Appendix 5 Botanica 2023 Report

KALGOORLIE NICKEL SMELTER

Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Prepared for BHP Nickel West Pty Ltd April 2023







Document Information

Prepared for:	BHP Nickel West Pty Ltd
Project Name:	Kalgoorlie Nickel Smelter
Tenements:	
Job Reference:	Reconnaissance Flora/Vegetation and Basic Fauna Assessment
Job Number:	2022/083
Date:	5 April 2023
Version:	FINAL

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Cover Photo: Eucalyptus torquata in flower

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EXECUTIVE SUMMARY

Botanica Consulting Pty Ltd (Botanica) was commissioned by BHP Nickel West Pty Ltd (BHP NiW) to undertake a reconnaissance flora/vegetation and basic vertebrate fauna survey at their Kalgoorlie Nickel Smelter (NKS) operations. The survey area encompasses an area of approximately 6,404 ha and is located approximately 12.5 km south of Kalgoorlie in the City of Kalgoorlie-Boulder in the Goldfields region of Western Australia.

Botanica conducted a reconnaissance flora/vegetation and basic fauna survey of the survey area from the 3rd to 9th October 2022. The area was traversed with a four wheel drive and on foot by Jim Williams (Director/Principal Botanist) and Greg Harewood (Principal Zoologist).

The purpose of the survey was to provide information on the environmental values surrounding the NKS operations.

The survey area lies within the Great Western Woodlands and within the Coolgardie Bioregion as defined by the Interim Biogeographic Regionalisation of Australia (IBRA). It is partially located on the Woolibar Pastoral Lease within the City of Kalgoorlie-Boulder. The survey area is located within six pre-European Beard vegetation associations, all of which retain at least 95% of their pre-European extent and are therefore not considered threatened.

Prior to the field survey, desktop assessments were undertaken for flora and fauna to identify any potential significant flora, vegetation and fauna that may occur within the survey area. The desktop assessment consisted of a literature review of previous flora and fauna assessments conducted within the local region, searches of the Department of Biodiversity, Conservation and Attractions' (DBCA) Threatened and Priority databases for conservation significant flora, fauna and ecological communities, a search of the NatureMap database, and a search for Matters of National Environmental Significance occurring within 40 km of the survey area.

Results of the desktop assessment identified a total of 935 vascular flora taxa (dominant genera included *Acacia*, *Eucalyptus*, *Eremophila*, and *Maireana*) and 316 terrestrial vertebrate fauna taxa (consisting of six amphibians, 174 bird species, 36 mammals and 100 reptiles) as having been previously recorded within 40 km of the survey area.

The desktop assessment identified the potential for 95 introduced flora (weed) species and nine introduced (feral) vertebrate fauna species as potentially occurring within 40 km of the survey area. Twelve of the introduced flora (weed) species are listed as Declared Pests and/or Weeds of National Significance (WoNS).

The desktop assessment identified 54 significant flora species previously recorded within 40 km of the survey area; four species were previously recorded within the survey area and seven were previously recorded within 10 km of the survey area.

The desktop assessment did not identify any Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) within the survey area. There is one PEC located approximately 35 km northeast of the survey area: Emu Land System (Priority 3).

The desktop assessment identified 19 significant fauna species previously recorded within 40 km of the survey area. Of these, the Malleefowl (*Leipoa ocellata*) is likely to occur within the survey area and the Grey Falcon (*Falco hypoleucos*) could possibly occur within the survey area.

The field survey identified 229 vascular flora taxa within the survey area. These taxa represented 111 genera across 32 families, with the most diverse families being Chenopodiaceae, Fabaceae, and Myrtaceae. Dominant genera include *Eremophila*, *Acacia*, and *Eucalyptus*.



A total of 25 broad-scale vegetation types were identified within the survey area; plus areas defined as salt lake (i.e. saline flats and marsh which were devoid of vegetation) and disturbed areas which were predominately cleared of native vegetation and contained numerous weed species. These vegetation types were located within eight different landform types (not including the salt lake and disturbed areas).

Based on the vegetation condition rating scale specified in the Environmental Protection Authority (EPA) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a), vegetation was rated as 'degraded' to 'good'. Disturbances within the survey area was a result of clearing for infrastructure (e.g. roads, powerlines, and buildings).

Eighteen introduced flora (weed) species were identified within the survey area. One of these species (**Opuntia ficus-indica*) is listed as a WoNS and a Declared Pest in Western Australia.

No Threatened Flora listed under the Western Australian *Biodiversity Conservation Act 2016* (BC Act) or Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was identified in the survey area. No Threatened Ecological Communities as listed under the Western Australian BC Act or Commonwealth EPBC Act were identified within the survey area.

The field survey identified one Priority flora species (as listed by the DBCA) within the survey area; *Eremophila praecox* – Priority 2.

No TECs or PECs were identified within the survey area.

There are no wetlands of international importance (Ramsar Wetlands) or national importance (Australian Nature Conservation Agency Wetlands) within the survey area nor any proposed or gazetted conservation reserves.

The field survey identified 10 broad scale terrestrial fauna habitats occurring within the survey area, and recorded a total of 78 vertebrate fauna taxa from within the survey area.

The field survey identified one Priority vertebrate fauna species (as listed by the DBCA) as utilising the survey area for some purpose during the survey period; *Nyctophilus major tor* (Central long-eared bat) – Priority 3.

The field survey identified one inactive Malleefowl mound within the survey area. The surrounding vegetation is described as low open *Eucalyptus* woodland on rocky hillslope landscape. No other evidence of Malleefowl was observed during the survey (i.e., no scats, feathers or tracks were seen). The habitat observed within the survey area was considered low potential for Malleefowl habitat, as it consisted of an open canopy cover in most areas.

1 INTRODUCTION

Botanica Consulting Pty Ltd (Botanica) was commissioned by BHP Nickel West Pty Ltd (BHP NiW) to undertake a reconnaissance flora/vegetation and basic vertebrate fauna survey at their Kalgoorlie Nickel Smelter (NKS) operations. The survey area encompasses an area of approximately 6,404 ha and is located approximately 12.5 km south of Kalgoorlie in the City of Kalgoorlie-Boulder in the Goldfields region of Western Australia (Figure 1-1).

1.1 Objectives

The purpose of the survey was to provide information on the environmental values surrounding the NKS operations. The objectives of the flora/vegetation and fauna and assessment were to:

- Undertake a desktop assessment (including a literature review and database searches) to gather background information, and identify any previously recorded occurrences of or potentially occurring Threatened and Priority listed flora/vegetation or fauna within the survey area;
- Conduct a reconnaissance flora and vegetation field survey (including targeted searches) to compile an inventory of flora species and vegetation communities occurring within the survey area;
- Assess the plant species diversity, density, composition, structure and weed cover across the survey area;
- Assess and map the vegetation communities within the survey area to a scale appropriate for the bioregion and described the vegetation communities according to the National Vegetation Information System (NVIS) structure and floristics;
- Assess and map the condition of vegetation within the survey area;
- Conduct a basic vertebrate fauna field survey (including targeted searches) to compile an inventory of fauna species occurring within the survey area;
- Assess and map the fauna habitats within the survey area and identify habitat types which are suitable for each significant fauna considered likely or possible to occur, or fauna recorded in the survey area;
- Report on the conservation status of species identified during the field survey, using the Western Australian Museum and EPBC Act databases, for presence of Threatened and/or Priority listed species or ecological communities within the survey area.

1.2 Regulatory Guidance and BHP Procedures

The flora assessment was conducted in accordance with the requirements of a reconnaissance flora survey as defined in *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a).

The vertebrate fauna assessment was conducted in accordance with the requirements of a basic terrestrial fauna survey as defined in *Technical Guidance - Terrestrial Fauna Surveys for Environmental Impact Assessment – June 2020* (EPA, 2020).

Targeted surveys for significant species of flora and fauna was also undertaken in suitable landforms/habitats in accordance with the requirements of the relevant Technical Guidance (EPA, 2016a; 2020).

The following EPA guidelines were also applied:

- Statement of Environmental Principles, Factors, Objectives and Aims of EIA (EPA, 2021);
- Environmental Factor Guideline: Flora and Vegetation (EPA, 2016b); and
- Environmental Factor Guideline: Terrestrial Fauna (EPA, 2016c).



1.3 BHP NiW Procedures

The following BHP NiW procedures were applied:

- Vegetation and Flora Survey Procedure (0124627);
- Vertebrate Fauna Surveys in Western Australia Procedure (SPR-IEN-EMS-012); and
- Biological Survey Spatial Data Requirements Procedure (SPR-IEN-EMS-015).



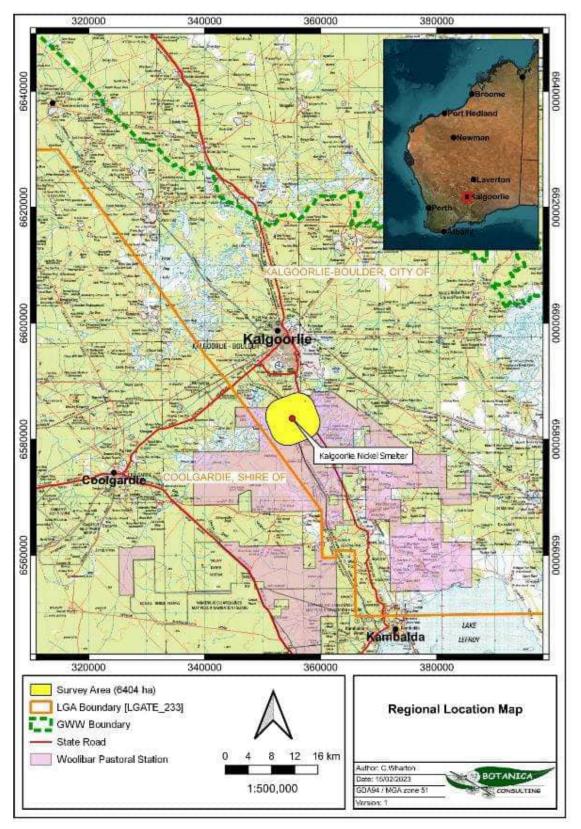


Figure 1-1: Regional location of the Kalgoorlie Nickel Smelter



2 **BIOPHYSICAL ENVIRONMENT**

2.1 Regional Environment

The survey area lies within the Eastern Goldfields (COO3) subregion of the Coolgardie bioregion, as defined by the Interim Biogeographic Regionalisation of Australia (IBRA) (Figure 2-1).

The Coolgardie bioregion covers the interzone between mulga and spinifex country, and eucalypt environments. The vegetation consists of Mallees, *Acacia* thickets and shrub heaths on sandplains. Diverse *Eucalyptus* woodlands occur around salt lakes, on ranges, and in valleys. Salt lakes support dwarf shrublands of samphire. Woodlands and *Dodonaea* shrubland occur on basic graninulites of the Fraser Range. The area is rich in endemic *Acacia* species.

The Eastern Goldfields subregion (5,102,428 ha) lies on the 'Eastern Goldfields Terrains' of the Yilgarn Craton, which is described as gently undulating plains with a subdued relief, interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas.

A series of large playa lakes in the western half of the Eastern Goldfields subregion are the remnants of an ancient major drainage line (Cowan, 2001). Ephemeral streams drain the low rises north and east into salt lakes and clay plans. Generally, these drainage lines are poorly defined wash or sheet zones, except where they enter the major salt lakes.

Woodland in the Coolgardie bioregion has been logged in the past for mining, timber and firewood, therefore much of the existing vegetation is of secondary growth (Beard, 1972).

2.2 Land Use

The dominant land uses of the Eastern Goldfields subregion is pasture land (38%), Nature Reserves (4.5%) with the remaining areas used for mining, exploration activities and freehold (Cowan, 2001).

The survey area is located within the City of Kalgoorlie-Boulder and partially intersects the Woolibar pastoral station (Figure 1-1).

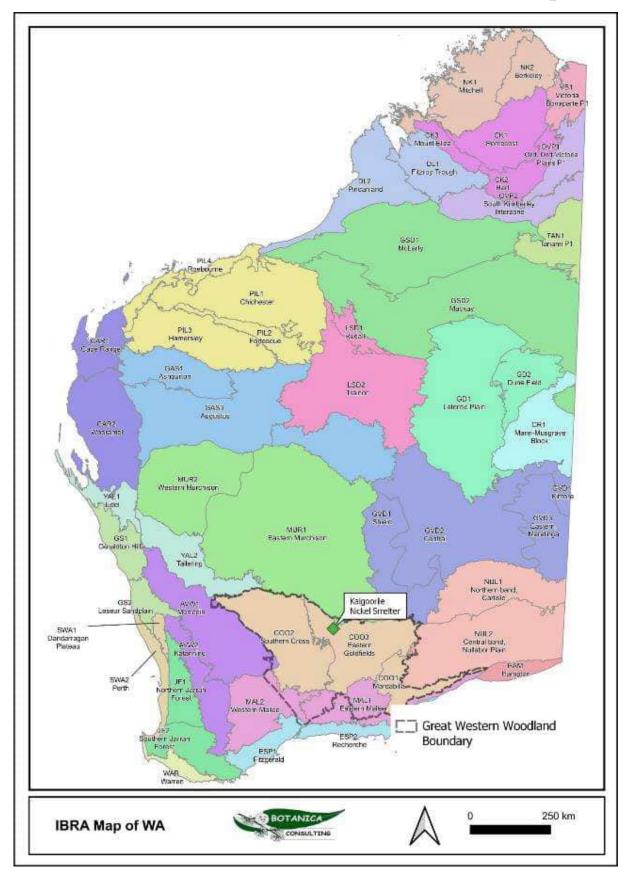


Figure 2-1: Map of the IBRA subregions and the boundary of the Great Western Woodlands in relation to the Kalgoorlie Nickel Smelter





2.3 Soils and Landscape Systems

The survey area lies within the Kalgoorlie Province soil-landscape of the Western Region, which consists of an extensive plateau of low relief. Flat to undulating plains with small valleys (occasionally broken by low narrow rocky hills, ridges, tors and bosses) are most commonly found on granitic terrain (Tille, 2006). On these plains may be found some silcrete duricrust, claypans, salt lakes with dunes and lunettes, gilgai areas, small remnants of sand plain, and small dune tracts (Tille, 2006).

The Kalgoorlie Province is further divided into six soil-landscape zones, with the survey area located on the border between the Kambalda Zone (265) and the Norseman Zone (266) in the south-eastern Goldfields between Menzies and Norseman.

The Kambalda Zone contains flat to undulating plains (with hills, ranges and some salt lakes and stony plains) on greenstone and granitic rocks of the Yilgarn Craton. Soils consist of calcareous loamy earths and red loamy earths with salt lakes soils and some red brown hardpan shallow loams and red sandy duplexes. Vegetation includes red mallee, blackbutt-salmon gum-gimlet woodlands with mulga and halophytic shrublands and some spinifex grasslands (Tille, 2006).

The Norseman Zone contains undulating plains and uplands (with some sandplains and salt lakes) on granitic rocks of the Yilgarn Craton. Calcareous loamy earths, yellow sandy and loamy earths, red loamy earths, red deep sands and salt lake soils. Salmon gum-redwood-merrit-red mallee-gimlet woodland with acacia-casuarina thickets (and some mulga shrublands and spinifex grasslands). Located in the southern Goldfields between Koolyanobbing, Menzies, Zanthus (Trans-Australian Railway), Norseman and Lake Hope (Tille, 2006).

In accordance with soil landscape system mapping data (Government of Western Australia, 2019a), the soil landscape zones are divided into soil landscape systems, with the survey area located within four landscape systems as described in Table 2-1 and shown in Figure 2-2.

Zone	Soil Landscape System	Description	Extent within Survey Area
	BB5	Rocky ranges and hills of greenstones-basic igneous rocks	1,770 ha (28%)
Kambalda Zone (265)	Mx43	Gently undulating valley plains and pediments; some outcrop of basic rock	2,898 ha (45%)
	SV15	Salt lakes and their associated areas	501 ha (8%)
Norseman Zone (266) SV15		Salt lakes and their associated areas	1,235 ha (19%)

Table 2-1: Soil landscape systems within the survey area



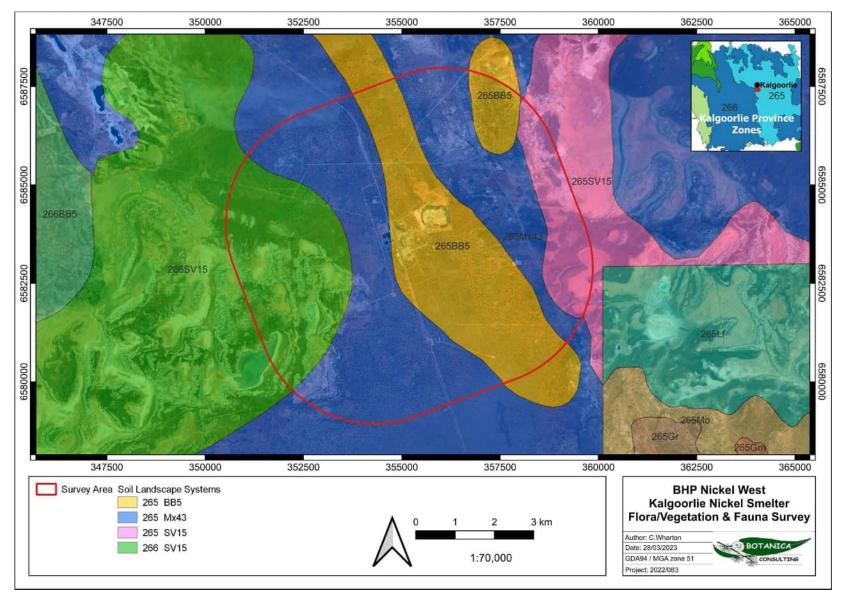


Figure 2-2: Map of soil landscape systems within the survey area



2.4 Pre-European Vegetation

In accordance with Beard (1990) the survey area is located in the Coolgardie Botanical District of the Southwestern Interzone Province. Vegetation is predominately *Eucalyptus* woodlands, with slopes and flats containing *E. longicornis* alongside *E. salubris* and *E. salmonophloia*. Woodland understories range from tall sclerophyll shrubland dominated by *Melaleuca pauperiflora* to soft-leaved saltbush shrubland of *Atriplex vesicaria* and *A. nummularia*. Some hill slopes contain mallees of *E. livida* or *E. loxophleba*, while ironstone ridges are covered in thickets of *Acacia quadrimarginea*, *Allocasuarina acutivalvis* and *A. campestris*. Other vegetation assemblages include species-rich scrub-heaths and *Allocasuarina* thickets on sandplains, merging into *Acacia* thickets and Kwongan vegetation to the north.

The pre-European vegetation association dataset (DPIRD, 2018) identifies six vegetation associations occurring within the survey area (Figure 2-3). The association descriptions and their remaining extent, as specified in the 2018 Statewide Vegetation Statistics (Government of Western Australia, 2019b) are provided in Table 2-2.

Areas retaining less than 30% of their pre-European vegetation extent generally experience exponentially accelerated species loss, while areas with less than 10% are considered "endangered" (EPA, 2000). The vegetation associations within the survey area retain at least 95% of their pre-European extent and are not considered to be representative of remnant vegetation.

Pre-European Vegetation	Description	Pre-European Extent Remaining (%)	Current Extent Reserved for Conservation (%)	Extent within Survey Area
Coolgardie 9	Woodland other: Wheatbelt; York gum, salmon gum etc. <i>Eucalyptus loxophleba,</i> <i>E. salmonophloia.</i> Goldfields; gimlet, redwood etc. <i>E. salubris, E. oleosa.</i> Riverine; rivergum <i>E. camaldulensis.</i> Tropical; messmate, woolybush	96.88	11.32	2,331 ha (36%)
Coolgardie 123	Saltbush and/or bluebush with scattered low trees: Mulga, other wattle, casuarina <i>Atriplex spp. Maireana spp.</i> with <i>Acacia</i> <i>aneura, A. papyrocarpa, Allocasuarina</i> <i>cristata</i>	97.93	0	1,061 ha (17%)
Coolgardie 125	Salt lake, lagoon, clay pan	98.75	0	303 ha (5%)
Coolgardie 540	Saltbush and/or bluebush with scattered low trees: Mulga, other wattle, casuarina <i>Atriplex spp. Maireana spp.</i> with <i>Acacia</i> <i>aneura, A. papyrocarpa, Allocasuarina</i> <i>cristata</i>	95.69	0	1,238 ha (19%)
Coolgardie 936			8.60	825 ha (13%)

Table 2-2: Pre-European vegetation associations within the survey area



Pre-European Vegetation	Description	Pre-European Extent Remaining (%)	Current Extent Reserved for Conservation (%)	Extent within Survey Area
Coolgardie 1294	Woodland other: Wheatbelt; York gum, salmon gum etc. <i>Eucalyptus loxophleba,</i> <i>E. salmonophloia</i> . Goldfields; gimlet, redwood etc. <i>E. salubris, E. oleosa.</i> Riverine; rivergum <i>E. camaldulensis.</i> Tropical; messmate, woolybush	96.06	1.90	646 ha (10%)



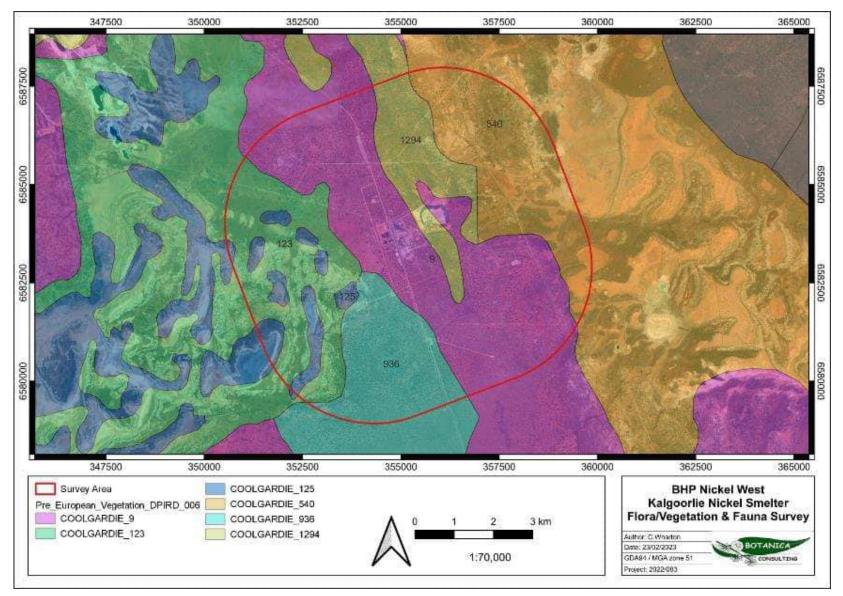


Figure 2-3: Pre-European vegetation associations within the survey area



2.5 Climate

The Coolgardie bioregion experiences an arid to semi-arid climate, with an average rainfall between 200-300 mm, sometimes in summer but usually in winter (Cowan, 2001). The nearest Bureau of Meteorology (BoM) weather station is at Kalgoorlie-Boulder Airport (#12038); located approximately 9 km north of the survey area.

Kalgoorlie-Boulder Airport receives an average annual rainfall of about 265 mm, with a bimodal rainfall pattern with peak falls in summer (February) and winter (June) (Figure 2-4). Summer rainfall originates from deteriorating tropical cyclones that cross the coast of northern Western Australia and dissipate to the south-east. Winter rainfall results from cold fronts crossing the southern coastline and moving inland.

The highest temperatures are recorded between November and March, when mean minimum and maximum temperatures are 18.3°C and 33.6°C, respectively. The lowest temperatures are recorded between June and August, when mean minimum and maximum temperatures are 5.1°C and 16.8°C, respectively.

The survey was conducted in October 2022, with the preceding months of August and September receiving above average rainfall (Figure 2-5).

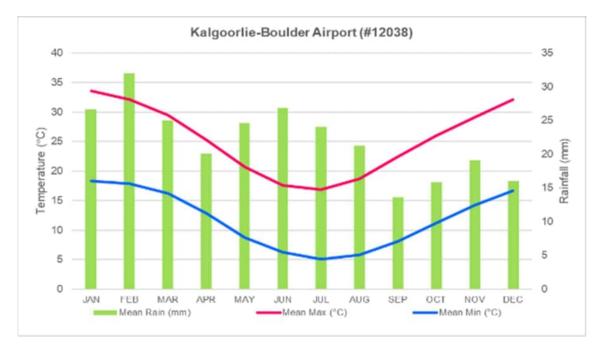


Figure 2-4: Climate data for Kalgoorlie-Boulder Airport (#12038) (BoM, 2023)



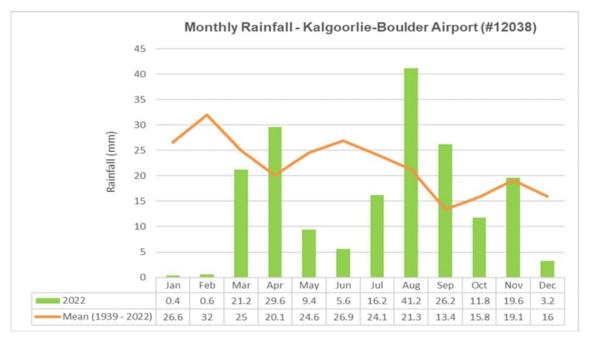


Figure 2-5: Monthly rainfall data for Kalgoorlie-Boulder Airport (#12038) (BoM, 2023)

2.6 Conservation Values

No Threatened Ecological Communities (TECs) listed under the Commonwealth EPBC Act or the Western Australian BC Act are known to occur within the survey area or within 40 km of the survey area. The nearest known TEC is located more than 200 km west of the survey area in the Avon Wheatbelt bioregion.

