lizard			X				X	X			

Appendix B2: Fauna Database Search Results

Scientific Name	Common Name	Conservation Status		Source			Literature					
		State	Federal	NM	PMST	DBCA	A	B	C	D	E	F
Liasis fuscus	Water Python			X								
Liopholis kintorei	Great Desert Skink	VU	VU	X	X	X						
Lophognathus gilberti	Top End Ta-ta Dragon			X			X	X	X	X	X	
Lucasium stenodactylus	Sand-plain Gecko			X				X				
Menetia greyii	Common Dwarf Skink			X				X				
Menetia maini				X				X	X			
Menetia surda	Western Dwarf Skink								X			
Morethia ruficauda	Lined Fire-tailed Skink								X			
Morethia ruficauda ruficauda	Lined Fire-tailed Skink			X				X				
Morethia storri				X				X				
Natator depressus	Flatback Turtle	VU	VU, MI, MA	X	X	X						
Notoscincus ornatus	Ornate Soil-crevice Skink			X								
Pogona minor	Dwarf Bearded Dragon			X								
Pogona minor minor	Western Bearded Dragon			X				X	X			
Pogona minor mitchelli				X								
Proablepharus tenuis				X					X			
Pseudechis australis	Mulga Snake			X								
Pseudonaja mengdeni	Western Brown Snake			X								
Pseudonaja nuchalis	Gwardar			X								
Pygopus nigriceps	Western Hooded Scaly-foot			X				X				
Rhynchoedura ornata	Western Beaked Gecko			X								
Simoselaps anomalus	Desert Banded Snake			X								
Simoselaps minimus		P2		X		X						
Strophurus ciliaris aberrans				X				X	X			
Strophurus ciliaris ciliaris				X								
Suta punctata	Spotted Snake			X								
Tiliqua multifasciata	Central Blue-tongue			X				X				
Tiliqua scincoides	Eastern Blue-tongue			X						X		
Tiliqua scincoides intermedia				X				X	X			
Varanus acanthurus	Spiny-tailed Goanna			X								
Varanus brevicauda	Short-tailed Pygmy Goanna			X								
Varanus eremius	Pygmy Desert Goanna			X								
Varanus gouldii	Bungarra Or Sand Goanna			X				X	X	X		
Varanus panoptes				X								
Varanus panoptes panoptes	Yellow-Spotted Monitor			X								
Varanus sparnus	Dampierland Goanna	P1		X								
Varanus tristis	Racehorse Goanna			X					X	X		

Appendix C
Flora Likelihood Assessment

Appendix B: Assessment of the Likelihood of Occurrence of Threatened and Priority Flora as per Desktop Assessment Database Searches surrounding the Survey Area

Distance to Nearest Record from the Survey Area is based on a distance analysis undertaken against 2022 DBCA database. High = Suitable habitat present and records less than 5 km from the Survey Area, Medium = Suitable habitat present and records between 5 km and 15 km from the Survey Area, and Low = No suitable habitat present and/or records greater than 15 km from the Survey Area, Unknown = Insufficient information available to classify . CR= Listed as Critically Endangered under the EPBC Act, EN = Listed as Endangered under the EBPC Act, VU = listed as Vulnerable under the EBPC Act. T = Threatened under the BC Act, P = Priority Listed, Ranked and Listed by the DBCA. Likelihoods are assessed both pre and post survey based on knowledge of the Survey Area, nearest known records, known flowering period of flora taxa and knowledge gained from the survey effort during ground truthing. 1: Department of the Environment (2021). SPRAT EPBC Threatened Flora in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. 2: Department of Biodiversity, Conservation and Attractions (2023). FloraBase - TheWestern Australian Flora. https://florabase.dpaw.wa.gov.au/

Species	Conservation Status		Source			Distance to Nearest Record (km)	Flowering Period	Prefered Habitat	Pre-Survey Likelihood of Occurrence	Habitat occurs within the Survey Area	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	NatureMap	PMST	DBCA						
Priority 1											
Aphyllodium parvifolium	P1		✓		✓	30.24	April or July	Sand. Sandhills.[1]	Low	Yes	Low
Corymbia paractia	P1		✓		✓	0.7	Apr - May or Oct - Dec	Skeletal soils. In transition zone between coastal beach dunes and pindan soils.[1]	High	Yes	Low
Hibiscus panduriformis	P1		✓			75	May - Jul	Black cracking clay.[1]	Low	No	Low
Jacquemontia sp. Broome (A.A. Mitchell 3028)	P1		✓		✓	1.8	April	Pindan plain. Light reddish brown sandy clay loam.[1]	High	Yes	Low
Thespidium basiflorum	P1		✓		✓	8.35	May - Aug	Sandy soils. Creeks.[1]	High	Yes	Low
Priority 2											
Gomphrena pusilla	P2		✓		✓	2	Mar - Apr	Fine beach sand. Behind foredune, on limestone.[1]	High	No	Low
Priority 3											
Acacia monticola x tumida var. kulparn	P3		✓		✓	4	Mar - Jun or Aug	Grows with *Acacia tumida* .[1]	High	Yes	Low
Aphyllodium glossocarpum	P3		✓		✓	3.48	Apr - Oct	Sand. Pindan.[1]	Medium	Yes	Low
Bonamia oblongifolia	P3		✓		✓	41.7	Feb	Sand or gravelly soils.[1]	Low	Yes	Low
Glycine pindanica	P3		✓		✓	0.6	Feb - Mar or June	Pindan soils.[1]	High	Yes	Medium
Goodenia byrnesii	P3		✓		✓	5	Jan - Feb	Sand. Edge of creek.[1]	High	Yes	Medium
Lophostemon grandiflorus subsp. grandiflorus	P3		✓		✓	40.7	Jan - Dec	Damp habitats (swamps, seepages).[1]	Low	No	Low
Paranotis halfordii	P3				✓	29.3	Feb - June	Rocky soil, sandstone, cliff tops. Also near crees, sandy clay, salt marsh.[1]	Low	No	Low
Polymeria sp. Broome (K.F. Kenneally 9759)	P3		✓		✓	4.4	May, Nov	Pindan plain. Light reddish-brown sandy clay loam.[1]	High	Yes	Medium
Stylidium pindanicum	P3		✓		✓	17.2	May - Jun, Aug - Sept	Sandy clay, clay flat, seasonal swamps.[1]	Low	No	Low

[1] Western Australian Herbarium (2023)

Tephrosia andrewii	P3		✓		✓	49	April or October	Sand, pindan country.[1]	Low	Yes	Low
Tephrosia valleculata	P3				✓	41	Apr - Sep	Sandy, often shallow soil around sandstone. Rock outcrops.[1]	Low	No	Low
Terminalia kumpaja	P3		✓		✓	1.47	Sep - Oct, Dec	Red aeolian sand dune.[1]	High	Yes	Low
Tetragonia coronata	P3		✓			9	Jul	Red clay loam. Calcrete outcrops.[1]	Medium	No	Low
Priority 4											
Pittosporum moluccanum	P4		✓		✓	43	Feb - Aug	White sand, sand dunes.[1]	Low	No	Low

[1] Western Australian Herbarium (2023)

FLORA SITE SHEET

Project Name Sanctuary Road Biological Survey
Site: Srr05
Location MGA 51 417482 **mE** 8017760 **mN**

Described by: BV
Date: 20-01-2023
Type: Releve

Landform: Pindan plain
Slope: Flat
Rock Type: N/A
Soil Type: Loam,Sand
Soil Colour: Orange

Vegetation: *Brachychiton diversifolius subsp. diversifolius, Corymbia greeniana and Lysiphyllum cunninghamii low woodland over Acacia colei var. colei, Erythrophleum chlorostachys and Grewia pindanica mid shrubland*

Condition: Very Good **Disturbance Type:** 0
Fire Age: >10 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
Abutilon australiense	150	0.5	
Acacia colei var. colei	150	50	
Brachychiton diversifolius subsp. diversifolius	300	10	
Corymbia greeniana	350	10	
Erythrophleum chlorostachys	150	1	
Grewia pindanica	150	0.5	
Lysiphyllum cunninghamii	200	0.5	
Persoonia falcata	200	0.5	