No Priority Ecological Communities (PECs) as listed by DBCA occur within the survey area. There is one PEC located within 40 km of the survey area: Emu Land System (Priority 3), located approximately 35 km northeast of the survey area.

There are no Ramsar or wetlands of national importance (ANCA Wetlands) within the survey area or within 40 km of the survey area. The Eastern Goldfields (COO3) subregion contains one wetland of national importance: Rowles Lagoon System, located approximately 70 km northwest of the survey area. The nearest Ramsar wetland: Lake Ballard, is located approximately 100 km north of the survey area.

The Rowles Lagoon System is also the nearest Environmentally Sensitive Area (ESA) as listed under the *Environmental Protection Act* 1986 (EP Act).

There are no proposed nor gazetted conservation reserves within the survey area. However, there are several gazetted conservation reserves within 40 km of the survey area. The closest gazetted conservation reserve is the Lakeside Timber Reserve which is located approximately 4 km east of the survey area.

A map showing conservation values in relation to the survey area is provided in Figure 2-6.



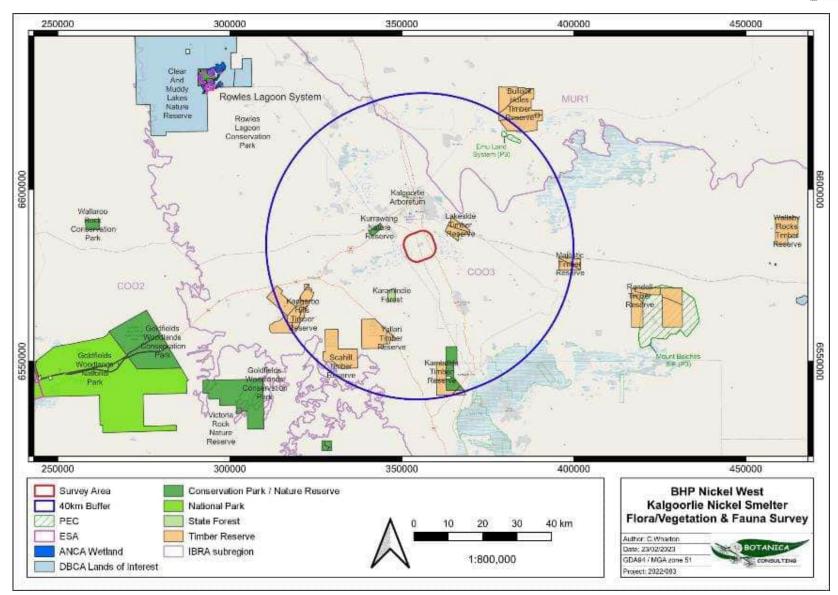


Figure 2-6: Conservation values in relation to the survey area



2.6.1 Great Western Woodlands

The survey area lies within the Great Western Woodlands, located approximately 35 km from the northern boundary. The Great Western Woodlands is considered by The Wilderness Society of WA to be of global biological and conservation importance as one of the largest and healthiest temperate woodlands on Earth, containing many endemic taxa. The region covers almost 16 million hectares, 160,000 square kilometres, from the southern edge of the Western Australian Wheatbelt to the pastoral lands of the Mulga country in the north, the inland deserts to the northeast, and the treeless Nullarbor Plain to the east (Figure 2-1).

The area provides an eastward connection between southwest forests and inland deserts (Gondwana Link) as well as linking the north-west passage to Shark Bay. The majority of the Great Western Woodlands is unallocated crown land (61.1%) with other interests including pastoral leases (20.4%), conservation reserves (15.4%) unallocated crown land ex-pastoral managed by the DBCA (2%) and private land (approximately 1%) (Watson *et. al.,* 2008).

No specific management strategy or formal conservation status applies to the Great Western Woodlands. The Great Western Woodlands currently includes towns, highways, roads, railways, private property, Crown Reserves, agricultural activities and mining tenements.

2.7 Hydrology

The survey area is located between and intersects the fringes of two inland salt lakes: White Lake and Hannan Lake. Lake Lefroy, one of the larger salt lakes in the Coolgardie bioregion is located approximately 35 km south-southeast of the survey area, whilst Lake Yindargooda is located approximately 35 km east of the survey area.

According to the Geoscience Australia database (2015), there are no permanent/ perennial inland waters or drainage lines within the survey area. There are several minor ephemeral drainage lines within the survey area which drain to the east towards Hannan Lake (Figure 2-7).

Groundwater Dependent Ecosystems (GDE) includes biological assemblages of species such as wetlands or vegetation that use groundwater either opportunistically or as their primary water source. For the purposes of this report, a GDE is defined as any vegetation community that derives part of its water budget from groundwater and must be assumed to have some degree of groundwater dependency. According to the BoM *Atlas of Groundwater Dependent Ecosystems* database (BoM, 2019), there is one low potential terrestrial GDE located within the survey area: Medium woodland; salmon gum (Figure 2-7).



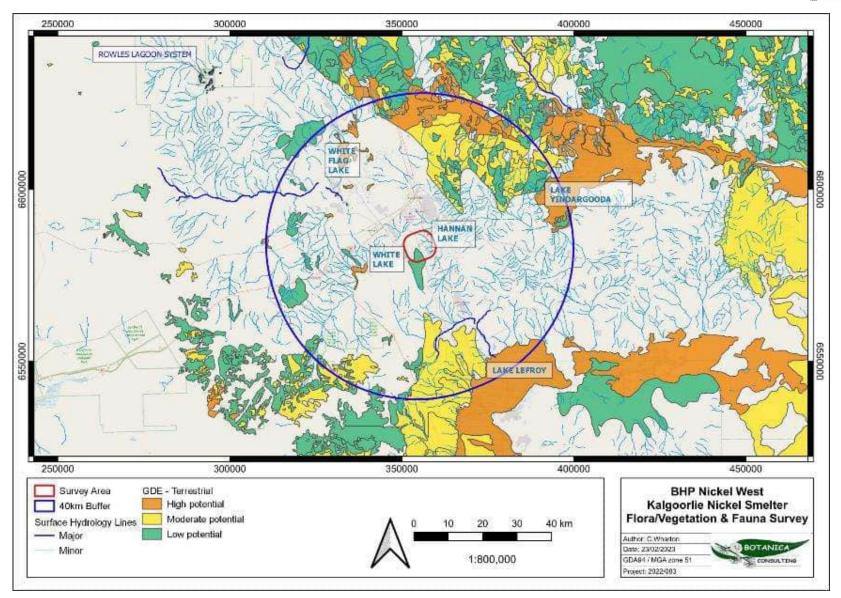


Figure 2-7: Regional hydrology of the survey area

3 SURVEY METHODOLOGY

3.1 Desktop Assessment

3.1.1 Literature Review

Prior to the field assessment a literature review was undertaken of previous flora and fauna assessments conducted within the local region. Documents reviewed included:

- Barrick Gold Corporation (2011). *Miscellaneous Fauna Survey Records 2006 2011. Kanowna Belle Area.* Unpublished internal data. May 2011.
- Biologic Environmental Survey (2021). *Kalgoorlie Nickel Smelter, Reconnaissance Flora and Vegetation Survey and Basic Terrestrial Fauna Survey*. Prepared for BHP Nickel West. December 2021.
- Botanica Consulting (2022). *Binduli North Operations: Reconnaissance Flora/ Vegetation & Basic Fauna Assessment.* Prepared for Norton Gold Fields Pty Ltd. November 2022.
- Botanica Consulting (2022). *Cannon Gold Project: Desktop Flora and Fauna Assessment Proposed Pipeline on L26/270.* Prepared for Horizon Minerals Ltd. September 2022.
- Botanica Consulting (2022). *Cannon Gold Project: Targeted Malleefowl Survey (L26/270) and Malleefowl Mound Survey.* Prepared for Horizon Minerals Ltd. September 2022
- Botanica Consulting (2022). *Kalgoorlie East Gold Project Powerline Majestic Timber Reserve Corridor Options and Drill Lines: Reconnaissance Flora and Basic Fauna Assessment.* Prepared for Black Cat Syndicate Ltd. March 2022.
- Botanica Consulting (2022). *Kalgoorlie East Gold Project Powerline, Jones Find and Imperial-Trojan dewatering pipeline: Reconnaissance Flora and Basic Fauna Assessment.* Prepared for Black Cat Syndicate Ltd. March 2022.
- Botanica Consulting (2021). *White Foil Project: Detailed Flora/Vegetation Survey and Basic Fauna Survey*. Prepared for Evolution Mining Ltd. February 2021.
- Botanica Consulting (2021). *Rayjax Project: Detailed Flora/Vegetation Survey and Basic Fauna Survey.* Prepared for Evolution Mining Ltd. January 2021.
- Botanica Consulting (2021). *Reconnaissance Flora/Vegetation Survey & Basic Fauna Survey* - *Greenfields Mill*. Prepared for FMR Investments Pty Ltd. September 2021.
- Botanica Consulting (2021). *Reconnaissance Flora/ Vegetation and Basic Fauna Survey L25/14, L25/53 & M25/360.* Prepared for Black Cat Syndicate Ltd. July 2021.
- Botanica Consulting (2021). *Fingals Project Reconnaissance Flora/ Vegetation and Basic Fauna Survey*. Prepared for Black Cat Syndicate Ltd. July 2021.
- Chapman, A. *et al* (1991). *Biological Surveys of Four Goldfields Reserves*. Land note 1/91. Available: <u>https://library.dbca.wa.gov.au/Journals/080051/080051-91.01.pdf</u>
- Cowan, M. (2001). A Biodiversity Audit of Western Australia's 53 Biogeographical Region in 2001; Coolgardie 3 (COO3 – Eastern Goldfields subregion). pp 156-169, Department of Conservation and Land Management, September 2001.
- GHD (2010). *Report for Teal Gold Project Biological Survey*. Prepared for Intermin Resources. October 2010.
- Harewood, G. (2010a). *Terrestrial Fauna Survey (Level 1) of the proposed Isabella Mine Area*. Unpublished report for Barrick (Kanowna) Ltd. January 2010.
- Harewood, G. (2010b). *Terrestrial Fauna Survey (Level 1) of the proposed Golden Valley Mine Area.* Unpublished report for Barrick (Kanowna) Ltd. January 2010.
- Harewood, G. (2010c). *Terrestrial Fauna Survey (Level 1) of the proposed Fenceline Mine Area*. Unpublished report for Barrick (Kanowna) Ltd. January 2010.
- Harewood, G. (2012). *Terrestrial Fauna Survey (Level 1) of Proposed Powerline and Infrastructure Area, KCGM Gidgi Operations.* Unpublished report for KCGM Pty Ltd. January 2012.



- Harewood, G. (2014). *Desktop Fauna Assessment. Proposed Tails Storage Facility Expansion.* Unpublished report for KCGM Pty Ltd. September 2014.
- KLA (2009a). *Barrick (Kanowna) Shamrock Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. January 2009.
- KLA (2009b). *Barrick (Kanowna) Crossroads Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. January 2009.
- KLA (2009c). *Barrick (Kanowna) Moonlight Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. March 2009.
- McKenzie N.L. & Hall N.J. (1992). The Biological Survey of The Eastern Goldfields of Western Australia: Part 8 Kurnalpi – Kalgoorlie Study Area. Western Australian Museum, 1992.
- Meissner R.A. & Coppen R. (2014). Flora and vegetation of the greenstone ranges of the Yilgarn Craton: Kangaroo Hills and surrounding area. Article in Conservation Science, Western Australia, 9 (2): 169-179.
- Phoenix Environmental Sciences (2022). *Terrestrial fauna assessment for the Fimiston Gold Mine Operations*. Prepared for Kalgoorlie Consolidated Gold Mines Pty Ltd. July 2022.
- Phoenix Environmental Sciences (2022). *Flora and vegetation assessments for the Fimiston Gold Mine Operations*. Prepared for Kalgoorlie Consolidated Gold Mines Pty Ltd. March 2022.

3.1.2 Database Searches

In addition to the literature review, searches of the following databases were undertaken to aid in the compilation of a list of flora and fauna taxa and communities within the survey area:

- DBCA's Threatened and Priority Flora Database (Ref: 11-0922FL) (DBCA, 2022a)
- DBCA's Threatened and Priority Ecological Communities Database (Ref: 81-0822EC) (DBCA, 2022b)
- DBCA's Threatened and Priority Fauna Database (Ref: 7315) (DBCA, 2022c)
- NatureMap Search (Ref: 115-0822) (DBCA, 2023)
- EPBC Act online Matters of National Environmental Significance (MNES) database (DCCEEW, 2023).

The database searches were conducted for an area encompassing a 40 km buffer around the survey area (i.e., the assessment area).

It should be noted that these lists are sometimes based on observations from a broader area than the assessment area (40-60 km radius) and therefore may include taxa not present. The databases also often include very old records that may be incorrect or in some cases the taxa in question have become locally or regionally extinct. Information from these sources should therefore be taken as indicative only and local knowledge and information also needs to be taken into consideration when determining the actual species which may be present within the specific area being investigated.

The conservation significance of flora and fauna taxa was assessed using data from the following sources:

- EPBC Act. Administered by the Australian Government (DCCEEW);
- BC Act. Administered by the WA Government (DBCA);
- Red List produced by the Species Survival Commission (SSC) of the World Conservation Union (also known as the IUCN Red List – the acronym derived from its former name of the International Union for Conservation of Nature and Natural Resources). The Red List has no legislative power in Australia but is used as a framework for State and Commonwealth categories and criteria; and

• Priority Flora and Fauna list. A non-legislative list maintained by DBCA for management purposes (flora list released 22nd June 2022; fauna list released 7th October 2022).

Significant flora species identified by the desktop review were assessed with regards to their population extent and distribution and preferred habitat to determine their likelihood of occurrence within the survey area. The assessment categorised flora species as follows:

- **Unlikely:** Suitable habitat is not expected to occur and/or the survey area is outside the known range of the species.
- **Possible:** Suitable habitat may be present, and the area is within the known range of the species. This option is also used when there is insufficient information to determine the preferred habitat of a species.
- **Likely:** Suitable habitat is expected to occur and there are records within 10 km of the survey area.
- **Previously Recorded:** A record for this species is located within the survey area. Field survey will ground-truth currently occurring individuals and populations.

Significant fauna species identified by the desktop review were assessed with regards to their distribution and preferred habitat to determine their likelihood of occurrence within the survey area. The assessment categorised fauna species as follows:

- **Would Not Occur:** There is no suitable habitat for the species in the survey area and/or there is no documented record of the species in the general area since records have been kept and/or the species is generally accepted as being locally/regionally extinct (supported by a lack of recent records).
- Unlikely to Occur: The survey area is outside of the currently documented distribution for the species in question, or no suitable habitat (type, quality and extent) was identified as being present during the desktop review or field assessment. Individuals of some species may occur occasionally as vagrants/transients especially if suitable habitat is located nearby but the site itself would not support a population or part population of the species.
- **Possibly Occurs:** Survey area is within the known distribution of the species in question and habitat of at least marginal quality was identified as likely to be present during the desktop review or field survey, supported in some cases by recent records being documented in literature from within or near the survey area. In some cases, while a species may be classified as possibly being present at times, habitat may be marginal (e.g. poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.
- Known to Occur: The species in question has been positively identified as being present (for sedentary species) or as using the survey area as habitat for some other purpose (for non-sedentary/mobile species) within or near the survey area. This information may have been obtained by direct observation of individuals or by way of secondary evidence (e.g., tracks, foraging debris, and scats). In some cases, while a species may be classified as known to occur, habitat may be marginal (e.g., poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.

Descriptions of conservation significant species and communities are provided in Appendix A.

3.2 Field Assessment

3.2.1 Flora and Vegetation Field Assessment

Botanica conducted a reconnaissance flora and vegetation survey of the survey area from the 3rd to the 9th October 2022.



The survey area was traversed using a 4WD vehicle and on foot by Jim Williams (Director/Principal Botanist, Diploma of Horticulture) and Greg Harewood (Principal Zoologist, BSc. Zoology). The GPS track log of the flora and vegetation survey effort is shown in Figure 3-1.

Prior to the commencement of field work, aerial photography was inspected and obvious differences in the vegetation assemblages were identified. The different vegetation communities identified were then inspected during the field survey to assess their validity. A handheld GPS unit was used to record the coordinates of the boundaries between existing vegetation communities.

The survey was conducted using 131 survey sites (relevés) as shown in Figure 3-1. At each relevé site, the area was walked on foot to observe and record all flora species. The distance surveyed at each relevé varied dependent on the diversity/ variability of species and landforms/ vegetation types.

At each relevé, the following information was recorded:

- GPS location;
- Photograph of vegetation;
- Dominant taxa for each stratum;
- All vascular taxa (including annual taxa);
- Landform classification;
- Vegetation condition rating;
- Collection and documentation of unknown plant specimens; and
- GPS location, photograph and collection of flora of conservation significance (if encountered).

Unknown specimens collected during the survey were identified with the aid of samples housed at the Botanica Herbarium and Western Australian Herbarium. Vouchering of the specimens with the Western Australian Herbarium was not required as none of the specimens were of significance (i.e. conservation flora, novel taxa, range extensions etc.).

Structural vegetation classification was used to characterise the different vegetation types identified within the survey area. Vegetation types were described in accordance with NVIS classifications - Vegetation Types (Level V).

The vegetation condition rating scale adapted from Keighery (1994) and Trudgen (1988), as specified in the *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a), for the South West and Interzone botanical provinces was used to rate the condition of vegetation within the survey area. Vegetation condition rating descriptions are listed in Appendix F.

3.2.1.1 Targeted Survey

Targeted searches for conservation significant flora species, as identified during the desktop assessment, were undertaken in areas of suitable habitat.

3.2.1.2 Data Analysis

Following the field assessment, vegetation types and condition were mapped using the GIS program QGIS, and the hectare area/ percentage area of each vegetation type and condition within the survey area was calculated. Spatial maps illustrating the location of vegetation types and any significant flora/ vegetation were generated using QGIS.

BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment



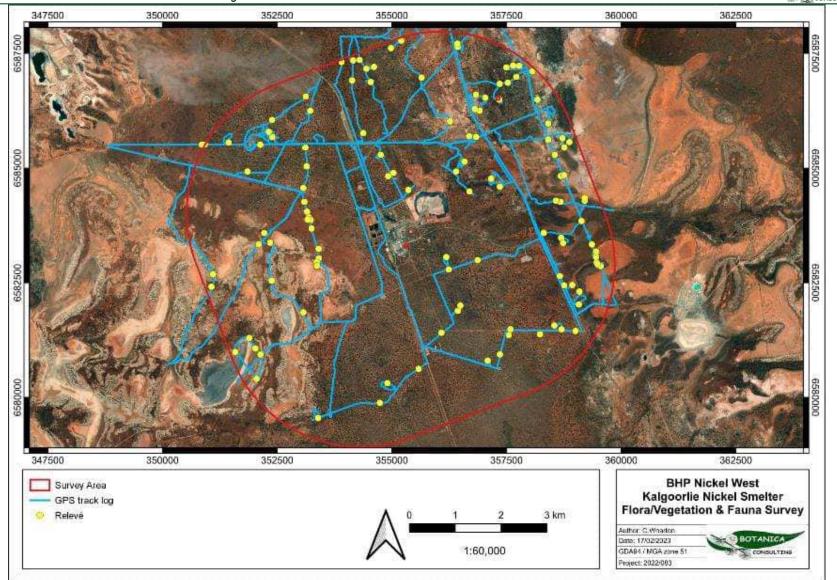


Figure 3-1: GPS track log of the flora and vegetation survey effort and locations of relevés



3.2.1.3 Scientific Licences

Licensed Staff	Permit Number	Date of Expiry
Jim Williams	FB62000457 - Flora Taking (Biological Assessment) Licence	04/08/2025

3.2.1.4 Flora Survey Limitations and Constraints

The flora/vegetation assessment was designed and carried out to conform to a reconnaissance survey as defined in *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016). The assessment included a literature review aimed at providing a list of expected species, and targeted and opportunistic flora collections via relevé sites. It is important to note that flora surveys will entail limitations notwithstanding careful planning and design. Potential limitations of the survey, as stipulated within the *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016), are listed in Table 3-2.

The conclusions presented in this report are based upon field data and environmental assessments and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. Also, it should be recognised that site conditions can change with time. Information not available at the time of this assessment which may subsequently become available may alter the conclusions presented.

Some species are reported as potentially occurring based on there being suitable habitat (quality and extent) within the survey area or immediately adjacent. The habitat requirements and ecology of many of the species known to occur in the wider area are however, often not well understood or documented. It can therefore be difficult to exclude species from the potential list based on a lack of a specific habitats or microhabitats within the survey area. As a consequence of this limitation, the potential species list produced is most likely an overestimation of those species that actually utilise the survey area for some purpose.

In recognition of survey limitations, a precautionary approach has been adopted for this assessment. Any flora species that would possibly occur within the survey area (or immediately adjacent), as identified through ecological databases, publications, discussions with local experts/residents and the habitat knowledge of the author, has been listed as having the potential to occur.

Potential Constraint	Potential Impact on Survey	Comments on Survey Outcomes
Access problems	Not a constraint	The survey was conducted via 4WD and on foot. Numerous access tracks were present within the survey area providing ease of access and good coverage of vegetation types.
Competency/ Experience	Not a constraint	The Botanist that conducted the survey was regarded as suitably qualified and experienced. Coordinating Staff : Jim Williams (Director/ Principal Botanist, Diploma of Horticulture).
		Data Interpretation : Catherine Wharton (Senior Environmental Consultant, BSc. Conservation Biology), Lauren Pick (Senior Environmental Consultant, BSc-Conservation Biology/ Zoology) and Greg Harewood (Principal Zoologist, BSc. Zoology).
Timing of survey, weather & season	Not a constraint	Fieldwork was undertaken within the EPA's recommended survey period (September - November) for the South-West and Interzone

Table 3-2: Flora Survey Limitations and Constraints



Potential Constraint	Potential Impact on Survey	Comments on Survey Outcomes
		Province. The survey was conducted in October 2022, with the preceding months of August and September receiving above-average rainfall.
Area disturbance	Not a constraint	The area has been disturbed from exploration and mining operations, cattle grazing and other human impacts, including hardstand areas associated with the Kalgoorlie Nickel Smelter; however, vegetation was mostly intact and comprised of native vegetation.
Survey Effort/ Extent	Not a constraint	Survey intensity was appropriate for the size/ significance of the area with a reconnaissance flora/ vegetation survey and basic fauna survey completed to identify vegetation types/ fauna habitats.
Availability of contextual information at a regional and local scale	Not a constraint	Conservation significant flora, fauna, and ecological community database searches provided by the DBCA were used to identify any potential locations of Threatened/Priority flora/fauna species and/or Threatened/Priority ecological communities. BoM, DWER, DPIRD, DBCA and DCCEEW databases were reviewed to obtain appropriate regional desktop information on the biophysical environment of the local region. Jim Williams and Greg Harewood have conducted numerous surveys within the Coolgardie bioregion and were also able to obtain information about the area from previous research conducted within the area. Results of previous assessments in the local area were reviewed to provide context on the local environment.
Completeness	Not a constraint	In the opinion of Botanica, the survey area was covered sufficiently in order to identify vegetation assemblages. Survey work was conducted within the EPAs recommended approximate timing (September - November). Some taxa were flowering and most taxa were able to be identified to species level. The vegetation associations for this study were based on visual descriptions of locations in the field. Vegetation associations identified were categorised via comparison to vegetation distributions throughout WA given on NVIS (DotEE, 2017).

3.2.2 Terrestrial Fauna Field Assessment

A basic fauna survey was completed in conjunction with the reconnaissance flora/vegetation survey from the 3rd to the 9th October 2022.

The survey area was traversed using a 4WD vehicle and on foot by Jim Williams (Director/Principal Botanist, Diploma of Horticulture) and Greg Harewood (Principal Zoologist, BSc. Zoology). The GPS track log of the survey effort for terrestrial fauna survey is shown in Figure 3-2.

Fauna habitat types were identified across the survey area based on broad major vegetation groups and associated landform. A handheld GPS unit was used to record the coordinates of the boundaries between fauna habitats and each habitat was photographed.

As part of the desktop literature review, available information on the habitat requirements of the species of conservation significance listed as possibly occurring in the area was researched. During the field survey, the habitats within the survey area were assessed and specific elements identified, if present, to determine the likelihood of listed Threatened and Priority species utilising area and its significance to them.



3.2.2.1 Targeted and Opportunistic Surveys

During the course of all the survey work non-systematic opportunistic observations of fauna species were made and recorded. Secondary evidence of fauna such as tracks, diggings and scats were also noted. Active searches of fauna species were undertaken throughout the study area involved a series of transects across the study area during the day including observations of bird species with binoculars. Searches included but were not limited to investigating burrows, investigating scats, tracks and other traces, turning fallen timber and rocks, opening standing timber crevices, peeling bark and raking leaf litter.

Targeted searches for conservation significant fauna species, as identified during the desktop assessment, were undertaken in areas of suitable habitat.

3.2.2.2 Motion Sensing Cameras

Four motion sensing, infrared "camera traps" (Acorn model LTI 5210A) were placed at various locations within the survey area on the 4th October 2022 and retrieved on the 10th October 2022; this equates to six days/nights per camera for a total of 24 days/nights of camera trapping.

The camera traps were set to take three consecutive pictures when triggered, with a five second time lapse before any subsequent trigger event. The camera traps were located near water and also small caves where animals were likely to be attracted (i.e., to drink). The location of each camera trap is shown in Figure 3-2, a description of each location is provided below:

- CAM100: near standing water, surrounded by Low Eucalypt/ Acacia/ Mallee Woodlands.
- CAM101: near entrance to a cave, within Clay-Loam Plain, Low Open Woodlands, adjacent to Rocky Hillslope, Low Eucalypt/ Acacia/ Mallee Woodlands.
- CAM102: near standing water adjacent to an access track, within Rocky Hillslope, Low Eucalypt/ Acacia/ Mallee Woodlands, adjacent to Clay-Loam Plain, Low Open Woodlands.
- CAM103: near standing water, within Clay-Loam Plain, Low Open Woodlands, adjacent to Rocky Hillslope, Low Eucalypt/ Acacia/ Mallee Woodlands.

All pictures were examined and fauna species, where possible, identified. Only one image of each species taken on any one day was documented as a record.

3.2.2.3 Acoustic Bat Recordings

Acoustic bat call recordings were undertaken using a Wildlife Acoustics SM2+ Bat Detector. Seven nights of recording were carried out from the 3rd October 2022 to the 9th October 2022; this equates to one night of recording per location for a total of 7 nights of bat recordings.

The recordings were commenced at sunset and continued until sunrise the following day. The bat detectors were located near water and also small caves where bats were likely to be attracted (i.e., to forage for insects). The recording locations are shown in Figure 3-2, a description of each location is provided below:

- BAT01: within Plains, Tall Shrublands.
- BAT02: within Rocky Hillslope, Low Eucalypt/Acacia/Mallee Woodlands, adjacent to Clay-Loam Plain, Low Open Woodlands.
- BAT03: within Sand Plain, Low Woodlands.
- BAT04: within a disturbed area on the outskirts of the main processing area, near the evaporation ponds, adjacent to Clay-Loam Plain, Low Open Woodlands.
- BAT05: within Kopai Dune, Tall Eucalypt Shrubland.
- BAT06: within a disturbed area surrounded by Clay-Loam Plain, Low Open Woodlands.
- BAT07: within Rocky Hillslope, Low Eucalypt/Acacia/Mallee Woodlands.



The detector records ultrasonic echolocation signals produced by bats which are subsequently processed to determine the presence of species-specific calls. The calls were identified to species level by Bob Bullen (Bat Call WA Pty Ltd).

3.2.2.4 Data Analysis

Following the field assessment, fauna habitats were mapped using the GIS program QGIS, and the hectare area/ percentage area of each habitat within the survey area was calculated. Spatial maps illustrating the location of habitats and any significant fauna were generated using QGIS.



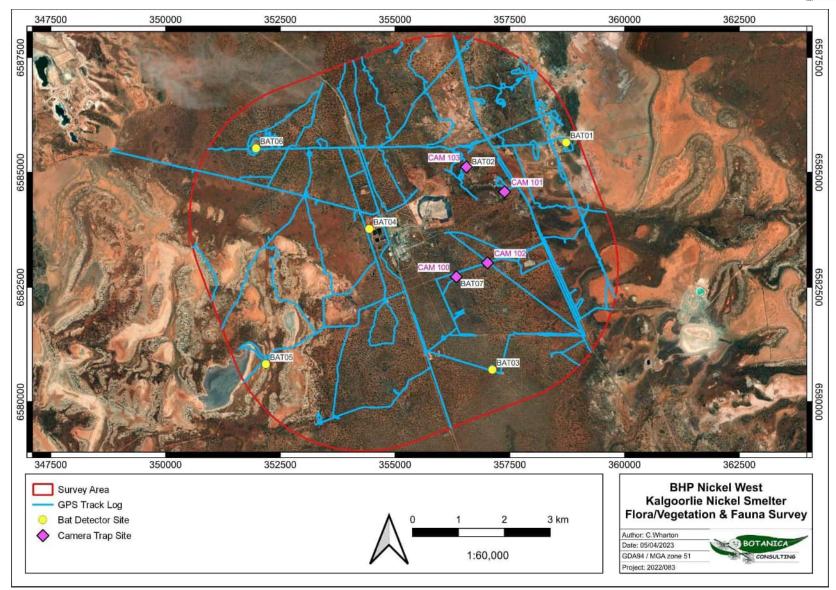


Figure 3-2: GPS track log of the fauna survey effort and locations of camera traps and bat detector sites



3.2.2.5 Fauna Survey Limitations and Constraints

The fauna assessment was designed and carried out to conform to a basic terrestrial fauna survey as defined in *Technical Guidance - Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020). The assessment included a literature review aimed at providing a list of expected species, targeted and opportunistic fauna observations, and the use of motion sensing cameras and bat detector recordings. It is important to note that fauna surveys will entail limitations notwithstanding careful planning and design. Fauna survey limitations and constraints, as stipulated within the *Technical Guidance – Terrestrial Fauna Surveys for Environmental Impact Assessment* (*EPA, 2020*), are summarised in Table 3-3.

As discussed above for flora (Section 3.2.1.3), the conclusions presented in this report are indicative of the environmental condition of the site at the time of the field assessments, and it should be recognised that site conditions can change with time.

Fauna species are indicated as potentially present within this report based on there being suitable (quality and extent) habitat within the study area or immediately adjacent. The habitat requirements of species known to occur in the wider area are not always well understood or documented, and therefore it can be difficult to exclude species from the potential list based on a lack of a specific habitats or microhabitats within the survey area. As a consequence of this limitation, the potential species list produced is most likely an overestimation of those species that actually utilise the survey area for some purpose. With respect to trapping, targeted and opportunistic observations, the possibility exists that certain species may not have been detected during field investigations due to:

- seasonal inactivity during field survey;
- species present within micro habitats not surveyed;
- cryptic species able to avoid detection; and
- transient wide-ranging species not present during survey period.

The lack of observational data on some species should therefore not be taken as necessarily indicating that a species is absent from the site.

In recognition of survey limitations a precautionary approach has been adopted for this assessment. Any fauna species that would possibly occur within the study area as identified through ecological databases, publications, discussions with local experts/residents and the habitat knowledge of the zoologist that executed the survey has been assumed to potentially occur in the study area.

Potential Constraint	Potential Impact on Survey	Comments on Survey Outcomes		
Competency/ Experience of the consultant carrying out the survey	Not a constraint	The Zoologist that executed the survey has conducted many basic, and detailed surveys in WA and can be regarded as suitably qualified. Coordinating Staff : Greg Harewood (Principal Zoologist, BSc. Zoology). Data Interpretation : Catherine Wharton (Senior Environmental Consultant, BSc. Conservation Biology), Lauren Pick (Senior Environmental Consultant, BSc-Conservation Biology/ Zoology) and Greg Harewood (Principal Zoologist, BSc. Zoology).		
Scope	Not a constraint	The survey carried out was a basic terrestrial fauna survey, comprising of a desktop assessment and a field survey that include		

Table 3-3: Fauna Survey Limitations and Constraints



Potential Constraint	Potential Impact on Survey	Comments on Survey Outcomes				
		a habitat assessment, opportunistic observations, and active searches.				
Proportion of fauna identified, recorded and/or collected	Not a constraint	The field survey recorded about 50% of listed potential vertebrate species considered likely to be present on site. It should be noted that the potential species list is very likely an over estimation of the species that use the study area on a regular basis. 84% of records were from fauna encountered in the field, all bat species were identified from acoustic recordings, which accounted for 11% of records, and the remaining 5% of records were obtained via camera traps. No specimens were collected for post survey identification.				
Sources of information	Not a constraint	The survey area has not (as far as the Zoologist that executed the survey is aware) been subject to detailed surveys in the past and specific fauna values are not well documented, though significant work has been done in nearby areas. No detailed fauna surveys have previously been conducted in the survey area; however, there has been one basic fauna survey previously undertaken in a portion of the survey area, immediately surrounding the smelter, by Biologic Environmental Survey in 2021.				
The proportion of the task achieved and further work	Not a constraint	The basic fauna survey was completed in full, no further work is required.				
Timing/ weather/ season/ cycle	Not a constraint	The survey was carried out in October which is within the recommended timing for vertebrate fauna surveys in the Southern climatic region (EPA, 2020).				
Disturbances (e.g. fire, flood, accidental human intervention etc.) which affected results of survey	Not a constraint	No constraints that would affect the survey results were encountered.				
Intensity (in retrospect, was the intensity adequate)	Not a constraint	Based on results achieved the survey can be considered adequate for a basic terrestrial fauna survey, with habitat assessments, targeted and opportunistic searches undertaken (via traverses, camera traps and acoustic recordings).				
Completeness (e.g. was relevant area fully surveyed)	Not a constraint	Density of trap lines and other survey sites/transects were above that generally carried out during the course of surveys of a similar type/area (i.e. basic fauna survey).				
Resources (e.g. degree of expertise available in animal identification to taxon level)	Not a constraint	No unresolved problems/uncertainties arose with respect to identifying observed vertebrate fauna species.				
Remoteness and/or access problems	Not a constraint	The survey was conducted via 4WD and on foot. Numerous access tracks were present within the survey area providing ease of access and good coverage of the fauna habitats.				
Availability of contextual (e.g. biogeographic) information on the region	Not a constraint	Previous fauna survey data for the wider area, specialist books/publications and government databases were consulted.				



4 **RESULTS**

4.1 Desktop Assessment

4.1.1 Flora

According to the results of the NatureMap search (DBCA, 2023), a total of 935 vascular flora taxa have been recorded within 40 km of the survey area. Dominant genera include *Acacia* (63 species), *Eucalyptus* (58 species), *Eremophila* (37 species), and *Maireana* (25 species); which represent ~20% of the vascular flora species recorded within 40 km of the survey area.

The full list of vascular flora identified by the NatureMap search (DBCA, 2023) is contained in Appendix B.

4.1.1.1 Introduced Flora

The desktop review identified 95 introduced flora (weed) species as potentially occurring within 40 km of the survey area. Of these, 11 are listed as Declared Pests on the Western Australian Organism List (WAOL) under the *Biosecurity and Agriculture Management* (BAM) *Act 2007*, and seven are listed as WoNS.

A summary of the potentially occurring Declared Pests and WoNS occurring within 40 km of the survey area are listed in Table 4-1.

The full list of potential weed species occurring within 40 km of the survey area is contained in Appendix C.

Family	Taxon	Common Name	WAOL Status	Control Category	WoNS
Asteraceae	*Xanthium spinosum	Common Cockleburr	Declared Pest - s22(2)	C3 Management	No
Boraginaceae	*Echium plantagineum	Patersons Curse	Declared Pest - s22(2)	-	No
Cactaceae	*Cylindropuntia imbricata	Tree Cholla	Declared Pest - s22(2)	C3 Management	Yes
	*Cylindropuntia kleiniae	Klein's Cholla	Declared Pest - s22(2)	C3 Management	Yes
	*Cylindropuntia tunicata	Sheathed Cholla	Declared Pest - s22(2)	C3 Management	Yes
	*Opuntia elata	-	Declared Pest - s22(2)	C3 Management	Yes
	*Opuntia ficus- indica	Indian Fig	Declared Pest - s22(2)	C3 Management	Yes
Fabaceae	*Alhagi maurorum	Camel Thorn	Declared Pest - s22(2)	C3 Management	No
Martyniaceae	*Proboscidea Iouisianica	Purple Flower Devil's Claw	Declared Pest, Prohibited - s12	C1 Exclusion	
Solanaceae	*Lycium ferocissimum	African Boxthorn	Permitted - s11	-	Yes
Tamaricaceae	*Tamarix chinensis	Chinese tamarisk	Declared Pest, Prohibited - s12	C1 Exclusion	No
Verbenaceae	*Lantana camara	Common Lantana	Declared Pest, Prohibited - s12	C1 Exclusion	Yes

Table 4-1: Potentially Occurring Declared Pests and WoNS within 40 km of the survey area



4.1.1.2 Significant Flora

The desktop assessment of the DBCA's Threatened and Priority flora database (DBCA, 2022a), NatureMap search (DBCA, 2023), Protected Matters searches (DCCEEW, 2023) and previous relevant literature identified 54 significant flora species recorded within a 40 km radius of the survey area. These are comprised of three Threatened, 17 Priority 1, 10 Priority 2, 20 Priority 3, and four Priority 4 taxa.

The locations of DBCA database records for significant flora in relation to the survey area is shown in Figure 4-1.

The significant flora species identified to occur within 40 km of the survey area were assessed for distribution and known habitat to determine their likelihood of occurrence within the survey area (Table 4-2). Four species were previously recorded within the survey area, seven were previously recorded within 10 km of the survey area and assessed as being likely to occur within the survey area, 18 were assessed as possibly occurring within the survey area, and the remaining 26 were assessed as being unlikely to occur within the survey area due to unsuitable habitat or being outside the known range of the species.



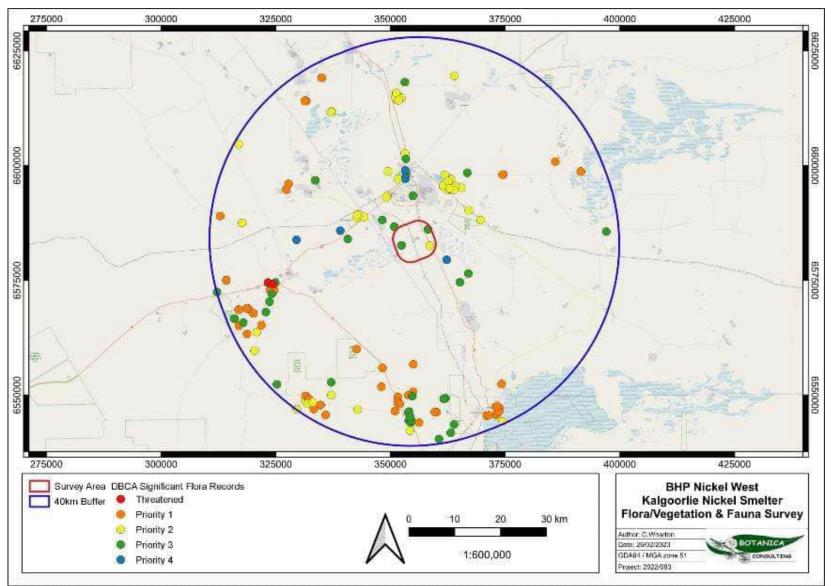


Figure 4-1: Significant flora records (DBCA, 2022a) in relation to the survey area



Table 4-2: Significant flora within a 40 km radius of the survey area

Taxon	Con	servation S	tatus	Habitat Description (MAUERD 2022)	Assessment	Likelihood of
	EPBC	BC Act	DBCA	Habitat Description (WAHERB, 2023)	Assessment	Occurrence
Acacia coatesii			P1	Flat to gentle slope, laterite/quartz, tantalite over greenstone, Eucalyptus woodland.	No habitat fitting this description within the survey area.	Unlikely
Acacia crenulata			P3	Clay, sandy clay, yellow sand. Rocky rises, granite outcrops, breakaways.	Outside known range, no granite outcrops within the survey area.	Unlikely
Acacia kerryana			P2	Granitic loamy sand, stony clayey loam or clayey sand. Low stony ridges, undulating plains.	Outside known range, no granite outcrops within the survey area.	Unlikely
Acacia websteri			P1	Red sand, clay or loam. Low-lying areas, flats.	Habitat may be present in the survey area.	Possible
Allocasuarina eriochlamys subsp. grossa			P3	Stony loam, laterite clay. Granite outcrops.	No granite outcrops within the survey area.	Unlikely
<i>Alyogyne</i> sp. Great Victoria Desert (D.J. Edinger 6212)			P3	Sand plain, mallee woodland.	No sandplains of mallee woodland within the survey area.	Unlikely
Alyxia tetanifolia			P3	Sandy clay, loam, concretionary gravel. Drainage lines, near lakes.	Habitat may be present in the survey area.	Likely
Angianthus prostratus			P3	Red clay or loamy soils. Saline depressions.	Outside known range, habitat may be present in the survey area.	Unlikely
Austrostipa frankliniae			P2	Rocky slope with Eucalypt woodland or Acacia shrubland.	Outside known range, habitat may be present in the survey area.	Unlikely
Austrostipa turbinata			P3	Rocky slope with Eucalypt woodland.	Habitat may be present in the survey area.	Likely
Calandrinia lefroyensis			P1	Red sandy loam soil. Saline flats, edge of salt lakes.	Habitat may be present in the survey area.	Possible
Chrysocephalum apiculatum subsp. norsemanense			P3	Sandplain with open mallee or shrubland.	Habitat may be present in the survey area.	Possible
Cyathostemon divaricatus			P1	Rocky hillslope. Red loam over laterite	Outside known range, habitat unlikely to occur.	Unlikely
Cyathostemon verrucosus			P3	Sandplain with open mallee or shrubland.	Habitat may be present in the survey area.	Possible



-	Conservation Status				Accession	Likelihood of
Taxon	EPBC	BC Act	DBCA	- Habitat Description (WAHERB, 2023)	Assessment	Occurrence
Dampiera plumosa			P1	Red sandy soils.	Outside known range, habitat may be present in the survey area.	Unlikely
Elachanthus pusillus			P2	Clay loam plain, Eucalyptus woodland.	Habitat may be present in the survey area.	Possible
Eremophila acutifolia			P3	No information on habitat.	Outside known range, habitat unknown.	Possible
Eremophila arachnoides subsp. tenera			P3	Flat calcareous plain.	Outside known range.	Unlikely
Eremophila caerulea subsp. merrallii			P4	Sand, clay or loam. Undulating plains.	Habitat may be present in the survey area.	Possible
Eremophila praecox			P2	Red/brown sandy loam. Undulating plains.	Recorded within survey area, habitat may be present, occurs within regional context.	Previously Recorded
Eremophila veronica			P3	Stony clay, clay loam. Lateritic breakaways.	No lateritic breakaways within the survey area.	Unlikely
Eremophila xantholaemus			P1	No information on habitat.	Occurs within regional context. Habitat unknown.	Possible
Eucalyptus jutsonii subsp. jutsonii			P4	Red to pale orange deep sands. Undulating areas and on dunes.	Outside known range, no habitat fitting this description within the survey area.	Unlikely
Eucalyptus websteriana subsp. norsemanica			P1	Rocky rises	Outside known range, no habitat fitting this description within the survey area.	Unlikely
Eucalyptus x brachyphylla			P4	Sandy loam. Granite outcrops	Regional records, potential habitat may be present.	Likely
Frankenia glomerata			P4	White sand. Margins of large salt lakes.	Habitat may be present in the survey area.	Likely
Gastrolobium graniticum	EN	VU	-	Sand, sandy loam, granite. Margins of large granite rock outcrops.	No granite outcrops within the survey area.	Unlikely
Goodenia salina			P2	Low gypseous dunes near salt pans.	Recorded within survey area, habitat may be present (i.e. Kopai dunes).	Previously Recorded
Grevillea georgeana			P3	Stony loam/clay. Ironstone hilltops & slopes.	No rocky slopes within the survey area.	Unlikely



-	Conservation Status		tatus			Likelihood of
Taxon	EPBC	BC Act	DBCA	- Habitat Description (WAHERB, 2023)	Assessment	Occurrence
Hakea rigida			P2	Sandy soils, yellow sand.	Outside known range, no habitat fitting this description within the survey area.	Unlikely
Isolepis australiensis			P3	Silty sand, sandy clay. Lake margins, pools.	Recorded within survey area, habitat may be present.	Previously Recorded
Lepidium fasciculatum			P3	Brown cracking clay plain.	No habitat fitting this description within the survey area.	Unlikely
Lepidium merrallii			P2	Clay loam.	Suitable habitat may be present.	Possible
<i>Lepidosperma</i> sp. Kambalda (A.A. Mitchell 5156)			P2	No information on habitat.	Adjacent to known range, habitat unknown.	Possible
<i>Lepidosperma</i> sp. Parker Range (N. Gibson & M. Lyons 2094)			P1	Rocky slope, mallee woodland.	Adjacent to known range, no habitat fitting this description within the survey area.	Unlikely
Melaleuca coccinea			P3	Sandy loam over granite. Granite outcrops, sandplain, river valleys.	Within known range of species, recorded within 10km of survey area, no granite outcrops within the survey area, however suitable habitat (i.e., sandplain, sandy loam) may be present.	Likely
Notisia intonsa			P3	Red sand, disturbed areas	Within known range of species, habitat may be present.	Likely
Phebalium appressum			P1	Yellow sandplain.	Outside known range, no habitat fitting this description within the survey area.	Unlikely
Phebalium clavatum			P2	Sandy soils. Sandplains.	Habitat may be present in the survey area.	Possible
Phlegmatospermum eremaeum			P3	Stony loam.	No habitat of stony loam in the survey area.	Unlikely
Pterostylis xerampelina			P1	Rocky areas, granite or ironstone.	No rocky slopes within the survey area.	Unlikely
Ptilotus procumbens			P1	Red clay.	Habitat may be present in the survey area.	Likely
Ptilotus rigidus			P1	Quartz and ironstone hillsides, outcrops. Near salt lakes.	Regional records adjacent to major salt lakes, no habitat fitting this description within the survey area.	Unlikely



T	Conservation Status		tatus			Likelihood of
Taxon	EPBC	BC Act	DBCA	- Habitat Description (WAHERB, 2023)	Assessment	Occurrence
<i>Ptilotus</i> sp. Kalgoorlie (J. Jackson & B. Moyle 260)			P1	Small quartz rocky hills associated with salt lakes.	Regional records adjacent to major salt lakes, suitable habitat may be present in the survey area.	Possible
Rhodanthe uniflora			P1	Brown earth. Open eucalyptus woodland.	Regional records, suitable habitat may be present in the survey area.	Possible
Ricinocarpos digynus			P1	Rocky hillslopes.	Regional records, suitable habitat may be present in the survey area.	Possible
Stylidium choreanthum			P3	White/yellow or red sand. Plains.	Regional records, suitable habitat may be present in the survey area.	Possible
Styphelia rectiloba			P3	Granite outcrops and breakaways.	Outside known range, habitat unlikely to occur.	Unlikely
Tecticornia flabelliformis	VU	-	P2	Clay. Saline flats	Habitat may be present in the survey area.	Possible
Thelymitra stellata	EN	EN	-	Sand, gravel, lateritic loam.	Outside known range, no habitat fitting this description within the survey area.	Unlikely
Thryptomene planiflora			P1	Sandplain, Acacia shrubland.	Regional records, suitable habitat may be present in the survey area.	Possible
<i>Thryptomene</i> sp. Coolgardie (E. Kelso s.n. 1902)			P1	No information on habitat.	Two collections from Coolgardie, more than 100 years ago.	Unlikely
Xanthoparmelia dayiana			P3	Lichen, various habitats.	Recorded within survey area, habitat may be present within survey area.	Previously Recorded
Xanthoparmelia xanthomelanoides			P2	No information on habitat.	Isolated regional record, no habitat information.	Possible

CONSULTING

4.1.2 Fauna

According to the results of the NatureMap search (DBCA, 2023), a total of 316 terrestrial vertebrate fauna taxa have been recorded within 40 km of the survey area including six amphibians, 174 bird species, 36 mammals and 100 reptiles.

The full list of terrestrial vertebrate fauna identified by the NatureMap search (DBCA, 2023) is contained in Appendix B.

4.1.2.1 Introduced (Feral) Fauna

The desktop review identified nine introduced (feral) vertebrate fauna species as potentially occurring within 40 km of the survey area (Table 4-3).

Family	Taxon	Common Name
	*Bos Taurus	European Cattle
Bovidae	*Capra hircus	Goat
	*Ovis aries	Sheep
Columbidae	*Columba livia	Domestic Pigeon, Rock Dove
	*Streptopelia senegalensis	Laughing Dove
Felidae	*Felis catus	Domestic Cat
Gekkonidae	*Hemidactylus frenatus	Asian House Gecko
Leporidae	*Oryctolagus cuniculus	Rabbit
Muridae	*Mus musculus	House Mouse

Table 4-3: Potentially occurring introduced fauna within 40 km of the survey area

4.1.2.2 Significant Fauna

The desktop assessment of the DBCA's Threatened and Priority fauna database (DBCA, 2022c), NatureMap search (DBCA, 2023), Protected Matters searches (DCCEEW, 2023) and previous relevant literature identified 19 significant terrestrial fauna species recorded within 40 km of the survey area. These are comprised of nine Threatened, two Priority, and eight migratory bird taxa.