Appendix F
Fauna Habitat Assessments

5668-HAB-01-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053736.892	**Northing**	8009977
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Hummocks, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	Litter, Vehicle tracks				
Introduced fauna	Cat		**Ground Cover**	76-100%	
Vegetation					
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%)			

Fulcrum photo ID	d5b1e6ae-d5f3-45d9-b8b8-7d3a32586528, fcc2c58e-d2cb-4c84-9343-2f4e69a79a44

5668-HAB-02-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053618.769	**Northing**	8009990
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Hummocks, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	76-100%	
Vegetation					
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Tussock grassland (50-80%)			

Fulcrum photo ID	559c6317-e5fd-4765-b9cf-0d712cc8c1f1, 508804a7-ac4d-45f4-bbf5-ab1987d5f7eb

5668-HAB-03-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053512.683	**Northing**	8009951
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Hummocks, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Shrubland and/or heathland (50-80%)			
Ground stratum	Mid (0.5-1 m)	Tussock grassland (50-80%)			

Fulcrum photo ID	7d8518d3-2970-4b79-9e37-a761e355f022, b65b1c8b-1b88-4e05-8a6c-7630b80332f0, 29a8a8bf-f4b8-4d92-9499-5f511bd4d68a

5668-HAB-04-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053424.269	**Northing**	8009882
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Leaf litter, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	26c157b5-beef-4933-8dd0-2f76e0846403, cf6c2ea3-a0a7-43b2-87f6-06fc8f09fde2, 0f0deadf-5ffe-4ff8-9e00-83f42ccaa3db

5668-HAB-05-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053337.038	**Northing**	8009866
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Very good		**Water Source**	Absent	
Fire History	Little or no fire evidence (>5 years)		**Microhabitats**	Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	Litter				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Shrubland and/or heathland (50-80%)			
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%)			

Fulcrum photo ID	585631e1-f220-414d-a1c3-c3a2924518ef, 34a21e2f-bcd9-477c-9e84-c624e63fb583, 2459a78f-c330-40fe-b69d-1d8e54e4690c

5668-HAB-06-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053377.728	**Northing**	8009981
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	South		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Hummocks, Leaf litter, Peeling bark, Woody debris	
Disturbance	Litter				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	6630540e-6043-4ecf-9de4-3061b70f4d1f, 2c8055c0-55f7-4725-92a1-ff4572733d33

5668-HAB-07-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053720.618	**Northing**	8010098
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Sparse grassland (0.25-20%)			

Fulcrum photo ID	fe442769-23e5-406f-82ca-df35483f17f2, 142f891f-2cf6-49b6-930b-045ae4575214, f9a551e5-0b85-4088-99a7-1419c25864e4

5668-HAB-08-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053638.898	**Northing**	8010230
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Leaf litter, Woody debris	
Disturbance	Litter				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)		*Acacia sp*	
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	a2e1da46-d81c-4c64-a576-ed15f0374731, 18ce4f54-0303-4e4c-8a02-1650934b32a3

5668-HAB-09-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053516.394	**Northing**	8010222
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Disturbed		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)		*Eucalyptus/Corymbia*	
Mid stratum	Tall (>2 m)	Sparse mallee shrubland (0.25-20%)			
Ground stratum	Mid (0.5-1 m)	Sparse grassland (0.25-20%)			

Fulcrum photo ID	984e5021-1bd4-47b9-a663-3ac6a6de47f3, 1e623ffe-1bf6-427c-b0a2-f928b7c21672

5668-HAB-10-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053374.586	**Northing**	8010220
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)			

Fulcrum photo ID	a3409b98-970f-4dbe-9e68-393d180be82f, 26ed983b-6d2e-4e91-80ee-d6ff76c67035

5668-HAB-11-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053387.791	**Northing**	8010140
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	8f444cce-0962-4d26-a7d9-2c8eec08a4f7, 69972b83-b99b-4314-a2cb-cf80cb2c0d27