Noting that although no significant fauna species have been recorded within the survey area (DBCA, 2022c), an old and inactive Malleefowl mound was identified by Biologic Environmental Survey during their field survey of the area in 2021 (Biologic Environmental Survey, 2021).

The locations of DBCA database records for significant fauna in relation to the survey area is shown in Figure 4-2.

Habitat and distribution data was used to determine the likelihood of occurrence within the survey area. The assessment identified two significant fauna species as potentially occurring in the survey area (Table 4-4).



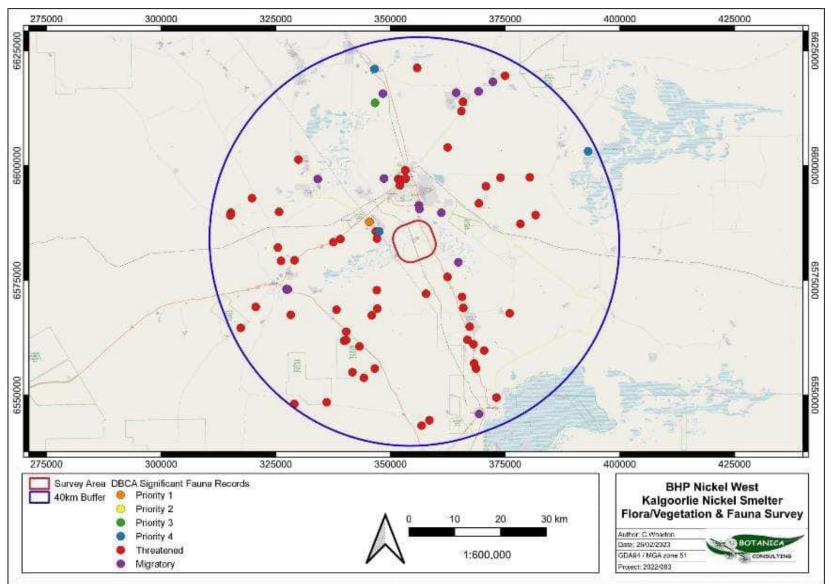


Figure 4-2: Significant fauna records (DBCA, 2022c) in relation to the survey area



		Conservation Status		tatus			Likelihood of	
Class	Class Taxon		EPBC BC Act DBCA		Habitat Description	Assessment	Occurrence	
Reptile	Western Spiny-tailed Skink Egernia stokesii badia	EN	VU	-	Known to occur in a broad semi-arid area in south- west WA, between Shark Bay and Minnivale and east to Cue. This record is from 1930.	Considered to be regionally extinct.	Unlikely to Occur	
	Bilby <i>Macrotis lagotis</i>	VU	VU	-	Once widespread in arid, semi-arid and relatively fertile areas covering 70 per cent of mainland Australia, by 1995 the bilby was restricted to arid regions and classed as a Threatened species (ALA, 2022).	Considered to be regionally extinct.	Unlikely to Occur	
Mammal	Chuditch Dasyurus geoffroii fortis	VU	VU	-	Historically, chuditch inhabited a wide range of habitats, but today it survives mostly in Jarrah Eucalyptus marginata forests and woodlands, mallee shrublands and heathlands (DBCA, 2017).	Very small number of old records in vicinity	Unlikely to Occur	
	Numbat <i>Myrmecobius fasciatus</i>	EN	EN	-	Previously widespread in arid and semi-arid Australia, the species is now restricted to two isolated wild populations in south-west Western Australia and a number of translocations to predator proof locations.	Considered to be regionally extinct.	Unlikely to Occur	
Aves	Carnaby's Cockatoo Calyptorhynchus latirostris	EN	EN	-	Carnaby's cockatoo is endemic to the south-west of Western Australia, with a widespread distribution and displays a seasonal migratory pattern. Most breeding occurs in the inland parts of its distribution, in areas receiving between 300 and 750 mm of annual average rainfall. During the non-breeding season the majority of the birds move to the higher rainfall coastal regions of their range including the midwest coast, Swan Coastal Plain and south coast.	Outside known current range of species.	Unlikely to Occur	
	Grey Falcon Falco hypoleucos	VU	VU	-	Occurs at low densities across inland Australia. The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined water courses. Observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter. Prey species are predominately birds, including doves, pigeons, small parrots and cockatoos and finches, but also includes small mammals and lizards.	Survey area may form part of larger home range.	Possibly Occurs	
	Grey Wagtail <i>Motacilla cinerea</i>	МІ	IA	-	Running water in disused quarries, sandy, rocky streams in escarpments and rainforest, sewerage ponds, ploughed fields and airfields (Morecombe 2004)	Never recorded in goldfields region.	Would Not Occur	

Table 4-4: Significant fauna within a 40 km radius of the survey area



Class	Tawan	Conservation Status		tatus	Habitat Description	Assessment	Likelihood of
Class	Taxon	EPBC	BC Act	DBCA	Habitat Description	Assessment	Occurrence
Aves (cont.)	Malleefowl <i>Leipoa ocellata</i>	VU	VU	-	Scrublands and woodlands dominated by mallee and wattle species (DCCEEW, 2023b).	Numerous regional records, suitable habitat may be present. An old and inactive Malleefowl mound was identified by Environmental Survey during their field survey of the area in 2021.	Known to Occur
	Curlew Sandpiper Calidris ferruginea	CR	CR	-	Iadoons swamps lakes and pools near the coast and No Suitable Habitat		
	Grey-tailed Tattler Tringa brevipes	МІ	-	P4			Would Not
	Hooded Plover Thinornis rubricollis	-	-	P4			Occur
	Migratory Shorebirds*	МІ	IA	-			
	Night Parrot Pezoporus occidentalis	EN	CR	-	Broad habitat requirements include areas of old- growth spinifex (Triodia) for roosting and nesting, together with foraging habitats that are likely to include various native grasses and herbs, and may or may not contain shrubs or low trees. (DBCA, 2017).	No suitable habitat or previous records.	Would Not Occur

* Migratory Shorebirds include: Actitis hypoleucos (Common Sandpiper), Calidris acuminata (Sharp-tailed sandpiper), Calidris alba (Sanderling), Calidris ruficollis (Red-necked stint), Plegadis falcinellus (Glossy ibis), Tringa glareola (Wood sandpiper), and Tringa nebularia (Common greenshank, greenshank).

4.2 Field Assessment

4.2.1 Flora

The field survey identified 229 vascular flora taxa within the survey area. These taxa represented 111 genera across 32 families, with the most diverse families being Chenopodiaceae, Fabaceae, and Myrtaceae. Dominant genera include *Eremophila* (20 species), *Acacia* (18 species), and *Eucalyptus* (15 species). The full field species inventory is listed in Appendix D.

4.2.1.1 Introduced Flora

Eighteen introduced (weed) species were identified within the survey area (Table 4-5).

Seventeen of these were recorded in areas defined as disturbed (Figure 4-5), 12 of which were not recorded elsewhere. Thus, only six weed species were recorded in areas of native vegetation across nine of the 25 broad-scale vegetation types (refer to Section 4.2.1.3), including:

- CD-MFW1
- CLP-EW1
- CLP-EW2
- CLP-EW3
- CLP-EW4
- CLP-EW5
- QRP-CS1
- RH-AFW1
- RH-MWS1

One plant of **Opuntia ficus-indica* (Indian Fig), which is listed as a WoNS and a Declared Pest in Western Australia (Table 4-6), was identified in the QRP-CS1 vegetation type (Figure 4-3).

The most common weed species was **Carrichtera annua* (Ward's Weed) which was recorded within seven of the 25 broad-scale vegetation types and within the areas defined as disturbed. The disturbed areas, especially along the highway, contained numerous individual plants of introduced species.

The full field species inventory is listed in Appendix D, which includes the species of weeds recorded in each vegetation type.

Family	Taxon	Common Name	Declared Plant	WoNS
Aizoaceae	*Mesembryanthemum nodiflorum	Slender Iceplant	N	N
Anacardiaceae	*Schinus molle var. areira	Pepper Tree	N	N
Asparagaceae	*Asphodelus fistulosus	Onion Weed	N	N
	*Carthamus lanatus	Saffron Thistle	N	N
	*Centaurea melitensis	Maltese Cockspur	N	N
Asteraceae	*Dittrichia graveolens	Stinkwort	N	N
	*Gazania linearis	Treasure Flower	N	N
	*Oncosiphon suffruticosum	Calomba Daisy	N	N
	*Brassica tournefortii	Mediterranean Turnip	N	N
Brassicaceae	*Carrichtera annua	Ward's Weed	N	N

Table 4-5: Introduced flora s	species within the survey area
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Family	Taxon	Common Name	Declared Plant	WoNS
Cactaceae	*Opuntia ficus-indica	Indian Fig	Y	Y
Fabaceae	*Erythrostemon gilliesii	Peacock Flower	N	N
Lamiaceae	*Salvia verbenaca	Wild Sage	N	N
Malvaceae	*Malva parviflora	Marshmallow	N	N
Desses	*Avena barbata	Bearded Oat	N	N
Poaceae	*Cenchrus ciliaris	Buffel Grass	N	N
Polygonaceae	*Rumex vesicarius	Ruby Dock	N	N
Solanaceae	*Nicotiana glauca	Tree Tobacco	N	N

Table 4-6: Details of declared plant recorded within the survey area

_			Declared Plant Pests		
Taxon	Location	Description*	BAM Legal Status	Control Category	
*Opuntia ficus- indica Indian Fig	Landform: Rocky Plain 358407E; 6585974N 1 plant only	Large shrub/tall tree to five metres tall. Usually with a trunk. Pads or segments: dull blue-green. Flattened, egg to oblong shape, 20-60 centimetres long. Flowers: yellow. Fruit: to 10 centimetres long. Yellow, orange, red, purple. Spines: spines usually absent, rarely one.	s22	C3	

* Source: Department of Primary Industries and Regional Development [DPIRD], 2023b.



Plate 4-1: Declared Plant (*Opuntia ficus-indica) recorded within the survey area (1 plant only)



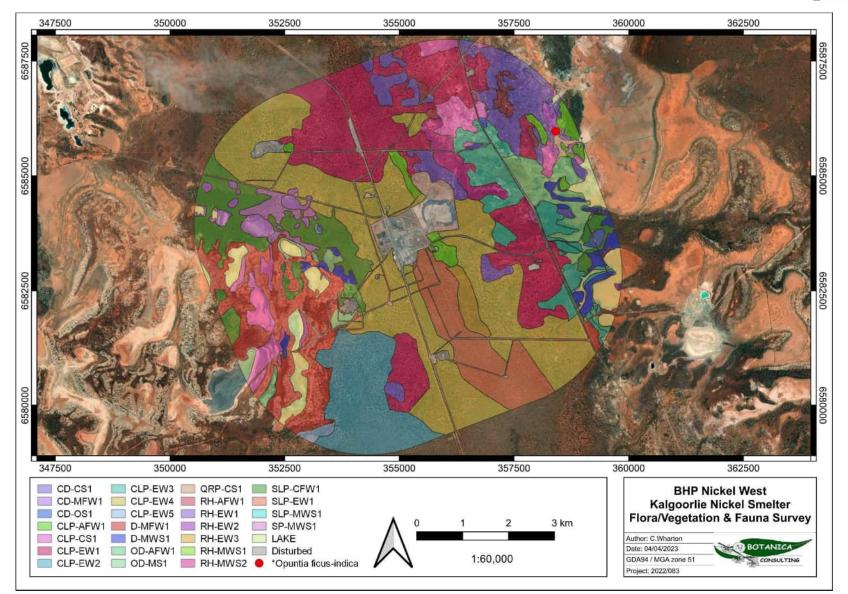


Figure 4-3: Location of Declared Pest (*Opuntia ficus-indica) recorded within the survey area



4.2.1.2 Significant Flora

According to the EPA *Environmental Factor Guideline for Flora and Vegetation* (EPA, 2016b) significant flora includes:

- flora being identified as threatened or priority species;
- locally endemic flora or flora associated with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems);
- new species or anomalous features that indicate a potential new species;
- flora representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- unusual species, including restricted subspecies, varieties or naturally occurring hybrids; and
- flora with relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.

One Priority Flora taxon was identified within the survey area: *Eremophila praecox* (Priority 2). Only one plant was recorded in in the RH-EW3 vegetation type (Figure 4-4).

No other significant flora (as described above) were recorded within the survey area.

Taxon	Conservation Code	Description*	Image
Eremophila praecox	Priority 2	Broom-like shrub, 1.5-3 m high. Flowers are purple, flowering occurs Oct or Dec. Habitat is Red/brown sandy loam. Undulating plains	

Table 4-7: Significant flora recorded within the survey area

* Source: Western Australian Herbarium [WAHERB], 2023

The other three significant flora species identified during the desktop assessment as being previously recorded within the survey area (Table 4-2) were targeted during the field survey; however, these records were not verified. Whilst the databases used during the desktop assessment often include very old records that may be incorrect, survey timing and climate conditions can also influence whether or not a species will be identified in the field. Both *Isolepis australiensis* (Priority 3) and *Goodenia salina* (Priority 2) are both annual species with 45-50 individual plants recorded at the same location in May 2016. It is possible that new plants had not germinated or matured to be identified during the field survey. Therefore these records are considered to be still valid. The *Xanthoparmelia dayiana* (Priority 3) is a species of Lichen which was recorded in February 1980, the record is still considered to be valid; noting that identification of lichens requires chemical analysis.



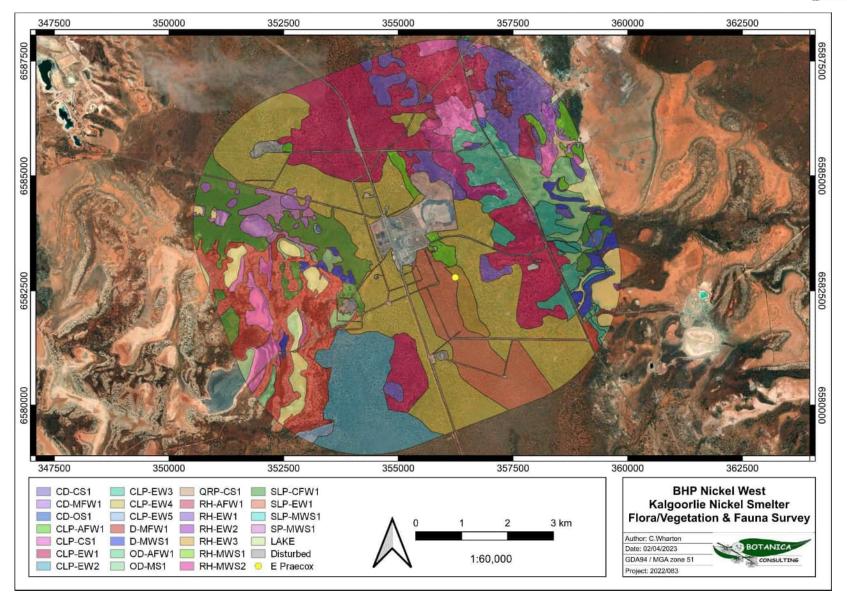


Figure 4-4: Location of significant flora (Eremophila praecox) recorded within the survey area



4.2.1.3 Vegetation Communities

A total of 25 broad-scale vegetation types were identified within the survey area; plus areas defined as salt lake (i.e. saline flats and marsh which were devoid of vegetation) and disturbed areas which were predominately cleared of native vegetation and contained numerous weed species. Vegetation community descriptions and extent are listed below in Table 4-8 and illustrated spatially in Figure 4-5. Vegetation community descriptions and extents were determined from field survey results, aerial imagery interpretation and extrapolation of the communities.

The survey found CLP-EW4 was the most widespread community in the survey area, occupying 1,376.3 ha (21.5%), while CLP-AFW1 was the most restricted with 3.9 ha (<0.1%). CLP-EW5 was the most diverse community, with 79 flora species recorded dominated by *Eremophila*, and CD-OS1 was the least diverse with seven flora species dominated by *Duma florulenta*.

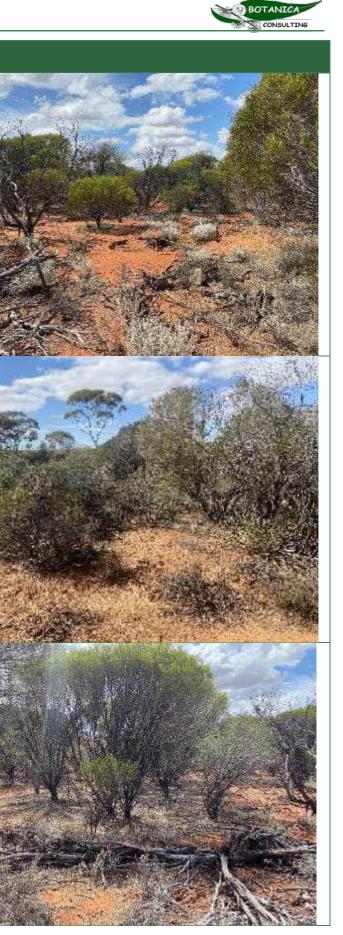
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
		Other Shrublands	CD-OS1	GP Duf	Sparse low shrubland of <i>Duma florulenta</i> in closed depression	11.3	0.2	Good	
Closed Depression	GILGAI PLAIN	Melaleuca Forests and Woodlands	CD-MFW1	GP MIMs Td	Tall shrubland of <i>Melaleuca lateriflora/ M. sheathiana</i> over low sparse samphire shrubland of <i>Tecticornia disarticulata</i> in closed depression	71.5	1.1	Good	
		Chenopod Shrublands	CD-CS1	GP Pian AtvTei	Mid sparse shrubland of <i>Pittosporum angustifolium</i> over low chenopod shrubland of <i>Atriplex vesicaria/</i> low samphire shrubland of <i>Tecticornia indica</i> in closed depression	9	0.1	Good	

Table 4-8: Vegetation communities within the survey area





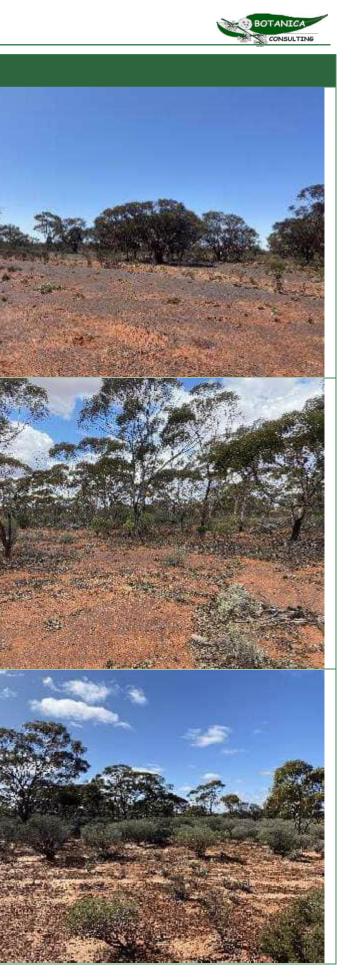
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
Open	ANEA	Acacia Forests and Woodlands	OD-AFW1	FP Aka Csu	Tall open shrubland of <i>Acacia kalgoorliensis</i> over low open shrubland of <i>Cratystylis subspinescens</i> in open depression	176.3	2.8	Good	
Open AF	FLOODPLAIN	Mallee Woodlands and Shrublands	OD-MS1	FP Mh Tei	Tall shrubland of <i>Melaleuca hamata</i> over low sparse samphire shrubland of <i>Tecticornia indica</i> in open depression	29.3	0.5	Good	
Clay-Loam Plain	CLAYPAN	Acacia Forests and Woodlands	CLP-AFW1	CY Aacu Scsp Pto	Low open woodland of <i>Acacia acuminata</i> over mid open shrubland of <i>Scaevola spinescens</i> and low open shrubland of <i>Ptilotus obovatus</i> on clay-loam plain	3.9	0.1	Good	



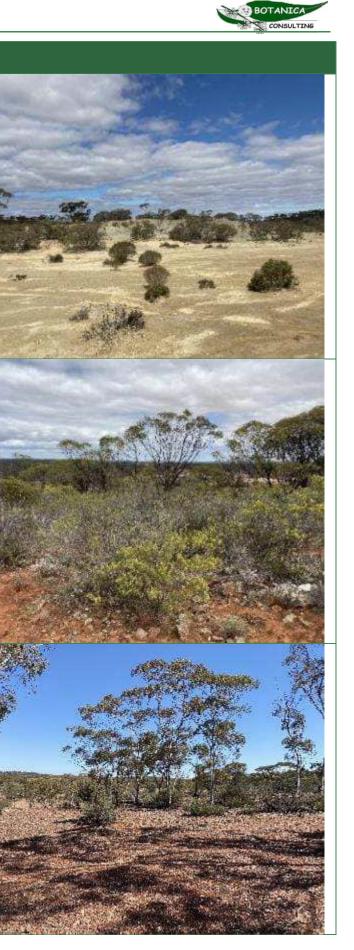
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
		Chenopod Shrublands	CLP-CS1	CY Pian CsuAtv	Tall open shrubland of <i>Pittosporum angustifolium</i> over low open shrubland of <i>Cratystylis</i> <i>subspinescens/Atriplex vesicaria</i> on a clay plain	230.6	3.6	Good	
		Eucalypt Woodlands	CLP-EW1	CY EsaEsal EscSeaf CconMase	Low open woodland of <i>Eucalyptus salmonophloia/ E.</i> salubris over mid open shrubland of <i>Eremophila</i> scoparia/ Senna artemisioides subsp. filifolia and low open shrubland of <i>Cratystylis conocephala/ Maireana</i> sedifolia on clay-loam plain	1012.6	15.8	Good	
		Eucalypt Woodlands	CLP-EW2	CY Ele Seaf Ted	Low open woodland of <i>Eucalyptus lesouefii</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over sparse samphire shrubland of <i>Tecticornia</i> <i>disarticulata</i> on clay-loam plain	426.7	6.7	Good	



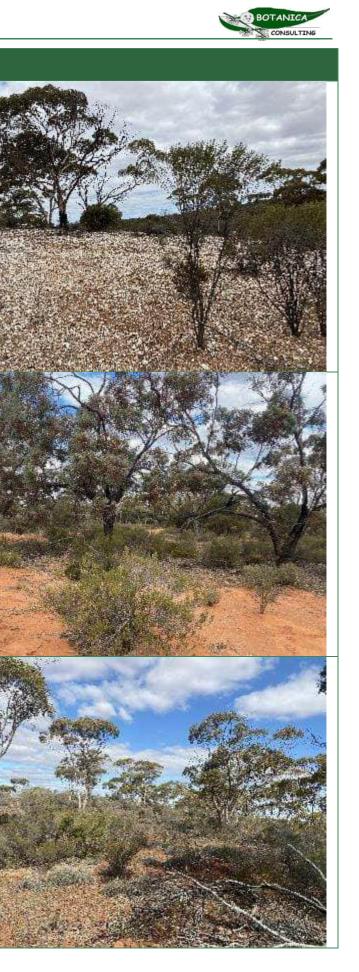
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
		Eucalypt Woodlands	CLP-EW3	CY Eura Esc Pto	Low open woodland of <i>Eucalyptus ravida</i> over mid open shrubland of <i>Eremophila scoparia</i> and low sparse shrubland of <i>Ptilotus obovatus</i> on clay-loam plain	270.1	4.2	Good	
		Eucalypt Woodlands	CLP-EW4	CY EleEol Ms Ccon	Low open woodland of <i>Eucalyptus lesouefii/ E. oleosa</i> over mid sparse shrubland of <i>Melaleuca sheathiana</i> and low shrubland of <i>Cratystylis conocephala</i> on clay-loam plain	1376.3	21.5	Good	
		Eucalypt Woodlands	CLP-EW5	CY Esal Seaf Olmu	Low open woodland of <i>Eucalyptus salubris</i> over mid shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over low open shrubland of <i>Olearia muelleri</i> on clay-loam plain	17.7	0.3	Good	



Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
Rocky Plain	STONY PLAIN	Chenopod Shrublands	QRP-CS1	SP PianAka CsuAtv	Tall open shrubland of <i>Pittosporum angustifolium/Acacia kalgoorliensis</i> over low open shrubland of <i>Cratystylis subspinescens/Atriplex vesicaria</i> on a rocky plain	10.9	0.2	Good	
		Acacia Forests and Woodlands	RH-AFW1	HS Aq Ercl Dm	Low open woodland of <i>Acacia quadrimarginea</i> over mid open shrubland of <i>Eremophila clarkei</i> and low open shrubland of <i>Dodonaea microzyga</i> on rocky hillslope	41.9	0.6	Good	
Rocky Hillslope	HILLSLOPE	Eucalypt Woodlands	RH-EW1	HS Ele Ei Aeri	Low open woodland of <i>Eucalyptus lesouefii</i> over mid open shrubland of <i>Eremophila ionantha</i> and low open shrubland of <i>Acacia erinacea</i> on rocky hillslope	367.4	5.7	Good	