5668-HAB-12-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053370.664	**Northing**	8010074
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	South		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Brown, Red				
Condition			**Habitat Features**		
Quality	Very good		**Water Source**	Absent	
Fire History	Little or no fire evidence (>5 years)		**Microhabitats**	Burrows, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Tall (1-2 m)	Open hummock grassland (20-50%)			

Fulcrum photo ID	02848000-0057-404e-b020-c7eab80d3d1e, 34cd9889-e0e8-4e25-a70b-283cd727b24a, f988b536-9bdd-4dcf-b3cf-dcca776654ed

5668-HAB-13-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053458.944	**Northing**	8010033
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Brown, Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Logs > 10 cm, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Shrubland and/or heathland (50-80%)			
Ground stratum	Low (>0.5 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	66fd3680-ce6f-4e3f-8487-2f9cbd588862, 5e810365-8174-4458-8faa-f0fd116b75ea

5668-HAB-14-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053476.33	**Northing**	8010143
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Brown, Red				
Condition			**Habitat Features**		
Quality	Good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	26-50%	
Vegetation					
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Tall (1-2 m)	Sparse tussock grassland (0.25-20%)			

Fulcrum photo ID	98f85cae-ca1a-4609-b067-837f8335cd4c, 557268ca-7366-4c6f-b559-8a58702ea19b, 411ac56b-9ef8-404a-abdb-5cbc6e946373

5668-HAB-15-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053626.407	**Northing**	8010157
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Brown, Red				
Condition			**Habitat Features**		
Quality	Very good		**Water Source**	Absent	
Fire History	Little or no fire evidence (>5 years)		**Microhabitats**	Burrows, Hummocks, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	76-100%	
Vegetation					
Upper stratum	Absent				
Mid stratum	Tall (>2 m)	Shrubland and/or heathland (50-80%)			
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	16171b5e-b786-40b5-9c7a-396c66f0479c, 29128e4a-66ff-46c9-a57d-ab7bfe1180cf

5668-HAB-16-JE

Project:	Sanctuary Road Biological Survey				
Date	19-01-2023		**Sample Type**	Terrestrial vertebrate fauna	
Zone	50	**Easting**	1053575.184	**Northing**	8010100
Landform and Soil			**Rock**		
Landform	Plain		**Rock type/s**	None	
Aspect	East		**Surface stone cover**	NA	
Soil type	Sandy loam		**Surface stone size classes present**	NA	
Soil colour	Red				
Condition			**Habitat Features**		
Quality	Very good		**Water Source**	Absent	
Fire History	Burnt (1-5 years)		**Microhabitats**	Burrows, Hummocks, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris	
Disturbance	None observed				
Introduced fauna	None observed		**Ground Cover**	51-75%	
Vegetation					
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)			
Mid stratum	Tall (>2 m)	Open shrubland and/or heathland (20-50%)			
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)			

Fulcrum photo ID	4f017bcf-829e-497c-ac40-52640da1a34d, 877d009d-7444-4322-9d0f-187e837c4275, b6f70657-9203-4c24-9489-f9303f178642