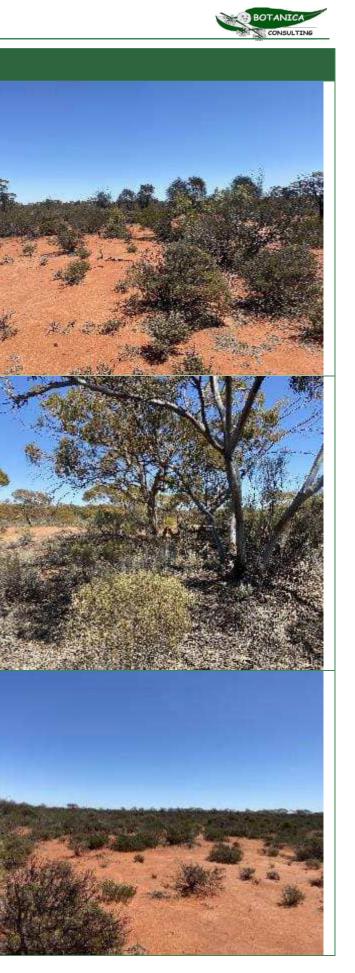
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
		Eucalypt Woodlands	RH-EW2	HS Ele MIMs Wr	Low open woodland of <i>Eucalyptus lesouefii</i> over mid sparse shrubland of <i>Melaleuca lateriflora/ M. sheathiana</i> over low open shrubland of <i>Westringia rigida</i> on rocky hillslope	22.4	0.3	Good	
		Eucalypt Woodlands	RH-EW3	HS Eto Sas Tsca	Low open woodland of <i>Eucalyptus torquata</i> over mid sparse shrubland of <i>Santalum spicatum</i> and sparse hummock grassland of <i>Triodia scariosa</i> on rocky hillslope	54.3	0.8	Good	
		Mallee Woodlands and Shrublands	RH-MWS1	HS Egr Seaf Tsca	Low open mallee woodland of <i>Eucalyptus griffithsii</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over sparse hummock grassland of <i>Triodia</i> <i>scariosa</i> on rocky hillslope	94.5	1.5	Good	



Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
		Mallee Woodlands and Shrublands	RH-MWS2	HS Egr Aka Tsca	Low open mallee woodland of <i>Eucalyptus griffithsii</i> over mid shrubland of <i>Acacia kalgoorliensis</i> over sparse hummock grassland of <i>Triodia scariosa</i> on rocky hillslope	92.5	1.4	Good	
	SAND DUNE	Eucalypt Forests and Woodlands	D-MFW1	SD EgrCp OlmuLah	Tall shrubland of <i>Eucalyptus griffithsii/ Callitris preissii</i> over sparse open shrubland of <i>Olearia muelleri/</i> <i>Lawrencia helmsii</i> on kopai dune	528.7	8.3	Good	
Sand Dune		Mallee Woodlands and Shrublands	D-MWS1	SD Esa Acco Tsca	Low open mallee woodland of <i>Eucalyptus salicola</i> over mid open shrubland of <i>Acacia colletioides</i> and sparse hummock grassland of <i>Triodia scariosa</i> on sand dune	99.5	1.6	Good	



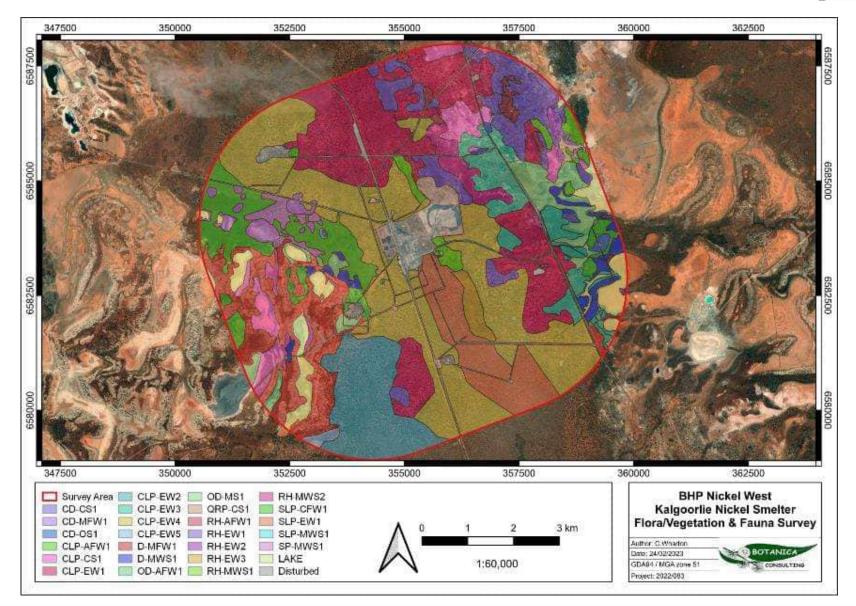
Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
Sand-Loam Plain		Casuarina Forests and Woodlands	SLP-CFW1	SA Cap MI Cm	Low sparse woodland of <i>Casuarina pauper</i> over mid open shrubland of <i>Melaleuca lateriflora</i> and low open shrubland of <i>Cratystylis microphylla</i> on sand-loam plain	399.9	6.2	Good	
	SAND PLAIN	Eucalypt Woodlands	SLP-EW1	SA Ele Ercap Tsca	Low open woodland of <i>Eucalyptus lesouefii</i> over mid sparse shrubland of <i>Eremophila caperata</i> and hummock grassland of <i>Triodia scariosa</i> on sand-loam plain	343.8	5.4	Good	
		Mallee Woodlands and Shrublands	SLP-MWS1	SA Eol Ercap Tsca	Low open mallee woodland of <i>Eucalyptus oleosa</i> over mid open shrubland of <i>Eremophila caperata</i> and sparse hummock grassland of <i>Triodia scariosa</i> on sand-loam plain	15	0.2	Good	



Landform	BHP Landform	NVIS Vegetation Group	Veg Code	BHP Veg Code	Vegetation Community	Area (ha)	Area (%)	Condition Rating	Image
Sandplain	SAND PLAIN	Mallee Woodlands and Shrublands	SP-MWS1	SA Eol Alh Tsca	Low open mallee woodland of <i>Eucalyptus oleosa</i> over mid open shrubland of <i>Allocasuarina helmsii</i> and hummock grassland of <i>Triodia scariosa</i> on sandplain	59.5	0.9	Good	
Salt Lake	SALINE FLATS AND MARSH	Salt Lake	LAKE	SF	Salt lake, devoid of vegetation.	256.8	4	Good	
Disturbed	OTHER	Disturbed	Disturbed	CL	Areas cleared for infrastructure e.g. roads, powerlines, buildings.	381.6	6	Degraded	











4.2.1.4 Vegetation Condition

Based on the vegetation condition rating scale adapted from Keighery (1994) and Trudgen, (1988), as specified in the EPA *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a) for the South West and Interzone botanical provinces, native vegetation within the survey area was rated as 'degraded' to 'good' (Table 4-8, Table 4-9, and Figure 4-6). Vegetation condition rating descriptions are listed in Appendix F. Disturbances within the survey area was a result of clearing for infrastructure (e.g. roads, powerlines, and buildings).

Eighteen weed species were identified within the survey area. One of these species (*Opuntia ficus-indica*) is listed as a WoNS and a Declared Pest in Western Australia.

Condition Rating	Description (EPA, 2016)	Area (ha)	Area (%)
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	6,023	94%
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	381	6%

Table 4-9: Vegetation Condition Rating within the Survey Area

4.2.1.5 Significant Vegetation

According to the EPA's *Environmental Factor Guideline for Flora and Vegetation* (EPA, 2016b) significant vegetation includes:

- vegetation being identified as threatened or priority ecological communities;
- vegetation with restricted distribution;
- vegetation subject to a high degree of historical impact from threatening processes;
- vegetation which provides a role as a refuge; and
- vegetation providing an important function required to maintain ecological integrity of a significant ecosystem.

No TECs or PECs as listed under State or Commonwealth legislation were identified within the survey area. No other significant vegetation (as described above) was recorded within the survey area.



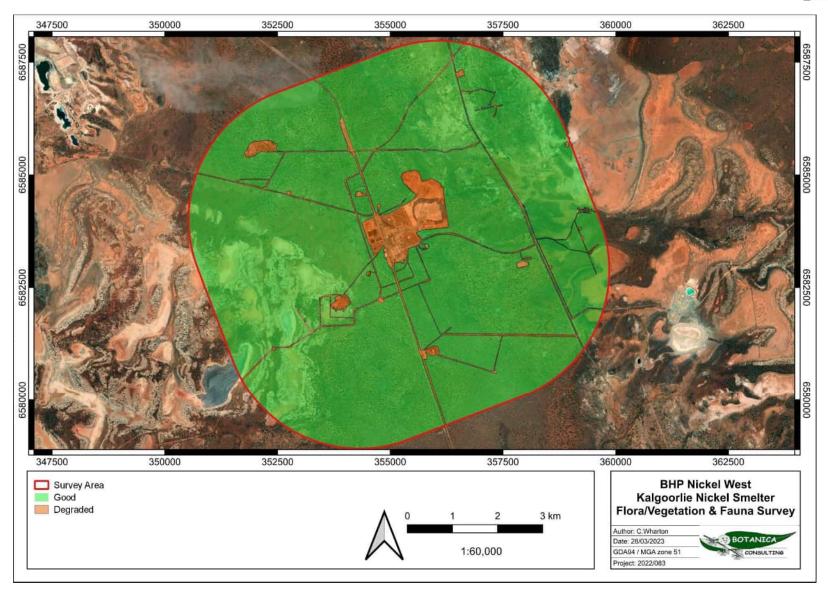


Figure 4-6: Vegetation condition within the survey area



4.2.2 Fauna

During the field survey a total of 78 vertebrate fauna taxa were identified within the survey area. These taxa represented 35 families across three classes, including Reptilia (5 families, 13 species), Aves (23 families, 49 species), and Mammalia (8 families, 16 species). The full field species inventory is listed in Appendix E.

4.2.2.1 Introduced Fauna

Five introduced fauna species were identified within the survey area:

- 1. *Bos taurus (European Cattle)
- 2. *Capra hircus (Goat)
- 3. *Canis lupus familiaris (Dog)
- 4. *Felis catus (Cat)
- 5. *Oryctolagus cuniculus (Rabbit).

These species were predominately identified via secondary evidence (e.g., scats and tracks), except for the Cat and the Rabbit which were identified via camera trap. There was only one record of each species during the field survey, except for the Rabbit which was recorded numerous times throughout the survey area.

4.2.2.2 Fauna Habitat

Based on vegetation and associated landforms identified during the flora and vegetation assessment, 10 broad scale terrestrial fauna habitats were identified as occurring within the survey area; this included areas defined as salt lake (i.e. saline flats and marsh) and disturbed areas which were predominately cleared of native vegetation.

Table 4-10 provides a description, the area and a visual representation of fauna habitat types, and the extent of fauna habitats is shown spatially in Figure 4-7.



Fauna Habitat	Description	Representative Fauna Attributes	Example Image
Closed Depression, Sparse Shrublands Extent in Survey Area: 91.8 ha (1.5%)	Mixed sparse shrublands of Lignum, <i>Melaleuca</i> or Chenopods in closed depressions.	 Ground has low suitability to burrowing species. Potential refuge for small fauna (e.g, reptiles) under shrubs. Low diversity vegetation strata. Low vegetation density and leaf litter. Chenopod shrubs provide a food source to avifauna during drought conditions. 	
Open Depression, Tall Shrublands Extent in Survey Area: 205.6 ha (3.2%)	Tall <i>Acacia</i> and <i>Melaleuca</i> shrublands over sparse shrublands of Aster/Chenopods in open depressions.	 Ground has low suitability to burrowing species. Potential refuge for small fauna (e.g., reptiles) under shrubs. Low diversity vegetation strata. Low vegetation density and leaf litter. Chenopod shrubs provide a food source to avifauna during drought conditions. 	
Plains, Tall Shrublands Extent in Survey Area: 241.5 ha (3.8%)	Tall open shrublands dominated by <i>Pittosporum angustifolium</i> over low open shrublands of Aster/Chenopods on rocky or clay-loam plains.	 Ground not well suited to burrowing species. Moderate vegetation density and leaf litter, providing good refuge for reptiles. Chenopod shrubs provide a food source to avifauna during drought conditions. 	

Table 4-10: Main Terrestrial Fauna Habitats within the Survey Area

BHP Nickel West Pty Ltd

Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment



Fauna Habitat	Description	Representative Fauna Attributes	Example Image
Clay-Loam Plain, Low Open Woodlands Extent in Survey Area: 3,107.3 ha (48.6%)	Low open <i>Acacia/Eucalyptus</i> woodlands over mixed shrublands of <i>Scaevola/Eremophila/Senna/Melaleuca</i> over mixed shrublands of <i>Ptilotus/Cratystylis/Tecticornia/Olearia</i> on clay-loam plains.	 Ground not well suited to burrowing species. Moderate to high diversity vegetation strata supporting avifauna assemblage. Moderate vegetation density and leaf litter, providing good refuge for reptiles. 	
Rocky Hillslope, Low Eucalypt/ Acacia/ Mallee Woodlands Extent in Survey Area: 673 ha (10.3%)	Low open <i>Acacia/Eucalyptus</i> woodlands over mixed shrublands of <i>Eremophila/Melaleuca/Santalum/SennalDodonaea/</i> <i>Acacia/Westringia</i> and sparse hummock grasslands on rocky hillslopes.	 Ground not suited to burrowing species. Moderate diversity vegetation strata supporting avifauna assemblage. Low vegetation density and rocks providing good refuge for reptiles. 	
Kopai Dune, Tall Eucalypt Shrubland Extent in Survey Area: 528.7 ha (8.3%)	Tall <i>Eucalyptus</i> shrubland over sparse open shrubland of <i>Olearia muelleri /Lawrencia helmsii</i> on kopai dune.	 Ground suited to burrowing species. Moderate diversity vegetation strata supporting avifauna. Moderate vegetation density and leaf litter providing good refuge for reptiles. 	

BHP Nickel West Pty Ltd

Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment



Fauna Habitat	Description	Representative Fauna Attributes	Example Image
Sand Dune, Low Open Mallee Woodland Extent in Survey Area: 99.5 ha (1.6%)	Low open Mallee woodland over mid open <i>Acacia</i> shrubland and sparse hummock grassland on sand dune.	 Ground suited to burrowing species. Moderate diversity vegetation strata supporting avifauna. Moderate vegetation density and leaf litter providing good refuge for reptiles and mammals. 	
Sand Plain, Low Woodlands Extent in Survey Area: 818.2 ha (12.7%)	Low sparse <i>Casuarina</i> woodlands and open <i>Eucalyptus</i> woodlands over mixed shrublands of <i>Melaleuca, Eremophila</i> and <i>Allocasuarina</i> and hummock grasslands on sand or sand-loam plains.	 Ground moderately suited to burrowing species. Low strata not suited to avifauna. Low vegetation density and leaf litter. Good mid-tier vegetation density and leaf litter, providing good refuge for reptiles and small mammals. 	
Saline Flats and Marsh Extent in Survey Area: 256.8 ha (4%)	Open low-lying saline flats distinguished by absence of vegetation and salt crusting.	 Ground not well suited to burrowing species. Lack of vegetation, thus low suitability as foraging habitat and low provision of refuge for reptiles or mammals. Occasionally suitable for migratory shorebirds following significant rainfall and inundation of salt lake areas. Fauna more likely to occur within adjacent habitats such as sand dunes. 	

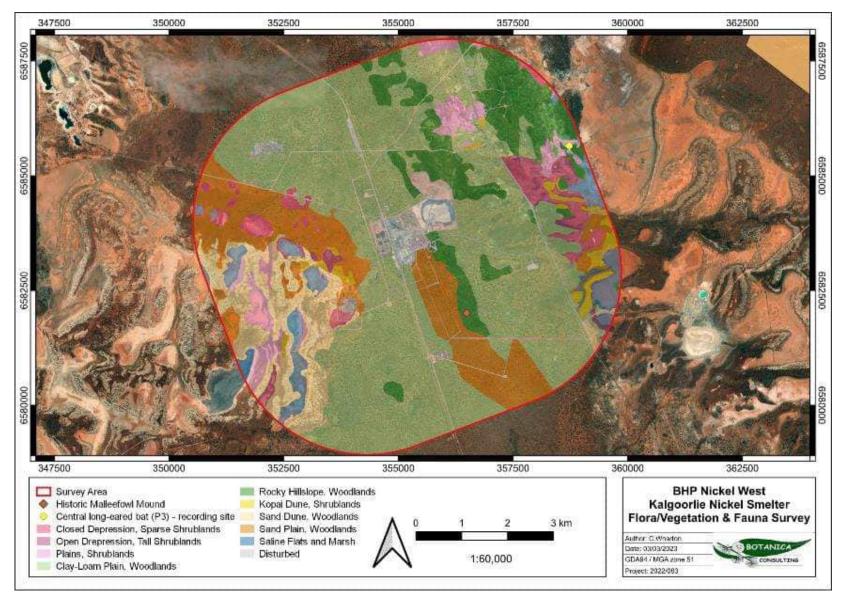
BHP Nickel West Pty Ltd

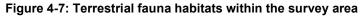
Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment



Fauna Habitat	Description	Representative Fauna Attributes	Example Image
Disturbed Extent in Survey Area: 381.6 ha (6%)	Areas which have been subject to high levels of disturbance activities, predominately cleared of native vegetation and contain numerous weed species.	 Ground not well suited to burrowing species. Low value foraging habitat for mammals and avifauna due to lack of native vegetation. Man made structures (e.g., buildings) and remnant materials (e.g., old tin sheets) provide good refuge for reptiles. 	







4.2.2.3 Significant Fauna

According to the EPA *Environmental Factor Guideline for Terrestrial Fauna* (EPA, 2016c) significant fauna includes:

- Fauna being identified as a Threatened or Priority species;
- Fauna species with restricted distribution;
- Fauna subject to a high degree of historical impact from threatening processes; and
- Fauna providing an important function required to maintain the ecological integrity of a significant ecosystem.

One vertebrate fauna species of conservation significance was positively identified as utilising the survey area for some purpose (e.g., foraging) during the survey period: *Nyctophilus major tor* (Central long-eared bat) – Priority 3 (DBCA).

This species was recorded during one nights bat recording on the 3rd October 2022 at 358727mE 6585653mN Zone 51 GDA2020 (i.e., Bat Detector Site BAT01), which was located within habitat consisting of tall open shrublands dominated by *Pittosporum angustifolium* over low open shrublands of Aster/Chenopods on rocky or clay-loam plains (Plains, Tall Shrublands) as shown in Figure 4-7. The vegetation associations within the survey area are unlikely to comprise a significant habitat for this fauna species.

Until recently, this species was only known from 15 localities in Western Australia and 19 in South Australia. There is no evidence that the species' range has contracted, but it is apparently rare in Great Victoria Desert, Nullarbor and Stony Plains bioregions while it is locally common in Coolgardie, Hampton, Gawler and western Eyre-York Block bioregions (Duncan *et al.* (ed), 1999).

Several additional species of conservation significance may utilise the survey area for some purpose at times, but their status within the survey area is difficult to determine because they were not sighted during the field survey, or evidence of use was not observed, these are:

• Grey Falcon (Falco hypoleucos) - Vulnerable (EPBC Act and BC Act)

This species is sparsely recorded throughout inland Australia. Suitable habitat likely to be present but in unlikely to represent critical habitat.

• Malleefowl (Leipoa ocellata) - Vulnerable (EPBC Act and BC Act)

This species is occasionally recorded in the Eastern Goldfields subregion. An inactive (historical) Malleefowl mound was observed within the survey area (Plate 4-2), located within *Eucalyptus* woodland on hillslope habitat (Figure 4-7). It was estimated that this mound was at least 20 years old (Hopkins, n.d.), and in fact maybe much older than this as they deteriorate slowly. It should be noted that this mound was found in a different location to the one inactive (historical) mound recorded by Biologic Environmental Survey (2021). No active Malleefowl mounds or other evidence of Malleefowl activity (tracks, feathers or bird observations etc.) were observed during the field survey. Available information suggests that a breeding population of this species is unlikely to be present in the survey area, though transient non-breeding individuals may occasionally occur.

It should be noted that while habitats onsite for one or more of the species listed above are considered possibly suitable, some or all may be marginal in extent/quality and therefore the fauna species considered as possibly occurring may in fact only visit the area for short periods as infrequent vagrants.





Plate 4-2: Inactive (>20 years) Malleefowl mound within the survey area

4.3 Matters of National Environmental Significance

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act protects Matters of National Environmental Significance (MNES) and is used by the Commonwealth DAWE to list threatened taxa and ecological communities into categories based on the criteria set out in the EPBC Act (<u>www.environment.gov.au/epbc/index.html</u>). The EPBC Act provides a national environmental assessment and approval system for proposed developments and enforces strict penalties for unauthorised actions that may affect matters of national environmental significance. MNES as defined by the Commonwealth EPBC Act include:

- Nationally threatened flora and fauna species;
- World heritage properties;
- National heritage places;
- Wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed);
- Nationally threatened ecological communities;
- Commonwealth marine area;
- The Great Barrier Reef Marine Park; and
- Nuclear actions (including uranium mining) a water resource, in relation to coal seam gas development and large coal mining development.

No MNES as defined by the Commonwealth EPBC Act were identified within the survey area.

4.4 Matters of State Environmental Significance

4.4.1 Environmental Protection Act 1986 (WA)

The EP Act provides for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment. The Act is administered by The Department of Water and Environment Regulation (DWER), which is the State Government's environmental regulatory agency.



Under Section 51C of the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations (Regulations) 2004* (WA) any clearing of native vegetation in Western Australia that is not eligible for exemption under Schedule 6 of the EP Act or under the Regulations requires a clearing permit from the DWER or the Department of Mines, Industry Regulation and Safety (DMIRS). Under Section 51A of the EP Act native vegetation includes aquatic and terrestrial vegetation indigenous to Western Australia, and intentionally planted vegetation declared by regulation to be native vegetation, but not vegetation planted in a plantation or planted with commercial intent. Section 51A of the EP Act defines clearing as "the killing or destruction of; the removal of; the severing or ringbarking of trunks or stems of; or the doing of substantial damage to some or all of the native vegetation in an area, including the flooding of land, the burning of vegetation, the grazing of stock or an act or activity that results in the above". Exemptions under Schedule 6 of the EP Act and the EP Regulations do not apply in ESAs as declared under Section 51B of the EP Act or in TECs listed under State and Commonwealth legislation.

No evidence of the survey area containing any TEC or Threatened flora or fauna was found during the survey. The survey area is not located within an ESA.

4.4.2 Biodiversity Conservation Act 2016

The BC Act is used by the Western Australian DBCA for the conservation and protection of biodiversity and biodiversity components in Western Australia and to promote the ecologically sustainable use of biodiversity components in the State. Taxa are classified as 'Threatened' when their populations are geographically restricted or are threatened by local processes (see following sections for Threatened definitions). Under the BC Act all native flora and fauna are protected throughout the State. Financial penalties are enforced under the BC Act if threatened species are collected without an appropriate licence.

Under Section 54(1) of the BC Act, habitat is eligible for listing as critical habitat if:

- a) it is critical to the survival of a threatened species or a threatened ecological community; and
- b) its listing is otherwise in accordance with the ministerial guidelines.

No critical habitat listed under the BC Act were recorded within the survey area.

No Threatened flora or fauna were recorded within the survey area.

4.5 Other Areas of Conservation Significance

The DBCA lists 'Priority' species and communities which are under consideration for declaration as 'Threatened' under the BC Act. These Priority species/ communities have no formal legal protection until they are endorsed by the Minister as being Threatened.

One Priority flora species was identified within the survey area; *Eremophila praecox* – currently listed as a Priority 2 species (DBCA, 2022d).

One Priority vertebrate fauna species was positively identified as utilising the survey area for some purpose during the survey period: *Nyctophilus major tor* (Central long-eared bat) – currently listed as a Priority 3 species (DBCA, 2022e).

No PECs were identified within the survey area.

There are no wetlands of international importance (Ramsar Wetlands) or national importance (Australian Nature Conservation Agency Wetlands) within the survey area.

There are no proposed nor gazetted conservation reserves within the survey area. The closest gazetted conservation reserve is the Lakeside Timber Reserve which is located approximately 4 km east of the survey area.

CONSULTING

5 BIBLIOGRAPHY

Anstis, M. (2013). Tadpoles and Frogs of Australia. New Holland Publishers, Sydney.

Bamford M.J. and Metcalf, B. (2009). *Malleefowl Surveys in the Mt Jackson Area 2003 – 2008*. Report produced for Cliffs' Natural Resources.

Barrett, G., Silcocks, A., Barry, S., Cunningham, R. and Poulter, R. (2003). *The New Atlas of Australian Birds*. Royal Australasian Ornithologists Union, Victoria.

Barrick Gold Corporation (2011). *Miscellaneous Fauna Survey Records 2006 - 2011. Kanowna Belle Area*. Unpublished internal data. May 2011.

Beard, J.S., (1990). Plant Life of Western Australia. Kangaroo Press Pty Ltd, NSW.

Benshemesh, J. (2007). *Department of Environment and Heritage*. National Recovery Plan for Malleefowl.

BHP (2018). Vegetation and Flora Survey Procedure (0124627).

BHP (2020). Biological Survey Spatial Data Requirements Procedure (SPR-IEN-EMS-015).

Biologic Environmental Survey (2021). *Kalgoorlie Nickel Smelter, Reconnaissance Flora and Vegetation Survey and Basic Terrestrial Fauna Survey*. Prepared for BHP Nickel West. December 2021.

Botanica Consulting (2022). *Binduli North Operations: Reconnaissance Flora/ Vegetation & Basic Fauna Assessment.* Prepared for Norton Gold Fields Pty Ltd. November 2022.

Botanica Consulting (2022). Cannon Gold Project: Desktop Flora and Fauna Assessment - Proposed Pipeline on L26/270. Prepared for Horizon Minerals Ltd. September 2022.

Botanica Consulting (2022). *Cannon Gold Project: Targeted Malleefowl Survey (L26/270) and Malleefowl Mound Survey.* Prepared for Horizon Minerals Ltd. September 2022

Botanica Consulting (2022). *Kalgoorlie East Gold Project Powerline – Majestic Timber Reserve Corridor Options and Drill Lines: Reconnaissance Flora and Basic Fauna Assessment*. Prepared for Black Cat Syndicate Ltd. March 2022.

Botanica Consulting (2022). *Kalgoorlie East Gold Project - Powerline, Jones Find and Imperial-Trojan dewatering pipeline: Reconnaissance Flora and Basic Fauna Assessment.* Prepared for Black Cat Syndicate Ltd. March 2022.

Botanica Consulting (2021). *White Foil Project: Detailed Flora/Vegetation Survey and Basic Fauna Survey*. Prepared for Evolution Mining Ltd. February 2021.

Botanica Consulting (2021). Rayjax Project: *Detailed Flora/Vegetation Survey and Basic Fauna Survey.* Prepared for Evolution Mining Ltd. January 2021.

Botanica Consulting (2021). *Reconnaissance Flora/Vegetation Survey & Basic Fauna Survey - Greenfields Mill*. Prepared for FMR Investments Pty Ltd. September 2021.

Botanica Consulting (2021). *Reconnaissance Flora/ Vegetation and Basic Fauna Survey L25/14, L25/53 & M25/360.* Prepared for Black Cat Syndicate Ltd. July 2021.

Botanica Consulting (2021). *Fingals Project Reconnaissance Flora/ Vegetation and Basic Fauna Survey*. Prepared for Black Cat Syndicate Ltd. July 2021.

Bureau of Meteorology [BoM] (2019). *Groundwater Dependent Ecosystems Atlas*. Bureau of Meteorology. Available: http://www.bom.gov.au/water/groundwater/gde/map.shtml

Bureau of Meteorology [BoM] (2023). *Climate Data*. Bureau of Meteorology. Available: http://www.bom.gov.au/climate

Bush, B., Maryan, B., Browne-Cooper, R. & Robinson, D. (2007). Reptiles and Frogs in the Bush: Southwestern Australia. UWA Press, Nedlands.



Chapman, A., Kealley, I., McMillan, D., McMillan, P. and Rolland, G. (1991). *Biological Surveys of Four Goldfields Reserves.* Landnote 1/91 Department of Conservation and Land Management.

Chapman, A. et al (1991). *Biological Surveys of Four Goldfields Reserves*. Land note 1/91. Available: https://library.dbca.wa.gov.au/Journals/080051/080051-91.01.pdf

Churchill, S. (2008). Australian Bats. Second Edition, Allen & Unwin.

Cogger, H.G. (2014). Reptiles and Amphibians of Australia. 7th Edition. CSIRO Publishing.

Cowan, M. (2001). A Biodiversity Audit of Western Australia's 53 Biogeographical Region in 2001; Coolgardie 3 (COO3 – Eastern Goldfields subregion). pp 156-169, Department of Conservation and Land Management, September 2001.

DBCA (2016). *Fauna profiles: Malleefowl Leipoa ocellata.* Available: https://www.dpaw.wa.gov.au/images/documents/plantsanimals/animals/animal profiles/Malleefowl profile.pdf. Last updated: December 2016.

DBCA (2022a). *Threatened/ Priority Flora Database Search [Ref: 11-0922FL]*. Obtained from Department of Biodiversity, Conservation and Attractions. 8 September 2022.

DBCA (2022b). Threatened/ Priority Ecological Communities Database Search [Ref: 81-0822EC]. Obtained from Department of Biodiversity, Conservation and Attractions. 4 August 2022.

DBCA (2022c). Threatened/ Priority Fauna Database Search [Ref: 7315]. Obtained from Department of Biodiversity, Conservation and Attractions. 31 August 2022.

DBCA (2022d). Document: *Threatened and Priority Flora List 22 June 2022.xlsx*. Department of Biodiversity, Conservation and Attractions. Available: <u>https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants</u>

DBCA (2022e). Document: *Threatened and Priority Fauna List 7 October 2022.xlsx*. Department of Biodiversity, Conservation and Attractions. Available: <u>https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals</u>

DBCA (2023). *NatureMap Database search*. Obtained from Department of Biodiversity, Conservation and Attractions, 01 March 2023.

Department of Climate Change, Energy, the Environment and Water [DCCEEW] (2012). *Interim Biogeographic Regionalisation for Australia (IBRA), Version 7.* Department of the Environment and Energy.

Department of Climate Change, Energy, the Environment and Water [DCCEEW] (2022). *Protected Matters Search Tool.* Environment Protection and Biodiversity Conservation Act 1999 (Cth).

DotEE (2017). *National Vegetation Information System (NVIS) Major Vegetation Groups, Version 4.2.* Department of the Environment and Energy.

DPIRD (2019). *Pre-European Vegetation (DPIRD_006)*. Department of Primary Industries and Regional Development, Western Australia, 24 July 2019.

DPIRD (2023a). *Declared Organism database search*. Department of Primary Industries and Regional Development, Western Australia. Available: <u>http://www.biosecurity.wa.gov.au/</u>. WAOL data exported on 19th February 2023.

DPIRD (2023a). Opuntia cacti species. Department of Primary Industries and Regional Development, Western Australia. Available: <u>https://www.agric.wa.gov.au/declared-plants/opuntia-cacti-species</u>

Duncan, Anne. & Baker, G. B. & Montgomery, Narelle. & Natural Heritage Trust (Australia) (1999). *The action plan for Australian bats* / edited by Anne Duncan, G. Barry Baker and Narelle Montgomery; with assistance from Lindy Lumsden et al. Natural Heritage Trust, Canberra.

EPA (2000). *Position Statement No. 2 Environmental Protection of Native Vegetation in Western Australia.* Environmental Protection Authority.



EPA (2016a). *Technical Guide - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016.* Environmental Protection Authority.

EPA (2016b). *Environmental Factor Guideline for Flora and Vegetation – December 2016.* Environmental Protection Authority.

EPA (2016c). *Environmental Factor Guideline for Terrestrial Fauna – December 2016.* Environmental Protection Authority.

EPA (2020). *Technical Guide – Terrestrial Fauna Surveys for Environmental Impact Assessment – June 2020.* Environmental Protection Authority.

EPA (2021). Statement of Environmental Principles, Factors, Objectives and Aims of EIA.

Geoscience Australia (2015). Surface Hydrology GIS. Australian Government.

GHD (2010). *Report for Teal Gold Project Biological Survey*. Prepared for Intermin Resources. October 2010.

Government of Western Australia (2019a). *Soil Landscape Mapping – Systems (DPIRD-064)*. GIS data obtained from data.wa.gov.au, last updated 27 June 2019.

Government of Western Australia (2019b). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis. (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth.

Harewood, G. (2010a). *Terrestrial Fauna Survey (Level 1) of the proposed Isabella Mine Area*. Unpublished report for Barrick (Kanowna) Ltd. January 2010.

Harewood, G. (2010b). *Terrestrial Fauna Survey (Level 1) of the proposed Golden Valley Mine* Area. Unpublished report for Barrick (Kanowna) Ltd. January 2010.

Harewood, G. (2010c). *Terrestrial Fauna Survey (Level 1) of the proposed Fenceline Mine Area.* Unpublished report for Barrick (Kanowna) Ltd. January 2010.

Harewood, G. (2012). *Terrestrial Fauna Survey (Level 1) of Proposed Powerline and Infrastructure Area, KCGM – Gidgi Operations*. Unpublished report for KCGM Pty Ltd. January 2012.

Harewood, G. (2014). *Desktop Fauna Assessment. Proposed Tails Storage Facility Expansion*. Unpublished report for KCGM Pty Ltd. September 2014.

Hopkins, L. (nd). *National Manual for the Malleefowl Monitoring System*. National Heritage Trust, Canberra.

Johnstone, R.E. and Storr, G.M. (1998). Handbook of Western Australian Birds: Volume 1 – Nonpasserines (Emu to Dollarbird). Western Australian Museum, Perth Western Australia.

Johnstone, R.E. and Storr, G.M. (2004). *Handbook of Western Australian Birds: Volume 2 – Passerines (Blue-winged Pitta to Goldfinch).* Western Australian Museum, Perth Western Australia.

Keighery, B. J., (1994). *Bushland Plant Survey: A guide to plant community survey for the community*. Wildflower Society of Western Australia (Inc.), Nedlands.

KLA (2009a). *Barrick (Kanowna) Shamrock Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. January 2009.

KLA (2009b). *Barrick (Kanowna) Crossroads Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. January 2009.

KLA (2009c). *Barrick (Kanowna) Moonlight Project Level 1 Fauna Survey*. Unpublished report for Barrick (Kanowna) Ltd. March 2009.

McKenzie, N.L., May, J. E. and McKenna, S. (2002). *Bioregional Summary of the 2002 Biodiversity Audit of Western Australia*. Department of Conservation and Land Management, Perth.

McKenzie N.L. & Hall N.J. (1992). *The Biological Survey of The Eastern Goldfields of Western Australia: Part 8 Kurnalpi – Kalgoorlie Study Area*. Western Australian Museum, 1992.



Meissner R.A. & Coppen R. (2014). *Flora and vegetation of the greenstone ranges of the Yilgarn Craton: Kangaroo Hills and surrounding area.* Article in Conservation Science, Western Australia, 9 (2): 169-179.

Menkhorst, P. and Knight, F. (2011). *A Field Guide to the Mammals of Australia.* Third Edition, Oxford University Press, Melbourne.

Morcombe, M. (2004). *Field Guide to Australian Birds.* Steve Parish Publishing, Archerfield, Queensland.

Phoenix Environmental Sciences (2022). *Terrestrial fauna assessment for the Fimiston Gold Mine Operations*. Prepared for Kalgoorlie Consolidated Gold Mines Pty Ltd. July 2022.

Phoenix Environmental Sciences (2022). *Flora and vegetation assessments for the Fimiston Gold Mine Operations*. Prepared for Kalgoorlie Consolidated Gold Mines Pty Ltd. March 2022.

Pizzey, G. and Knight, F. (2012). *The Field Guide to the Birds of Australia*. 9th Edition. Harper Collins, Sydney.

National Malleefowl Recovery Team [NMRT] (2020). *National Malleefowl Monitoring Manual*: Edition: v2020_1 - (Revised June 2020).

Pringle, H.J.R., Van Vreeswyk, A.M.E. and Gilligan, S.A. (1994). *An inventory and condition survey in the North-Eastern Goldfields, Western Australia*. Western Australian Department of Agriculture, Technical Bulletin No. 87

Simpson, K. and Day, N. (2010). Field Guide to the Birds of Australia. Penguin Books, Ringwood.

Storr, G. M. (1985). *Birds of the mid-eastern interior of Western Australia*. Records of the Western Australian Museum Supplement. 22:1-45.

Storr, G. M. (1986). *Birds of the south-eastern interior of Western Australia*. Records of the Western Australian Museum Supplement. 26:1-60.

Storr, G. M. (1987). *Birds of the Eucla Division of Western Australia*. Records of the Western Australian Museum Supplement. 27:1-81.

Storr, G. M., and R. E. Johnstone (1988). Birds of the Swan Coastal Plain and adjacent seas and islands. Records of the Western Australian Museum Supplement. 28:1-45.

Storr, G.M., Smith, L.A. and Johnstone R.E. (1983). Lizards of Western Australia II: Dragons and *Monitors*. WA Museum, Perth.

Storr, G.M., Smith, L.A. and Johnstone R.E. (1990). *Lizards of Western Australia III: Geckos and Pygopods*. WA Museum, Perth.

Storr, G.M., Smith, L.A. and Johnstone R.E. (1999). *Lizards of Western Australia I: Skinks.* Revised Edition, WA Museum, Perth.

Storr, G.M., Smith, L.A. and Johnstone R.E. (2002). *Snakes of Western Australia*. Revised Edition, WA Museum, Perth.

Thompson, S. and Thompson, G. (2006). *Reptiles of the Western Australian Goldfields*. Published by the Goldfields Environmental Management Group.

Tille, P. (2006). *Soil Landscapes of Western Australia's Rangelands and Arid Interior*. Department of Agriculture and Food Western Australia

Tyler M.J. and Doughty P. (2009). *Field Guide to Frogs of Western Australia*. Fourth Edition. WA Museum, Perth.

Van Dyck, S., Gynther, I. & Baker, A. Eds (2013). *Field Companion to The Mammals of Australia.* Queensland Museum.

Van Dyck, S. & Strahan, R. Eds (2008). *The Mammals of Australia*. Third edition Queensland Museum.



Western Australian Herbarium (1998–). *Florabase—the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions. Available: <u>https://florabase.dpaw.wa.gov.au/</u>

Wilson, S. and Swan, G. (2013). *A Complete Guide to Reptiles of Australia.* Third Edition, Reed, New Holland, Sydney.



APPENDIX A: CONSERVATION RATINGS BC ACT AND EPBC ACT

Definitions of Conservation Significant Species

Code	Category				
State categorie	s of Threatened and Priority species				
Listed by order of under section 19	Threatened Species (T) Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as Threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).				
	Critically Endangered Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial				
CR	guidelines". Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for critically endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for critically endangered flora.				
	Endangered				
EN	Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines".				
	Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for endangered flora.				
	Vulnerable				
VU	Threatened species considered to be "facing a high risk of extinction in the wild in the medium- term future, as determined in accordance with criteria set out in the ministerial guidelines".				
VO	Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for vulnerable flora.				
Extinct species	of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.				
EX	Extinct Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).				
	Published as presumed extinct under schedule 4 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018</i> for extinct fauna or the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for extinct flora.				
	Extinct in the Wild				
EW	Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no Threatened fauna or Threatened flora species listed as extinct in the				
	wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.				
Specially protected species					
the following cat	Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more o the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.				
Species that are	e listed as Threatened species (critically endangered, endangered or vulnerable) or extinct ne BC Act cannot also be listed as Specially Protected species.				
	International Agreement/ Migratory				
IA	Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).				



Code	Category
	Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the <i>Convention on the Conservation of Migratory Species of Wild Animals</i> (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.
	Published as migratory birds protected under an international agreement under schedule 5 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018.</i>
CD	Species of special conservation interest Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as Threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act). Published as conservation dependent fauna under schedule 6 of the <i>Wildlife Conservation</i> <i>(Specially Protected Fauna) Notice 2018.</i>
OS	Other specially protected species Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act). Published as other specially protected fauna under schedule 7 of the <i>Wildlife Conservation</i> (<i>Specially Protected Fauna</i>) Notice 2018.
Priority specie	
Priority Fauna o	ened species that do not meet survey criteria, or are otherwise data deficient, are added to the or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of ey and evaluation of conservation status so that consideration can be given to their declaration Fauna or Flora.
have been rece	e adequately known, are rare but not threatened, or meet criteria for near threatened, or that ntly removed from the threatened species or other specially protected fauna lists for other than ons, are placed in Priority 4. These species require regular monitoring.
	Priority codes is based on the Western Australian distribution of the species, unless the /A is part of a contiguous population extending into adjacent States, as defined by the known ons.
	Priority 1: Poorly-known species
P1	Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
	Priority 2: Poorly-known species
P2	Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
	Priority 3: Poorly-known species
Р3	Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
	Priority 4: Rare, Near Threatened and other species in need of monitoring
Ρ4	 (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
Commonwealt	h categories of Threatened species



Code	Category
EX	Extinct Taxa where there is no reasonable doubt that the last member of the species has died.
EW	Extinct in the Wild Taxa where it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
CR	Critically Endangered Taxa that are facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
EN	Endangered Taxa which are not critically endangered and is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
VU	Vulnerable Taxa which are not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
CD	Conservation DependentTaxa which are the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied:(i)the species is a species of fish;(ii)the species is the focus of a plan of management that provides for actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised;(iii)the plan of management is in force under a law of the Commonwealth or of a State or Territory;(iv)cessation of the plan of management would adversely affect the conservation status of the species.

Definitions of Conservation Significant Communities

Category Code	Category		
State catego	tate categories of Threatened Ecological Communities (TEC)		
	Presumed Totally Destroyed		
PD	An ecological community will be listed as Presumed Totally Destroyed if there are no recent records of the community being extant and either of the following applies:		
	records within the last 50 years have not been confirmed despite thorough searches or known likely habitats or;		
	all occurrences recorded within the last 50 years have since been destroyed.		
	Critically Endangered		
	An ecological community will be listed as Critically Endangered when it has been adequately		
	surveyed and is found to be facing an extremely high risk of total destruction in the immediate		
	future, meeting any one of the following criteria:		
	The estimated geographic range and distribution has been reduced by at least 90% and is either		
CR	continuing to decline with total destruction imminent, or is unlikely to be substantially rehabilitated		
	in the immediate future due to modification;		
	The current distribution is limited i.e. highly restricted, having very few small or isolated occurrences, or covering a small area;		
	The ecological community is highly modified with potential of being rehabilitated in the immediate		
	future.		
	Endangered		
	An ecological community will be listed as Endangered when it has been adequately surveyed		
EN	and is not Critically Endangered but is facing a very high risk of total destruction in the near future. The coolegical community must meet any one of the following criteria:		
EIN	future. The ecological community must meet any one of the following criteria:		
	The estimated geographic range and distribution has been reduced by at least 70% and is either continuing to decline with total destruction imminent in the short-term future, or is unlikely to be		
	substantially rehabilitated in the short-term future due to modification;		
L			



Category Code	Category				
	The current distribution is limited i.e. highly restricted, having very few small or isolated				
occurrences, or covering a small area; The ecological community is highly modified with potential of being rehabilitated in t					
	future.				
	Vulnerable				
	An ecological community will be listed as Vulnerable when it has been adequately surveyed and				
	is not Critically Endangered or Endangered but is facing high risk of total destruction in the				
	medium to long term future. The ecological community must meet any one of the following criteria:				
VU	The ecological community exists largely as modified occurrences that are likely to be able to be substantially restored or rehabilitated;				
	The ecological community may already be modified and would be vulnerable to threatening				
	process, and restricted in range or distribution;				
	The ecological community may be widespread but has potential to move to a higher threat				
	category due to existing or impending threatening processes.				
Commonweal	th categories of Threatened Ecological Communities (TEC)				
CE	Critically Endangered If, at that time, an ecological community is facing an extremely high risk of extinction in the wild				
UL	in the immediate future (indicative timeframe being the next 10 years).				
	Endangered				
EN	If, at that time, an ecological community is not critically endangered but is facing a very high risk				
	of extinction in the wild in the near future (indicative timeframe being the next 20 years).				
	Vulnerable If, at that time, an ecological community is not critically endangered or endangered, but is facing				
VU	a high risk of extinction in the wild in the medium-term future (indicative timeframe being the next				
	50 years).				
Priority Ecolo	gical Communities				
	Poorly-known ecological communities				
P1	Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases)				
	and for which current threats exist.				
	Poorly-known ecological communities				
P2	Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, un-allocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation.				
	Poorly known ecological communities				
	Communities that are known from several to many occurrences, a significant number or area of				
	which are not under threat of habitat destruction or degradation or:				
P3	Communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under				
15	imminent threat, or;				
	Communities made up of large, and/or widespread occurrences, that may or not be represented				
	in the reserve system, but are under threat of modification across much of their range from				
	processes such as grazing and inappropriate fire regimes.				
P4	Ecological communities that are adequately known, rare but not threatened or meet criteria for near threatened, or that have been recently removed from the threatened list. These				
	communities require regular monitoring.				
	Conservation Dependent ecological communities				
P5	Ecological communities that are not threatened but are subject to a specific conservation				
15	program, the cessation of which would result in the community becoming threatened within five				
	years.				

APPENDIX B: NATUREMAP SEARCH RESULTS (DBCA, 2023)

Vascular Flora

Class	Genus	Taxon	Conservation Status
DICOT	Abutilon	Abutilon cryptopetalum	
DICOT	Acacia	Acacia acuminata	
DICOT	Acacia	Acacia ancistrophylla var. ancistrophylla	
DICOT	Acacia	Acacia andrewsii	
DICOT	Acacia	Acacia aneura	
DICOT	Acacia	Acacia aneura group	
DICOT	Acacia	Acacia aptaneura	
DICOT	Acacia	Acacia beauverdiana	
DICOT	Acacia	Acacia burkittii	
DICOT	Acacia	Acacia calcarata	
DICOT	Acacia	Acacia camptoclada	
DICOT	Acacia	Acacia chrysella	
DICOT	Acacia	Acacia coatesii	P1
DICOT	Acacia	Acacia collegialis	
DICOT	Acacia	Acacia colletioides	
DICOT	Acacia	Acacia coolgardiensis	
DICOT	Acacia	Acacia dempsteri	
DICOT	Acacia	Acacia desertorum var. desertorum	
DICOT	Acacia	Acacia donaldsonii	
DICOT	Acacia	Acacia duriuscula	
DICOT	Acacia	Acacia effusifolia	
DICOT	Acacia	Acacia enervia subsp. explicata	
DICOT	Acacia	Acacia eremophila var. eremophila	
DICOT	Acacia	Acacia erinacea	
DICOT	Acacia	Acacia gibbosa	
DICOT	Acacia	Acacia hemiteles	
DICOT	Acacia	Acacia inaequiloba	
DICOT	Acacia		
DICOT	Acacia	Acacia inceana subsp. inceana	
-	Acacia	Acacia jennerae	
DICOT	Acacia	Acacia jensenii	
DICOT		Acacia kalgoorliensis	D2
DICOT	Acacia	Acacia kerryana	P2
DICOT	Acacia	Acacia lasiocalyx	
DICOT	Acacia	Acacia leptopetala	
DICOT	Acacia	Acacia ligulata	
DICOT	Acacia	Acacia longispinea	
DICOT	Acacia	Acacia masliniana	
DICOT	Acacia	Acacia merrallii	
DICOT	Acacia	Acacia mulganeura	
DICOT	Acacia	Acacia multispicata	
DICOT	Acacia	Acacia murrayana	
DICOT	Acacia	Acacia nyssophylla	
DICOT	Acacia	Acacia oswaldii	
DICOT	Acacia	Acacia oswaldii (Narrow phyllode variant)	
DICOT	Acacia	Acacia pachypoda	
DICOT	Acacia	Acacia Plurinerves - Microneurae Phyllodes 8-nerved, terete	(Miscellaneous)
DICOT	Acacia	Acacia prainii	
DICOT	Acacia	Acacia pritzeliana	
DICOT	Acacia	Acacia pycnantha	
DICOT	Acacia	Acacia rendlei	
DICOT	Acacia	Acacia resinimarginea	

Class	Genus	Taxon
DICOT	Acacia	Acacia resinistipulea
DICOT	Acacia	Acacia sclerosperma subsp. sclerosp
DICOT	Acacia	Acacia sericocarpa
DICOT	Acacia	Acacia sibirica
DICOT	Acacia	Acacia sp. Mt Jackson (B. Ryan 176)
DICOT	Acacia	Acacia sp. narrow phyllode (B.R. Ma
DICOT	Acacia	Acacia sp. Norseman (B. Archer 155
DICOT	Acacia	Acacia synchronicia
DICOT	Acacia	Acacia tetragonophylla
DICOT	Acacia	Acacia warramaba
DICOT	Acacia	Acacia websteri
DICOT	Acacia	Acacia xerophila var. brevior
DICOT	Acacia	Acacia yorkrakinensis subsp. acrita
DICOT	Actinobole	Actinobole uliginosum
DICOT	Aizoon	Actinobole diiginosam Aizoon pubescens
DICOT		1
-	Alectryon	Alectryon oleifolius subsp. canescen
DICOT	Alhagi	Alhagi camelorum
DICOT	Alhagi	Alhagi maurorum
DICOT	Allocasuarina	Allocasuarina acutivalvis subsp. acut
DICOT	Allocasuarina	Allocasuarina acutivalvis subsp. acut
DICOT	Allocasuarina	Allocasuarina campestris
DICOT	Allocasuarina	Allocasuarina campestris / eriochlam
DICOT	Allocasuarina	Allocasuarina cf. campestris
DICOT	Allocasuarina	Allocasuarina eriochlamys subsp. eri
DICOT	Allocasuarina	Allocasuarina eriochlamys subsp. gro
DICOT	Allocasuarina	Allocasuarina helmsii
DICOT	Alternanthera	Alternanthera denticulata
DICOT	Alternanthera	Alternanthera nodiflora
DICOT	Aluta	Aluta aspera subsp. aspera
DICOT	Alyogyne	Alyogyne pinoniana var. leptochlamy
DICOT	Alyssum	Alyssum linifolium
DICOT	Alyxia	Alyxia buxifolia
DICOT	Alyxia	Alyxia tetanifolia
DICOT	Amaranthus	Amaranthus viridis
DICOT	Amyema	Amyema benthamii
DICOT	Amyema	Amyema gibberula var. gibberula
DICOT	Amyema	Amyema linophylla subsp. linophylla
DICOT	Amyema	Amyema miquelii
DICOT	Amyema	Amyema preissii
DICOT	Androcalva	Androcalva aphrix
DICOT	Androcalva	Androcalva luteiflora
DICOT	Angianthus	Angianthus prostratus
DICOT	Angianthus	Angianthus tomentosus
DICOT	Anthotroche	Anthotroche pannosa
DICOT	Arabidella	Arabidella chrysodema
DICOT	Arabidella	Arabidella trisecta
		Arctotheca calendula
DICOT	Arctotheca	AICIOLITECA CAIETIUUIA
DICOT		
DICOT DICOT	Argemone	Argemone ochroleuca subsp. ochrole
DICOT		Argemone ochroleuca subsp. ochrole Asclepias curassavica Asteridea athrixioides