Appendix G
Fauna Inventory

Appendix G: Sanctuary Rd Fauna Inventory

Family	Scientific name	Common Name	State	Federal	Total
Birds					
Artamidae	*Cracticus nigrogularis*	Pied Butcherbird			2
Cacatuidae	*Cacatua sanguinea*	Little Corella			1
Campephagidae	*Coracina novaehollandiae*	Black-faced Cuckooshrike		MA	7
Columbidae	*Geopelia humeralis*	Bar-shouldered Dove			3
	Geopelia striata placida	Peaceful Dove			1
Coraciidae	*Eurystomus orientalis*	Oriental Dollarbird		MA	2
Corvidae	*Corvus orru*	Torresian Crow			1
Cuculidae	*Chalcites basalis*	Horsfield's Bronze Cuckoo		MA	2
	Philemon citreogularis	Little Friarbird			3
Estrildidae	*Stizoptera bichenovii*	Double-barred Finch			5
Maluridae	*Malurus assimilis*	Purple-backed Fairywren			7
	Malurus melanocephalus	Red-backed Fairywren			1
Meliphagidae	*Conopophila rufogularis*	Rufous-throated Honeyeater			2
	Gavicalis virescens	Singing Honeyeater			10
	Lichmera indistincta	Brown Honeyeater			13
	Philemon citreogularis	Little Friarbird			13
Meropidae	*Merops ornatus*	Rainbow Bee-eater		MA	13
Monarchidae	*Grallina cyanoleuca*	Magpie-lark		MA	2
Pachycephalidae	*Pachycephala rufiventris*	Rufous Whistler			5
Pomatostomidae	*Pomatostomus temporalis*	Grey-crowned Babbler			7
Psittaculidae	*Trichoglossus rubritorquis*	Red-collared Lorikeet			4
Mammals					
Felidae	**Felis catus*	Cat			1
Reptiles					
Agamidae	*Lophognathus horneri*	Kimberley Ta-ta Dragon			2
Scincidae	*Tiliqua scincoides*	Eastern Blue-tongue			1
Varanidae	*Varanus gouldii*	Bungarra Or Sand Goanna			3

*Introduced species

Appendix D
Flora Inventory

Family	Species
Apocynaceae	*Carissa lanceolata*
	Leichhardtia viridiflora subsp. tropica
Asclepiadaceae	*Gymnema erectum*
Asteraceae	*Pluchea sp.*
Bignoniaceae	*Dolichandrone occidentalis*
	Ehretia saligna var. saligna
	Euploca leptalea
	Euploca sp.
	Trichodesma zeylanicum
Caryophyllaceae	*Polycarpaea longiflora*
Combretaceae	*Terminalia sp.*
Convolvulaceae	**Distimake dissectus var. dissectus*
	Bonamia sp.
	Convolvulaceae sp.
	Ipomoea pes-caprae subsp. brasiliensis
	Jacquemontia paniculata
	Polymeria ambigua
Cyperaceae	*Cyperus ?conicus*
Fabaceae	*Acacia adoxa var. subglabra*
	Acacia colei var. colei
	Acacia plectocarpa subsp. plectocarpa
	Acacia sp.
	Cajanus marmoratus
	Crotalaria medicaginea
	Erythrophleum chlorostachys
	Lysiphyllum cunninghamii
	Senna costata
	Tephrosia leptoclada
	Zornia sp.
Hernandiaceae	*Gyrocarpus americanus subsp. pachyphyllus*
Lamiaceae	*Mesosphaerum suaveolens*
Lauraceae	*Cassytha capillaris*
Malvaceae	*Abutilon australiense*
	Brachychiton diversifolius subsp. diversifolius
	Corchorus ?sidoides subsp. sidoides
	Corchorus sidoides subsp. sidoides
	Grewia breviflora
	Grewia pindanica
	Malvaceae sp.
	Melhania oblongifolia
	Sida ?sp. Pindan
Moraceae	*Ficus aculeata var. indecora*
Myrtaceae	*Corymbia flavescens*
	Corymbia greeniana
	Corymbia sp.
Phyllanthaceae	*Breynia cernua*
	Flueggea virosa subsp. melanthesioides
	Lysiandra eremica
	Phyllanthus sp.

Poaceae	*Chrysopogon pallidus*
	Poaceae sp.1
	Poaceae sp.2
	Poaceae sp.3
	Triodia microstachya
Proteaceae	*Hakea macrocarpa*
	Persoonia falcata
Rhamnaceae	**Ziziphus mauritiana*
	Ventilago viminalis
Rubiaceae	*Gardenia pyriformis subsp. keartlandii*
	Spermacoce sp.
Santalaceae	*Santalum lanceolatum*
Sapindaceae	*Dodonaea hispidula var. arida*
Solanaceae	*Solanum cunninghamii*
	Solanum sp.
Violaceae	*Afrohybanthus aurantiacus*