	Conservation Status
erma	
slin 7831)	
4)	
	P1
3	
. ,.	
ivalvis	
ivalvis / prinsepiana	
ys subsp. grossa	
ochlamys	
ossa	P3
S	
	D2
	P3
	P3
euca	

BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation Status
DICOT	Astus	Astus subroseus	
DICOT	Atriplex	Atriplex acutibractea	
DICOT	Atriplex	Atriplex acutibractea subsp. acutibractea	
DICOT	Atriplex	Atriplex acutibractea subsp. karoniensis	
DICOT	Atriplex	Atriplex amnicola	
DICOT	Atriplex	Atriplex codonocarpa	
DICOT	Atriplex	Atriplex eardleyae	
DICOT	Atriplex	Atriplex bolocarpa	
DICOT	Atriplex	Atriplex lindleyi subsp. inflata	
DICOT	Atriplex	Atriplex nana	
DICOT	Atriplex	Atriplex nummularia	
DICOT	Atriplex	Atriplex nummularia subsp. spathulata	
DICOT	Atriplex	Atriplex pumilio	
DICOT	Atriplex	Atriplex quadrivalvata var. quadrivalvata	
DICOT	Atriplex	Atriplex semibaccata	
DICOT	Atriplex	Atriplex sp. indet.	
DICOT	Atriplex	Atriplex spongiosa	
DICOT	Atriplex	Atriplex stipitata	
DICOT	Atriplex	Atriplex suberecta	
	•	•	
DICOT	Atriplex	Atriplex vesicaria	
DICOT	Baeckea	Baeckea elderiana	
DICOT	Baeckea	Baeckea sp. Koonadgin (B.L. Rye & M.E. Trudgen BLR 241137)	
DICOT	Banksia	Banksia elderiana	
DICOT	Beyeria	Beyeria lechenaultii	
DICOT	Beyeria	Beyeria sulcata var. brevipes	
DICOT	Beyeria	Beyeria sulcata var. sulcata	
DICOT	Billardiera	Billardiera fusiformis	
DICOT	Boerhavia	Boerhavia coccinea	
DICOT	Boronia	Boronia coerulescens	
DICOT	Boronia	Boronia coerulescens subsp. spinescens	
DICOT	Boronia	Boronia ternata	
DICOT	Bossiaea	Bossiaea cucullata	
DICOT	Brachychiton	Brachychiton gregorii	
DICOT	Brachyscome	Brachyscome ciliaris	
DICOT	Brachyscome	Brachyscome iberidifolia	
DICOT	Brachyscome	Brachyscome lineariloba	
DICOT	Brachyscome	Brachyscome perpusilla	
DICOT	Brachysola	Brachysola coerulea	
DICOT	Brassica	Brassica tournefortii	
DICOT	Brunonia	Brunonia australis	
DICOT	Brunonia	Brunonia sp. Goldfields (K.R. Newbey 6044)	
DICOT	Bryophyllum	Bryophyllum delagoense	
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DICOT	Buglossoides	Buglossoides arvensis	
DICOT	Calandrinia	Calandrinia calyptrata	
DICOT	Calandrinia	Calandrinia eremaea	
DICOT	Calandrinia	Calandrinia lefroyensis	P1
DICOT	Calandrinia	Calandrinia polyandra	
DICOT	Calandrinia	Calandrinia sculpta	
DICOT	Calandrinia	Calandrinia sp. Blackberry (D.M. Porter 171)	
DICOT	Calandrinia	Calandrinia translucens	
DICOT	Calothamnus	Calothamnus gilesii	
DICOT	Calotis	Calotis breviradiata	
DICOT	Calotis	Calotis hispidula	
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	Calotis	Calotis multicaulis	
DICOT	Calytrix	Calytrix amethystina	
DICOT	Calytrix	Calytrix birdii	
DICOT	Capsella	Capsella bursa-pastoris	
DICOT	Carrichtera	Carrichtera annua	
DICOT	Carthamus	Carthamus lanatus	
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Class	Genus	Taxon
DICOT	Casuarina	Casuarina pauper
DICOT	Centaurea	Centaurea melitensis
DICOT	Cephalipterum	Cephalipterum drummondii
DICOT	Ceratogyne	Ceratogyne obionoides
DICOT	Chamelaucium	Chamelaucium ciliatum
DICOT	Chenopodium	Chenopodium album
DICOT	Chenopodium	Chenopodium curvispicatum
DICOT	Chenopodium	Chenopodium murale
DICOT	Chorizema	Chorizema racemosum
DICOT	Chrysocephalum	Chrysocephalum apiculatum subsp. r
DICOT	Chrysocephalum	Chrysocephalum puteale
DICOT	Cichorium	Cichorium intybus
DICOT	Citrullus	Citrullus colocynthis
DICOT	Codonocarpus	Codonocarpus cotinifolius
DICOT	Comesperma	Comesperma drummondii
DICOT	Comesperma	Comesperma scoparium
DICOT	Commersonia	Commersonia craurophylla
DICOT	Conospermum	Conospermum stoechadis subsp. sto
DICOT	Convolvulus	Convolvulus clementii
DICOT	Convolvulus	Convolvulus remotus
DICOT	Conyza	Convza bonariensis
DICOT		,
DICOT	Conyza Coopernookia	Conyza sumatrensis
		Coopernookia strophiolata
DICOT	Cotula	Cotula australis
DICOT	Craspedia	Craspedia haplorrhiza
DICOT	Crassula	Crassula colorata var. acuminata
DICOT	Crassula	Crassula colorata var. colorata
DICOT	Crassula	Crassula tetramera
DICOT	Cratystylis	Cratystylis conocephala
DICOT	Cratystylis	Cratystylis conocephala x microphylla
DICOT	Cratystylis	Cratystylis microphylla
DICOT	Cratystylis	Cratystylis subspinescens
DICOT	Cryptandra	Cryptandra aridicola
DICOT	Cryptandra	Cryptandra graniticola
DICOT	Cryptandra	Cryptandra pungens
DICOT	Cryptandra	Cryptandra recurva
DICOT	Cryptandra	Cryptandra sp. indet.
DICOT	Cucumis	Cucumis myriocarpus subsp. myrioca
DICOT	Cullen	Cullen cinereum
DICOT	Cullen	Cullen discolor
DICOT	Cullen	Cullen leucanthum
DICOT	Cyanostegia	Cyanostegia angustifolia
DICOT	Cyanostegia	Cyanostegia microphylla
DICOT	Cyathostemon	Cyathostemon divaricatus
DICOT	Cyathostemon	Cyathostemon verrucosus
DICOT	Cylindropuntia	Cylindropuntia fulgida var. mamillata
DICOT	Cylindropuntia	Cylindropuntia imbricata
DICOT	Cylindropuntia	Cylindropuntia kleiniae
DICOT	Cylindropuntia	Cylindropuntia tunicata
DICOT	Dampiera	Dampiera eriocephala
DICOT	Dampiera	Dampiera latealata
DICOT	Dampiera	Dampiera lavandulacea
DICOT	Dampiera	Dampiera luteiflora
DICOT	Dampiera	Dampiera plumosa
DICOT	Dampiera	Dampiera stenostachya
DICOT	Dampiera	Dampiera tenuicaulis
DICOT	Dampiera	Dampiera tenuicaulis var. curvula
DICOT	Dampiera	Dampiera tenuicaulis var. curvua Dampiera tenuicaulis var. tenuicaulis
DICOT	Darwinia	Darwinia sp. Karonie (K. Newbey 850
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DICOT	Dasymalla	Dasymalla terminalis

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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation Status
DICOT	Datura	Datura ferox	Childe
DICOT	Datura	Datura inoxia	
DICOT	Daucus	Daucus glochidiatus	
DICOT	Daviesia	Daviesia aphylla	
DICOT	Daviesia	Daviesia croniniana	
DICOT	Daviesia	Daviesia grahamii	
DICOT	Daviesia	Daviesia nematophylla	
DICOT	Daviesia	Daviesia pachyloma	
DICOT	Dicrastylis	Dicrastylis brunnea	
DICOT	Dicrastylis	Dicrastylis parvifolia	
DICOT	Didymanthus	Didymanthus roei	
DICOT	Dillwynia	Dillwynia sp. Coolgardie (V.E. Sands 637.3.1)	
DICOT	Diocirea	Diocirea acutifolia	P3
DICOT	Diocirea	Diocirea violacea	
DICOT	Diocirea	Diocirea x Eremophila violacea x clavata	
DICOT	Disphyma	Disphyma crassifolium subsp. clavellatum	
DICOT	. ,		
	Dissocarpus	Dissocarpus paradoxus	
DICOT	Dodonaea	Dodonaea adenophora	
DICOT	Dodonaea	Dodonaea ambiyophylla	
DICOT	Dodonaea	Dodonaea boroniifolia	
DICOT	Dodonaea	Dodonaea cf. microzyga/adenophora	
DICOT	Dodonaea	Dodonaea lobulata	
DICOT	Dodonaea	Dodonaea lobulata x microzyga	
DICOT	Dodonaea	Dodonaea microzyga	
DICOT	Dodonaea	Dodonaea microzyga var. acrolobata	
DICOT	Dodonaea	Dodonaea stenozyga	
DICOT	Dodonaea	Dodonaea viscosa subsp. angustissima	
DICOT	Drosera	Drosera sp. Branched styles (S.C. Coffey 193)	
DICOT	Drummondita	Drummondita hassellii	
DICOT	Duboisia	Duboisia hopwoodii	
DICOT	Dysphania	Dysphania cristata	
DICOT	Dysphania	Dysphania kalpari	
DICOT	Dysphania	Dysphania pumilio	
DICOT	Echium	Echium plantagineum	
DICOT	Einadia	Einadia nutans subsp. eremaea	
DICOT	Elachanthus	Elachanthus pusillus	P2
DICOT	Enchylaena	Enchylaena tomentosa	
DICOT	Enchylaena	Enchylaena tomentosa var. tomentosa	
DICOT	Enekbatus	Enekbatus eremaeus	
DICOT	Eremophila	Eremophila alternifolia	
DICOT	Eremophila	Eremophila caerulea subsp. caerulea	
DICOT	Eremophila	Eremophila caerulea subsp. caerulea Eremophila caerulea subsp. merrallii	P4
DICOT	Eremophila	Eremophila caperata	
DICOT	Eremophila	Eremophila caperata Eremophila clarkei	
DICOT	Eremophila	Eremophila clavata	
DICOT	Eremophila	Eremophila decipiens	
DICOT		Eremophila decipiens Eremophila decipiens subsp. decipiens	
DICOT	Eremophila		
	Eremophila	Eremophila dempsteri	
DICOT	Eremophila	Eremophila deserti	
DICOT	Eremophila	Eremophila drummondii	
DICOT	Eremophila	Eremophila georgei	
DICOT	Eremophila	Eremophila gibbosa	
DICOT	Eremophila	Eremophila glabra subsp. glabra	
DICOT	Eremophila	Eremophila granitica	
DICOT	Eremophila	Eremophila interstans subsp. interstans	
DICOT	Eremophila	Eremophila interstans subsp. virgata	
DICOT	Eremophila	Eremophila ionantha	
DICOT	Eremophila	Eremophila ionantha x scoparia	
DICOT	Eremophila	Eremophila longifolia	
DICOT	Eremophila	Eremophila maculata subsp. brevifolia	

Class	Genus	Taxon
DICOT	Eremophila	Eremophila miniata
DICOT	Eremophila	Eremophila oblonga
DICOT	Eremophila	Eremophila oldfieldii subsp. angustifo
DICOT	Eremophila	Eremophila oppositifolia subsp. angu
DICOT	Eremophila	Eremophila parvifolia subsp. auricam
DICOT	Eremophila	Eremophila parvifolia x scoparia
DICOT	Eremophila	Eremophila praecox
DICOT	Eremophila	Eremophila psilocalyx
DICOT	Eremophila	Eremophila pustulata
DICOT	Eremophila	Eremophila rugosa
DICOT	Eremophila	Eremophila saligna
DICOT	Eremophila	Eremophila scoparia
DICOT	Eremophila	Eremophila serrulata
DICOT	Eremophila	Eremophila subfloccosa subsp. lanat
DICOT	Eremophila	Eremophila veronica
DICOT	Eremophila	Eremophila xantholaema
DICOT	Ericomyrtus	Ericomyrtus serpyllifolia
DICOT	Eriochiton	Eriochiton sclerolaenoides
DICOT	Erodium	Erodium cicutarium
DICOT	Erodium	Erodium crinitum
DICOT	Erodium	Erodium cygnorum
DICOT	Erymophyllum	Erymophyllum glossanthus
DICOT	Erymophyllum	Erymophyllum ramosum
DICOT	Erymophyllum	Erymophyllum ramosum subsp. ramo
DICOT	Erythrostemon	Erythrostemon gilliesii
DICOT	Eucalyptus	Eucalyptus calycogona subsp. calyco
DICOT	Eucalyptus	Eucalyptus campaspe
DICOT	Eucalyptus	Eucalyptus celastroides
DICOT	Eucalyptus	Eucalyptus celastroides subsp. celas
DICOT	Eucalyptus	Eucalyptus cf. ravida
DICOT	Eucalyptus	Eucalyptus clelandii
DICOT	Eucalyptus	Eucalyptus clelandiorum
DICOT	Eucalyptus	Eucalyptus clelandiorum x torquata
DICOT	Eucalyptus	Eucalyptus comitae-vallis
DICOT	Eucalyptus	Eucalyptus concinna
DICOT	Eucalyptus	Eucalyptus concinna / planipes
DICOT	Eucalyptus	Eucalyptus corrugata
DICOT	Eucalyptus	Eucalyptus cylindrocarpa
DICOT	Eucalyptus	Eucalyptus cylindrocarpa subsp. sem
DICOT	Eucalyptus	Eucalyptus distuberosa subsp. distub
DICOT	Eucalyptus Eucalyptus	Eucalyptus eremophila
DICOT	Eucalyptus	Eucalyptus eremophila subsp. eremo Eucalyptus flocktoniae
DICOT	Eucalyptus	Eucalyptus nockioniae Eucalyptus fraseri subsp. fraseri
DICOT	Eucalyptus	Eucalyptus gracilis
DICOT	Eucalyptus	Eucalyptus griffithsii
DICOT	Eucalyptus	Eucalyptus poristes
DICOT	Eucalyptus	Eucalyptus incrassata
DICOT	Eucalyptus	Eucalyptus jutsonii subsp. jutsonii
DICOT	Eucalyptus	Eucalyptus leptophylla
DICOT	Eucalyptus	Eucalyptus leptopoda subsp. subluta
DICOT	Eucalyptus	Eucalyptus lesouefii
DICOT	Eucalyptus	Eucalyptus livida
DICOT	Eucalyptus	Eucalyptus Iongicornis
DICOT	Eucalyptus	Eucalyptus longissima
DICOT	Eucalyptus	Eucalyptus loxophleba subsp. lissoph
DICOT	Eucalyptus	Eucalyptus oleosa
DICOT	Eucalyptus	Eucalyptus oleosa subsp. oleosa
DICOT	Eucalyptus	Eucalyptus oleosa var. obtusa
DICOT	Eucalyptus	Eucalyptus oleosa var. repleta
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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation Status
DICOT	Eucalyptus	Eucalyptus petraea	
DICOT	Eucalyptus	Eucalyptus pileata	
DICOT	Eucalyptus	Eucalyptus planipes	
DICOT	Eucalyptus	Eucalyptus platycorys	
DICOT	Eucalyptus	Eucalyptus prolixa	
DICOT	Eucalyptus	Eucalyptus ravida	
DICOT	Eucalyptus	Eucalyptus rigidula	
DICOT	Eucalyptus	Eucalyptus salicola	
DICOT	Eucalyptus	Eucalyptus salmonophloia	
DICOT	Eucalyptus	Eucalyptus salubris	
DICOT	Eucalyptus	Eucalyptus sp. Mulga Rock (K.D. Hill & L.A.S. Johnson KH 2668)	
DICOT	Eucalyptus	Eucalyptus sp. Southern smooth-bark (D. Nicolle & M. French DN 6	016)
DICOT	••	Eucalyptus sp. Southern smooth-bark (D. Nicolie & M. French Div os	910)
	Eucalyptus		
DICOT	Eucalyptus	Eucalyptus tenera	
DICOT	Eucalyptus	Eucalyptus torquata	
DICOT	Eucalyptus	Eucalyptus transcontinentalis	
DICOT	Eucalyptus	Eucalyptus trichopoda	
DICOT	Eucalyptus	Eucalyptus urna	
DICOT	Eucalyptus	Eucalyptus websteriana	
DICOT	Eucalyptus	Eucalyptus websteriana subsp. norsemanica	P1
DICOT	Eucalyptus	Eucalyptus websteriana subsp. websteriana	
DICOT	Eucalyptus	Eucalyptus x brachyphylla	P4
DICOT	Eucalyptus	Eucalyptus yilgarnensis	
DICOT	Euphorbia	Euphorbia drummondii	
DICOT	Euphorbia	Euphorbia multifaria	
DICOT	Euphorbia	Euphorbia porcata	
DICOT	Euphorbia	Euphorbia tannensis subsp. eremophila	
DICOT	•		
DICOT	Euryomyrtus	Euryomyrtus maidenii	
	Exocarpos	Exocarpos aphyllus	
DICOT	Frankenia	Frankenia cinerea	
DICOT	Frankenia	Frankenia desertorum	
DICOT	Frankenia	Frankenia glomerata	P4
DICOT	Frankenia	Frankenia interioris	
DICOT	Frankenia	Frankenia interioris var. interioris	
DICOT	Frankenia	Frankenia interioris var. parviflora	
DICOT	Frankenia	Frankenia pauciflora var. pauciflora	
DICOT	Frankenia	Frankenia setosa	
DICOT	Frankenia	Frankenia tetrapetala	
DICOT	Gastrolobium	Gastrolobium graniticum	VU
DICOT	Gazania	Gazania linearis	
DICOT	Gilberta	Gilberta tenuifolia	
DICOT	Glandularia	Glandularia aristigera	
DICOT	Glischrocaryon	Glischrocaryon angustifolium	
DICOT	Glischrocaryon	Glischrocaryon flavescens	
DICOT	Glycyrrhiza	Glycyrrhiza acanthocarpa	
DICOT	Gnephosis	Gnephosis brevifolia	
DICOT	Gnephosis	Gnephosis macrocephala	
DICOT	Gnephosis	Gnephosis tenuissima	
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DICOT	Gompholobium	Gompholobium gompholobioides	
DICOT	Gonocarpus	Gonocarpus confertifolius var. helmsii	
DICOT	Goodenia	Goodenia cf. xanthosperma	
DICOT	Goodenia	Goodenia concinna	
DICOT	Goodenia	Goodenia dyeri	
DICOT	Goodenia	Goodenia elderi	
DICOT	Goodenia	Goodenia havilandii	
DICOT	Goodenia	Goodenia mimuloides	
DICOT	Goodenia	Goodenia pusilliflora	
DICOT	Goodenia	Goodenia salina	P2
DICOT	Goodenia	Goodenia xanthosperma	
DICOT	Grevillea	Grevillea acacioides	

Class	Genus	Taxon
DICOT	Grevillea	Grevillea acuaria
DICOT	Grevillea	Grevillea beardiana
DICOT	Grevillea	Grevillea cagiana
DICOT	Grevillea	Grevillea didymobotrya subsp. didymo
DICOT	Grevillea	Grevillea excelsior
DICOT	Grevillea	Grevillea georgeana
DICOT	Grevillea	Grevillea haplantha subsp. haplantha
DICOT	Grevillea	Grevillea hookeriana subsp. apiciloba
DICOT	Grevillea	Grevillea hookeriana subsp. hookeriar
DICOT	Grevillea	Grevillea huegelii
DICOT	Grevillea	Grevillea nematophylla subsp. nemato
DICOT	Grevillea	Grevillea obliquistigma subsp. obliquis
DICOT	Grevillea	Grevillea oligomera
DICOT	Grevillea	Grevillea oncogyne
DICOT	Grevillea	Grevillea paniculata
DICOT	Grevillea	Grevillea sarissa subsp. bicolor
DICOT	Grevillea	Grevillea sarissa subsp. sarissa
DICOT	Grevillea	Grevillea teretifolia
DICOT	Grevillea	Grevillea uncinulata
DICOT	Gunniopsis	Gunniopsis quadrifida
DICOT	Gyrostemon	Gyrostemon racemiger
DICOT	Hakea	Hakea erecta
DICOT	Hakea	Hakea francisiana
DICOT	Hakea	Hakea minyma
DICOT	Hakea	Hakea rigida
DICOT	Halgania	Halgania andromedifolia
DICOT	Halgania	Halgania cyanea var. Allambi Stn (B.V
DICOT	Halgania	Halgania cyanea var. Charleville (R.W
DICOT	Halgania	Halgania integerrima
DICOT	Haloragis	Haloragis gossei
DICOT	Haloragis	Haloragis maierae
DICOT	Haloragis	Haloragis trigonocarpa
DICOT	Halosarcia	Halosarcia chartacea
DICOT	Hannafordia	Hannafordia bissillii subsp. latifolia
DICOT	Helianthus	Helianthus annuus
DICOT	Heliotropium	Heliotropium europaeum
DICOT	Heliotropium	Heliotropium supinum
DICOT	Helipterum	Helipterum craspedioides
DICOT	Hemiphora	Hemiphora elderi
DICOT	Hibbertia	Hibbertia ancistrophylla
DICOT	Hibbertia	Hibbertia glomerosa var. glomerosa
DICOT	Hibiscus	Hibiscus solanifolius
DICOT	Homalocalyx	Homalocalyx thryptomenoides
DICOT	Hovea	Hovea acanthoclada
DICOT	Hyalosperma	Hyalosperma demissum
DICOT	Hyalosperma	Hyalosperma glutinosum
DICOT	Hyalosperma	Hyalosperma glutinosum subsp. glutin
DICOT	Hyalosperma	Hyalosperma zacchaeus
DICOT	Hybanthus	Hybanthus epacroides
DICOT	Hybanthus	Hybanthus floribundus subsp. curvifoli
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DICOT	Hydrocotyle	Hydrocotyle pilifera var. glabrata
DICOT	Hypertelis	Hypertelis cerviana
DICOT	Hysterobaeckea	Hysterobaeckea petraea
DICOT	Ipomoea	Ipomoea calobra
DICOT	Isoetopsis	Isoetopsis graminifolia
DICOT	Isotoma	Isotoma petraea
DICOT	Jacksonia	Jacksonia arida
DICOT	Kennedia	Kennedia prorepens
DICOT	Kippistia	Kippistia suaedifolia
DICOT	Lachnostachys	Lachnostachys coolgardiensis