Appendix E
Flora Site Sheets

FLORA SITE SHEET

Project Name Sanctuary Road Biological Survey
Site: SR01
Location MGA 51 417543 **mE** 8017602

Described by: BV
Date: 19-01-2023
Type: Quadrat

Landform: Pindan plain
Slope: Flat
Rock Type: N/A
Soil Type: Loam,Sand
Soil Colour: Orange

Vegetation: *Ehretia saligna var. saligna, Acacia colei var. colei and Acacia plectocarpa subsp. plectocarpa low open forest over Acacia adoxa var. subglabra, Persoonia falcata and Phyllanthus sp. mid open shrubland over Triodia microstachya low sparse hummock grassland*

Condition: Very Good **Disturbance Type:** 0
Fire Age: 1-5 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
Acacia adoxa var. subglabra	50	1	
Acacia colei var. colei	225	20	
Acacia plectocarpa subsp. plectocarpa	250	50	
Acacia sp.	200	2	
Afrohybanthus aurantiacus	20	0.1	
Brachychiton diversifolius subsp. diversifolius	250	1	
Chrysopogon pallidus	25	0.1	
Corchorus sidoides subsp. sidoides	20	1	
Corymbia greeniana	350	1	
Corymbia sp.	300	5	
Dodonaea hispidula var. arida	10	0.1	
Ehretia saligna var. saligna	300	5	
Erythrophleum chlorostachys	300	1	
Flueggea virosa subsp. melanthesioides	200	1	
Gardenia pyriformis subsp. keartlandii	175	0.1	
Grewia pindanica	50	0.5	
Leichhardtia viridiflora subsp. tropica	200	0.1	
Lysiphyllum cunninghamii	120	0.1	
Malvaceae sp.	10	0.1	
Persoonia falcata	100	10	
Phyllanthus sp.	50	5	
Poaceae sp.	50	1	
Santalum lanceolatum	150	1	
Spermacoce sp.	10	0.1	
Trichodesma zeylanicum	40	0.1	
Triodia microstachya	40	10	
Ventilago viminalis	300	1	
Zornia sp.	10	0.1	

FLORA SITE SHEET

Project Name Sanctuary Road Biological Survey
Site: Sr02
Location MGA 51 417393 **mE** 8017692

Described by: BV
Date: 19-01-2023
Type: Quadrat

Landform: Pindan plain
Slope: Flat
Rock Type: N/A
Soil Type: Loam,Sand
Soil Colour: Orange

Vegetation: *Corymbia greeniana low open woodland over Acacia colei var. colei, Acacia adoxa var subglabra and Corymbia flavescens mid shrubland over Triodia microstachya mid open hummock grassland*

Condition: Very Good **Disturbance Type:** fragmentation
Fire Age: 1-5 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
Abutilon australiense	20	2	
Acacia adoxa var. subglabra	40	5	
Acacia colei var. colei	200	30	
Acacia plectocarpa subsp. plectocarpa	20	10	
Acacia sp.	200	1	
Brachychiton diversifolius subsp. diversifolius	350	0.1	
Cajanus marmoratus	10	0.1	
Carissa lanceolata	50	1	
Chrysopogon pallidus	40	1	
Convolvulaceae sp.	30	0.1	
Corchorus ?sidoides subsp. sidoides	30	1	
Corymbia flavescens	250	1	
Corymbia greeniana	400	1	
Crotalaria medicaginea	20	1	
Cyperus ?conicus	15	0.1	
Dodonaea hispidula var. arida	30	1	
Dolichandrone occidentalis	150	0.1	
Ehretia saligna var. saligna	200	0.5	
Erythrophleum chlorostachys	100	0.1	
Euploca sp.	15	0.1	
Flueggea virosa subsp. melanthesioides	150	0.5	
Gardenia pyriformis subsp. keartlandii	30	0.1	
Grewia pindanica	120	1	
Gymnema erectum	40	0.1	
Gyrocarpus americanus subsp. pachyphyllus	5	0.1	
Jacquemontia paniculata	50	1	
Lysiandra eremica	20	0.1	
Lysiphyllum cunninghamii	25	1	
Mesosphaerum suaveolens	40	1	
Persoonia falcata	100	1	
Poaceae sp.	25	1	
Polymeria ambigua	30	0.1	
Santalum lanceolatum	150	1	
Solanum cunninghamii	50	0.1	
Tephrosia leptoclada	25	0.1	
Trichodesma zeylanicum	100	0.1	
Triodia microstachya	40	30	
Ventilago viminalis	300	0.5	
Zornia sp.	5	2	

FLORA SITE SHEET

Project Name Sanctuary Road Biological Survey
Site: Sr03
Location MGA 51 417299 **mE** 8017738

Described by: BV
Date: 19-01-2023
Type: Quadrat

Landform: Pindan plain
Slope: Flat
Rock Type: N/A
Soil Type: Loam,Sand
Soil Colour: Orange

Vegetation: *Acacia plectocarpa subsp. plectocarpa, Corymbia flavescens and Corymbia greeniana low woodland over Abutilon australiense and Dodonaea hispidula var. arida low sparse shrubland over Triodia microstachya low hummock grassland*

Condition: Good **Disturbance Type:** 0
Fire Age: 1-5 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
Abutilon australiense	50	10	
Acacia plectocarpa subsp. plectocarpa	500	10	
Bonamia sp.	10	0.1	
Brachychiton diversifolius subsp. diversifolius	100	0.1	
Breynia cernua	100	0.1	
Carissa lanceolata	50	1	
Cassytha capillaris	10	0.1	
Chrysopogon pallidus	40	10	
Corchorus ?sidoides subsp. sidoides	50	0.1	
Corymbia flavescens	400	1	
Corymbia greeniana	450	2	
Crotalaria medicaginea	30	1	
**Distimake dissectus var. dissectus*	150	0.1	
Dodonaea hispidula var. arida	50	2	
Euploca leptalea	10	0.1	
Ficus aculeata var. indecora	150	0.1	
Flueggea virosa subsp. melanthesioides	150	1	
Gardenia pyriformis subsp. keartlandii	150	0.1	
Grewia breviflora	100	1	
Gymnema erectum	50	0.1	
Ipomoea pes-caprae subsp. brasiliensis	30	0.1	
Lysiandra eremica	20	2	
Lysiphyllum cunninghamii	100	1	
Melhania oblongifolia	60	0.1	
Persoonia falcata	200	1	
Phyllanthus sp.	20	2	
Pluchea sp.	10	0.1	
Polycarpaea longiflora	10	0.1	
Santalum lanceolatum	150	1	
Senna costata	75	0.1	
Solanum sp.	50	0.1	
Spermacoce sp.	10	0.1	
Terminalia sp.	250	0.1	
Trichodesma zeylanicum	100	1	
Triodia microstachya	20	40	
Ventilago viminalis	300	0.5	
**Ziziphus mauritiana*	150	0.1	
Zornia sp.	10	1	

FLORA SITE SHEET

Project Name Sanctuary Road Biological Survey
Site: Srr04
Location MGA 51 417303 **mE** 8017482

Described by: BV
Date: 19-01-2023
Type: Releve

Landform: Pindan plain
Slope: Flat
Rock Type: N/A
Soil Type: Loam,Sand
Soil Colour: Orange

Vegetation: *Acacia plectocarpa subsp. plectocarpa, Flueggea virosa subsp. melanthesioides and Gyrocarpus americanus subsp. pachyphyllus low open woodland over Acacia colei var. colei and Persoonia falcata tall open shrubland over Triodia microstachya low hummock grassland*

Condition: Very Good **Disturbance Typ** 0
Fire Age: >10 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
Acacia colei var. colei	200	2	
Acacia plectocarpa subsp. plectocarpa	600	0.5	
Flueggea virosa subsp. melanthesioides	300	5	
Gyrocarpus americanus subsp. pachyphyllus	300	5	
Lysiphyllum cunninghamii	600	0.5	
Persoonia falcata	250	10	
Triodia microstachya	40	60	

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