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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation
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DICOT	Lactuca	Lactuca serriola forma serriola	
DICOT	Lantana	Lantana camara	
DICOT	Lawrencella	Lawrencella rosea	
DICOT	Lawrencia	Lawrencia glomerata	
DICOT	Lawrencia	Lawrencia helmsii	
DICOT	Lawrencia	Lawrencia repens	
DICOT	Lawrencia	Lawrencia squamata	
DICOT	Lechenaultia	Lechenaultia brevifolia	
DICOT	Leiocarpa	Leiocarpa websteri	
DICOT	Lemooria	Lemooria burkittii	
DICOT	Lepidium	Lepidium africanum	
DICOT	Lepidium	Lepidium fasciculatum	P3
DICOT	Lepidium	Lepidium merrallii	P2
DICOT	Lepidium	Lepidium oxytrichum	
DICOT	Lepidium	Lepidium papillosum	
DICOT	Lepidium	Lepidium phlebopetalum	
DICOT	Leptosema	Leptosema cervicorne	
DICOT	Leptosema	Leptosema daviesioides	
DICOT	Leptospermum	Leptospermum fastigiatum	
DICOT	Leptospermum	Leptospermum subtenue	
DICOT	Leucochrysum	Leucochrysum fitzgibbonii	
DICOT	Leucopogon	Leucopogon hamulosus	
DICOT	Leucopogon	Leucopogon sp. Boorabbin (K.R. Newbey 8374)	
DICOT	Leucopogon	Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	
DICOT	Leucopogon	Leucopogon sp. Coolgardie (M. Hislop & F. Hort MH 3197)	
DICOT	Leucopogon	Leucopogon sp. Kambalda (J. Williams s.n. PERTH 07305028)	
DICOT	Limonium	Limonium sinuatum	
DICOT	Lobelia	Lobelia cf. winfrindae	
DICOT	Lotus	Lotus cruentus	
DICOT	Lycium	Lycium australe	
DICOT	Lycium	Lycium ferocissimum	
DICOT	Lysiana	Lysiana casuarinae	
DICOT	Lysimachia	Lysimachia arvensis	
DICOT	Lythrum	Lythrum hyssopifolia	
DICOT	Maireana	Maireana aff. planifolia	
DICOT	Maireana	Maireana amoena	
DICOT	Maireana	Maireana appressa	
DICOT	Maireana	Maireana atkinsiana	
DICOT	Maireana	Maireana brevifolia	
DICOT	Maireana	Maireana carnosa	
DICOT	Maireana	Maireana erioclada	
DICOT	Maireana	Maireana eriosphaera	
DICOT	Maireana	Maireana georgei	
DICOT	Maireana	Maireana glomerifolia	
DICOT	Maireana	Maireana integra	
DICOT	Maireana	Maireana marginata	
DICOT	Maireana	Maireana oppositifolia	
DICOT	Maireana	Maireana pentagona	
DICOT	Maireana	Maireana pentatropis	
DICOT	Maireana	Maireana platycarpa	
DICOT	Maireana	Maireana pyramidata	
DICOT	Maireana	Maireana radiata	
DICOT	Maireana	Maireana sedifolia	
DICOT	Maireana	Maireana suaedifolia	
DICOT	Maireana	Maireana tomentosa	
DICOT	Maireana	Maireana tomentosa subsp. tomentosa	
DICOT	Maireana	, Maireana trichoptera	
DICOT	Maireana	Maireana triptera	
DICOT	Maireana	Maireana turbinata	
DICOT	Malleostemon	Malleostemon peltiger	
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Class	Genus	Taxon
DICOT	Malleostemon	Malleostemon roseus
DICOT	Malleostemon	Malleostemon tuberculatus
DICOT	Malva	Malva parviflora
DICOT	Malva	Malva weinmanniana
DICOT	Marianthus	Marianthus bicolor
DICOT	Marrubium	Marrubium vulgare
DICOT	Marsdenia	Marsdenia australis
DICOT	Medicago	Medicago laciniata
DICOT	Medicago	Medicago minima
DICOT	Medicago	Medicago polymorpha
DICOT	Melaleuca	Melaleuca acuminata subsp. acumina
DICOT	Melaleuca	Melaleuca calyptroides
DICOT	Melaleuca	Melaleuca coccinea
DICOT	Melaleuca	Melaleuca cordata
DICOT	Melaleuca	Melaleuca elliptica
DICOT	Melaleuca	Melaleuca fulgens / radula subsp. fulg
DICOT	Melaleuca	Melaleuca fulgens subsp. fulgens
DICOT	Melaleuca	Melaleuca halmaturorum
DICOT	Melaleuca	Melaleuca halmaturorum subsp. cymb
DICOT	Melaleuca	Melaleuca hamata
DICOT	Melaleuca	Melaleuca lanceolata
DICOT	Melaleuca	Melaleuca lateriflora
DICOT	Melaleuca	Melaleuca leiocarpa
DICOT	Melaleuca	Melaleuca macronychia subsp. macro
DICOT	Melaleuca	Melaleuca pauperiflora subsp. fastigia
DICOT	Melaleuca	Melaleuca sheathiana
DICOT	Melaleuca	Melaleuca uncinata
DICOT	Melaleuca	Melaleuca zeteticorum
DICOT	Melia	Melia azedarach
DICOT	Mesembryanthemum	Mesembryanthemum crystallinum
DICOT	Mesembryanthemum	Mesembryanthemum nodiflorum
DICOT	Micromyrtus	Micromyrtus erichsenii
DICOT	Micromyrtus	Micromyrtus monotaxis
DICOT	Micromyrtus	Micromyrtus stenocalyx
DICOT	Millotia	Milotia myosotidifolia
DICOT	Millotia	Millotia perpusilla
DICOT	Minuria	Minuria cunninghamii
DICOT	Minuria	Minuria gardneri
DICOT	Minuria	Minuria leptophylla
DICOT	Mirbelia	Mirbelia depressa
DICOT	Mirbelia	Mirbelia microphylla
DICOT	Mirbelia	Mirbelia ramulosa
DICOT	Mirbelia	Mirbelia seorsifolia
DICOT	Monoculus	Monoculus monstrosus
DICOT	Monotaxis	
DICOT	Monotaxis	Monotaxis grandiflora var. obtusifolia Monotaxis luteiflora
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	Myoporum	Myoporum montanum
DICOT	Myoporum	Myoporum platycarpum subsp. platyc
DICOT	Myosurus	Myosurus australis
DICOT	Myriocephalus	Myriocephalus pygmaeus
DICOT	Nicotiana	Nicotiana glauca
DICOT	Nicotiana	Nicotiana occidentalis subsp. obliqua
DICOT	Nicotiana	Nicotiana rotundifolia
DICOT	Nitraria	Nitraria billardierei
DICOT	Notisia	Notisia intonsa
DICOT	Olearia	Olearia exiguifolia
DICOT	Olearia	Olearia homolepis
DICOT	Olearia	Olearia incana
DICOT	Olearia	Olearia muelleri
DICOT	Olearia	Olearia pimeleoides

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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment Class Genus Taxon

Class	Genus	issance Flora/Vegetation and Basic Fauna Assessment Taxon	Conservation
DIGOT		<u></u>	Status
DICOT	Olearia	Olearia rudis	
DICOT	Olearia	Olearia sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)	
DICOT	Olearia	Olearia subspicata	
DICOT	Oligocarpus	Oligocarpus calendulaceus	
DICOT	Omphalolappula	Omphalolappula concava	
DICOT	Oncosiphon	Oncosiphon suffruticosum	
DICOT	Opercularia	Opercularia vaginata	
DICOT	Opuntia	Opuntia elata	
DICOT	Opuntia	Opuntia ficus-indica Orbea variegata	
DICOT	Orbea	Orbea variegata Orianthera flaviflora	
DICOT	Orianthera Orianthera	Orianthera tortuosa	
DICOT	Oxalis	Oriantiera tonuosa Oxalis bowiei	
DICOT	Oxalis	Oxalis powier Oxalis pes-caprae	
DICOT	Ozothamnus	Ozothamnus cassiope	
DICOT	Papaver	Papaver hybridum	
DICOT	Persicaria	Persicaria prostrata	
DICOT	Persoonia	Persoonia saundersiana	
DICOT	Petalostylis	Petalostylis cassioides	
DICOT	Petrophile	Petrophile arcuata	
DICOT	Petrophile	Petrophile seminuda	
DICOT	Phebalium	Phebalium appressum	P1
DICOT	Phebalium	Phebalium canaliculatum	11
DICOT	Phebalium	Phebalium canaliculatum (hybrid)	
DICOT	Phebalium	Phebalium canaliculatum (tybita)	
DICOT	Phebalium	Phebalium clavatum	P2
DICOT	Phebalium	Phebalium clavatum - filifolium ?	12
DICOT	Phebalium	Phebalium filifolium	
DICOT	Phebalium	Phebalium laevigatum	
DICOT	Phebalium	Phebalium lepidotum	
DICOT	Phebalium	Phebalium tuberculosum	
DICOT	Philotheca	Philotheca tomentella	
DICOT	Phlegmatospermum	Phlegmatospermum eremaeum	P3
DICOT	Phyla	Phyla canescens	
DICOT	Phyllangium	Phyllangium sulcatum	
DICOT	Physopsis	Physopsis viscida	
DICOT	Pimelea	Pimelea angustifolia	
DICOT	Pimelea	Pimelea microcephala subsp. microcephala	
DICOT	Pimelea	Pimelea spiculigera var. thesioides	
DICOT	Pittosporum	Pittosporum angustifolium	
DICOT	Pityrodia	Pityrodia lepidota	
DICOT	Plantago	Plantago debilis	
DICOT	Plantago	Plantago drummondii	
DICOT	Plantago	Plantago sp. Mt Magnet (A.S. George 6793)	
DICOT	Platysace	Platysace effusa	
DICOT	Platysace	Platysace trachymenioides	
DICOT	Podolepis	Podolepis aristata subsp. affinis	
DICOT	Podolepis	Podolepis canescens	
DICOT	Podolepis	Podolepis capillaris	
DICOT	Podolepis	Podolepis lessonii	
DICOT	Podolepis	Podolepis rugata	
DICOT	Podotheca	Podotheca wilsonii	
DICOT	Pogonolepis	Pogonolepis muelleriana	
DICOT	Polygonum	Polygonum aviculare	
DICOT	Pomaderris	Pomaderris forrestiana	
DICOT	Portulaca	Portulaca oleracea	
DICOT	Portulacaria	Portulacaria afra	
DICOT	Proboscidea	Proboscidea louisianica	
DICOT	Prostanthera	Prostanthera althoferi subsp. althoferi	
DICOT	Prostanthera	Prostanthera campbellii	

Class	Genus	Taxon
DICOT	Prostanthera	Prostanthera grylloana
DICOT	Prostanthera	Prostanthera incurvata
DICOT	Psammomoya	Psammomoya choretroides
DICOT	Pterocaulon	Pterocaulon sphacelatum
DICOT	Ptilotus	Ptilotus aervoides
DICOT	Ptilotus	Ptilotus carlsonii
DICOT	Ptilotus	Ptilotus chortophytus
DICOT	Ptilotus	Ptilotus eremita
DICOT	Ptilotus	Ptilotus exaltatus
DICOT	Ptilotus	Ptilotus exaltatus var. villosus
DICOT	Ptilotus	Ptilotus gaudichaudii
DICOT	Ptilotus	Ptilotus gaudichaudii var. parviflorus
DICOT	Ptilotus	Ptilotus grandiflorus
DICOT	Ptilotus	Ptilotus helichrysoides
DICOT	Ptilotus	Ptilotus holosericeus
DICOT	Ptilotus	Ptilotus obovatus
DICOT	Ptilotus	Ptilotus polystachyus
DICOT	Ptilotus	Ptilotus procumbens
DICOT	Radyera	Radyera farragei
DICOT	Rhagodia	Rhagodia drummondii
DICOT	Rhagodia	Rhagodia eremaea
DICOT	Rhodanthe	Rhodanthe battii
DICOT	Rhodanthe	Rhodanthe cf. oppositifolia
DICOT	Rhodanthe	Rhodanthe charsleyae
DICOT	Rhodanthe	Rhodanthe chlorocephala subsp. rose
DICOT	Rhodanthe	Rhodanthe chlorocephala subsp. sple
DICOT	Rhodanthe	Rhodanthe floribunda
DICOT	Rhodanthe	Rhodanthe haigii
DICOT	Rhodanthe	Rhodanthe laevis
DICOT	Rhodanthe	Rhodanthe manglesii
DICOT	Rhodanthe	Rhodanthe nullarborensis
DICOT	Rhodanthe	Rhodanthe oppositifolia subsp. oppos
DICOT	Rhodanthe	Rhodanthe pygmaea
DICOT	Rhodanthe	Rhodanthe rubella
DICOT	Rhodanthe	Rhodanthe stricta
	Rhodanthe	
		Rhodanthe uniflora Ricinocarpos sp. Eastern Goldfields (
DICOT	Ricinocarpos Ricinocarpos	Ricinocarpos stylosus
DICOT	1	Ricinocarpos velutinus
	Ricinocarpos	•
DICOT	Rinzia	Rinzia carnosa
DICOT	Roepera	Roepera aurantiaca subsp. aurantiac
DICOT	Roepera	Roepera compressa
DICOT	Roepera	Roepera eremaea
DICOT	Roepera	Roepera glauca
DICOT	Roepera	Roepera ovata
DICOT	Roepera	Roepera reticulata
DICOT	Roepera	Roepera tetraptera
DICOT	Roycea	Roycea divaricata
DICOT	Rumex	Rumex vesicarius
DICOT	Salsola	Salsola australis
DICOT	Salvia	Salvia reflexa
DICOT	Salvia	Salvia verbenaca
DICOT	Santalum	Santalum acuminatum
DICOT	Santalum	Santalum spicatum
DICOT	Scaevola	Scaevola spinescens
DICOT	Schenkia	Schenkia clementii
DICOT	Schinus	Schinus molle var. areira
DICOT	Schoenia	Schoenia cassiniana
DICOT	Schoenia	Schoenia filifolia subsp. filifolia
DICOT	Sclerolaena	Sclerolaena brevifolia

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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation Status
DICOT	Sclerolaena	Sclerolaena cuneata	
DICOT	Sclerolaena	Sclerolaena diacantha	
DICOT	Sclerolaena	Sclerolaena drummondii	
DICOT	Sclerolaena	Sclerolaena eurotioides	
DICOT	Sclerolaena	Sclerolaena fusiformis	
DICOT	Sclerolaena	Sclerolaena gardneri	
DICOT	Sclerolaena	Sclerolaena intricata	
DICOT	Sclerolaena	Sclerolaena obliquicuspis	
DICOT	Sclerolaena	Sclerolaena parviflora	
DICOT	Senecio	Senecio dolichocephalus	
DICOT	Senecio	Senecio glossanthus	
DICOT	Senecio	Senecio lacustrinus	
DICOT	Senecio	Senecio magnificus	
DICOT	Senecio	Senecio pinnatifolius	
DICOT	Senna	Senna artemisioides	
DICOT	Senna	Senna artemisioides subsp. filifolia	
DICOT	Senna	Senna artemisioides subsp. x artemisioides	
DICOT	Senna	Senna cardiosperma	
DICOT	Senna	Senna pleurocarpa	
DICOT	Senna	Senna pleurocarpa var. angustifolia	
DICOT	Senna	Senna pleurocarpa var. pleurocarpa	
DICOT	Senna	Senna stowardii	
DICOT	Seringia	Seringia velutina	
DICOT	Sida	Sida calyxhymenia	
DICOT	Sida	Sida intricata	
DICOT	Sida	Sida spodochroma	
DICOT	Sisymbrium	Sisymbrium irio	
DICOT	Sisymbrium	Sisymbrium orientale	
DICOT	Solanum	Solanum cleistogamum	
DICOT	Solanum	Solanum ellipticum	
DICOT	Solanum	Solanum esuriale	
DICOT	Solanum	Solanum hoplopetalum	
DICOT	Solanum	Solanum lasiophyllum	
DICOT	Solanum	Solanum nigrum	
DICOT	Solanum	Solanum nummularium	
DICOT	Solanum	Solanum petrophilum	
DICOT	Solanum	Solanum plicatile	
DICOT	Solanum	Solanum simile	
DICOT	Sonchus	Sonchus oleraceus	
DICOT	Spartothamnella	Spartothamnella sp. Helena & Aurora Range (P.G. Armstrong 155-	109)
DICOT	Spergularia	Spergularia diandra	
DICOT	Spergularia	Spergularia marina	
DICOT	Stackhousia	Stackhousia sp. Mt Keith (G. Cockerton & G. O'Keefe 11017)	
DICOT	Stenanthemum	Stenanthemum stipulosum	
DICOT	Stenopetalum	Stenopetalum filifolium	
DICOT	Stenopetalum	Stenopetalum lineare	
DICOT	Stenopetalum	Stenopetalum lineare var. lineare	
DICOT	Stenopetalum	Stenopetalum pedicellare	
DICOT	Streptoglossa	Streptoglossa liatroides	
DICOT	Stylidium	Stylidium arenicola	
DICOT	Stylidium	Stylidium choreanthum	P3
DICOT	Stylidium	Stylidium dielsianum	
DICOT	Stylidium	Stylidium induratum	
DICOT	Surreya	Surreya diandra	
DICOT	Swainsona	Swainsona affinis	
DICOT	Swainsona	Swainsona beasleyana	
DICOT	Swainsona	Swainsona canescens	
DICOT	Swainsona	Swainsona colutoides	
DICOT	Swainsona	Swainsona gracilis	
DICOT	Swainsona	Swainsona incei	

Class	Genus	Taxon
DICOT	Swainsona	Swainsona kingii
DICOT	Swainsona	Swainsona leeana
DICOT	Swainsona	Swainsona oliveri
DICOT	Swainsona	Swainsona oroboides
DICOT	Swainsona	Swainsona paradoxa
DICOT	Swainsona	Swainsona purpurea
DICOT	Swainsona	Swainsona rostellata
DICOT	Symphyotrichum	Symphyotrichum squamatum
DICOT	Tamarix	Tamarix chinensis
DICOT	Tecticornia	Tecticornia chartacea
DICOT	Tecticornia	Tecticornia disarticulata
DICOT	Tecticornia	Tecticornia doliiformis
DICOT	Tecticornia	Tecticornia flabelliformis
DICOT	Tecticornia	Tecticornia halocnemoides
DICOT	Tecticornia	Tecticornia indica subsp. bidens
DICOT	Tecticornia	Tecticornia peltata
DICOT	Tecticornia	Tecticornia pergranulata subsp. elong
DICOT	Tecticornia	Tecticornia pergranulata subsp. pergr
DICOT	Tecticornia	Tecticornia pruinosa
DICOT	Tecticornia	Tecticornia pterygosperma subsp. pte
DICOT	Tecticornia	Tecticornia sp. Burnerbinmah (D. Edir
DICOT	Tecticornia	Tecticornia sp. Dennys Crossing (K.A.
DICOT	Tecticornia	Tecticornia syncarpa
DICOT	Tecticornia	Tecticornia triandra
DICOT	Tecticornia	Tecticornia undulata
DICOT	Templetonia	Templetonia ceracea
DICOT	Templetonia	Templetonia incrassata
DICOT	Tetragonia	Tetragonia eremaea
DICOT	Tetratheca	Tetratheca efoliata
DICOT	Teucrium	Teucrium sessiliflorum
DICOT	Thiseltonia	Thiseltonia gracillima
DICOT	Thryptomene	Thryptomene australis subsp. brachya
DICOT	Thryptomene	Thryptomene kochii
DICOT	Thryptomene	Thryptomene sp. Coolgardie (E. Kelso
DICOT	Thryptomene	Thryptomene sp. Londonderry (R.H. H
DICOT	Thryptomene	Thryptomene urceolaris
DICOT	Trachymene	Trachymene cyanopetala
DICOT	Trachymene	Trachymene ornata
DICOT	Tribulus	Tribulus terrestris
DICOT	Trichanthodium	Trichanthodium skirrophorum
DICOT	Trichodesma	Trichodesma zeylanicum
DICOT	Triptilodiscus	Triptilodiscus pygmaeus
DICOT	Trymalium	Trymalium myrtillus subsp. myrtillus
DICOT	Urtica	Urtica urens
DICOT	Velleia	Velleia rosea
DICOT	Verreauxia	Verreauxia dyeri
DICOT	Verticordia	Verticordia chrysantha
DICOT	Verticordia	Verticordia picta
DICOT	Verticordia	Verticordia pritzelii
DICOT	Vicia	Vicia monantha subsp. triflora
DICOT	Vincetoxicum	Vincetoxicum lineare
DICOT	Vittadinia	Vittadinia cervicularis var. cervicularis
DICOT	Vittadinia	Vittadinia dissecta var. hirta
DICOT	Vittadinia	Vittadinia humerata
DICOT	Vittadinia	Vittadinia sp. indet.
DICOT	Vittadinia	Vittadinia sulcata
DICOT	Wahlenbergia	Wahlenbergia gracilenta
DICOT	Waitzia	Waitzia acuminata var. acuminata
DICOT	Waitzia	Waitzia fitzgibbonii
DICOT	Westringia	Westringia cephalantha

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BHP Nickel West Pty Ltd Kalgoorlie Nickel Smelter – Reconnaissance Flora/Vegetation and Basic Fauna Assessment

Class	Genus	Taxon	Conservation Status
DICOT	Westringia	Westringia cephalantha var. caterva	
DICOT	Westringia	Westringia rigida	
DICOT	Xanthium	Xanthium spinosum	
DICOT	Zygophyllum	Zygophyllum apiculatum	
DICOT	Zygophyllum	Zygophyllum aurantiacum	
DICOT	Zygophyllum	Zygophyllum compressum	
DICOT	Zygophyllum	Zygophyllum eremaeum	
DICOT	Zygophyllum	Zygophyllum fruticulosum	
DICOT	Zygophyllum	Zygophyllum glaucum	
DICOT	Zygophyllum	Zygophyllum ovatum	
DICOT	Zygophyllum	Zygophyllum reticulatum	
FERN	Cheilanthes	Cheilanthes adiantoides	
FERN	Cheilanthes	Cheilanthes austrotenuifolia	
FERN	Cheilanthes	Cheilanthes sieberi subsp. sieberi	
GYMNO	Callitris	Callitris columellaris	
GYMNO	Callitris	Callitris preissii	
GYMNO	Callitris	Callitris sp.	
GYMNO	Callitris	Callitris verrucosa	
LIVERWORT	Riccia	Riccia crinita	
LIVERWORT	Riccia	Riccia limbata	
MONOCOT	Agave	Agave americana	
MONOCOT	Amphipogon	Amphipogon caricinus var. caricinus	
MONOCOT	Aristida	Aristida contorta	
MONOCOT	Austrostipa	Austrostipa blackii	
MONOCOT	Austrostipa	Austrostipa drummondii	
MONOCOT	Austrostipa	Austrostipa elegantissima	
MONOCOT	Austrostipa	Austrostipa eremophila	
MONOCOT	Austrostipa	Austrostipa nitida	
MONOCOT	Austrostipa	Austrostipa nodosa	
MONOCOT	Austrostipa	Austrostipa platychaeta	
MONOCOT	Austrostipa	Austrostipa scabra	
MONOCOT	Austrostipa	Austrostipa sp. Carlingup Road (S. Kern & R. Jasper LCH 18459)	P3
MONOCOT	Austrostipa	Austrostipa sp. Dowerin (G. Wiehl F 8004)	P2
MONOCOT	Austrostipa	Austrostipa trichophylla	
MONOCOT	Bromus	Bromus arenarius	
MONOCOT	Bromus	Bromus catharticus	
MONOCOT	Bromus	Bromus diandrus	
MONOCOT	Bulbine	Bulbine semibarbata	
MONOCOT	Caladenia	Caladenia footeana	
MONOCOT	Caladenia	Caladenia nobilis	
MONOCOT	Caladenia	Caladenia roei	
MONOCOT	Cenchrus	Cenchrus ciliaris	
MONOCOT	Cenchrus	Cenchrus setaceus	
MONOCOT	Chamaexeros	Chamaexeros fimbriata	
MONOCOT	Chloris	Chloris truncata	
MONOCOT	Chrysitrix	Chrysitrix distigmatosa	
MONOCOT	Dactyloctenium	Dactyloctenium radulans	
MONOCOT	Danthonia	Danthonia acerosa	
MONOCOT	Danthonia	Danthonia caespitosa	
MONOCOT	Dichanthium	Dichanthium sericeum subsp. sericeum	
MONOCOT	Digitaria	Digitaria ammophila	
MONOCOT	Digitaria	Digitaria brownii	
MONOCOT	Ehrharta	Ehrharta villosa	
MONOCOT	Eleocharis	Eleocharis acutangula	
MONOCOT	Elymus	Elymus scaber	
MONOCOT	Enneapogon	Enneapogon avenaceus	
MONOCOT	Enneapogon	Enneapogon caerulescens	

Class	Genus	Taxon
MONOCOT	Enneapogon	Enneapogon cylindricus
MONOCOT	Enteropogon	Enteropogon acicularis
MONOCOT	Enteropogon	Enteropogon ramosus
MONOCOT	Eragrostis	Eragrostis curvula
MONOCOT	Eragrostis	Eragrostis dielsii
MONOCOT	Eragrostis	Eragrostis falcata
MONOCOT	Eragrostis	Eragrostis setifolia
MONOCOT	Eragrostis	Eragrostis xerophila
MONOCOT	Eriachne	Eriachne pulchella
MONOCOT	Gahnia	Gahnia deusta
MONOCOT	Hordeum	Hordeum glaucum
MONOCOT	Hordeum	Hordeum leporinum
MONOCOT	Isolepis	Isolepis australiensis
MONOCOT	Isolepis	Isolepis congrua
MONOCOT	Lepidobolus	Lepidobolus chaetocephalus
MONOCOT	Lepidobolus	Lepidobolus deserti
MONOCOT	Lepidosperma	Lepidosperma aff. diurnum
MONOCOT	Lepidosperma	Lepidosperma diurnum
MONOCOT	Lepidosperma	Lepidosperma sp. Kambalda (A.A. M
MONOCOT	Lepidosperma	Lepidosperma sp. Parker Range (N.
MONOCOT	Leptochloa	Leptochloa digitata
MONOCOT	Mesomelaena	Mesomelaena preissii
MONOCOT	Monachather	Monachather paradoxus
MONOCOT	Panicum	Panicum decompositum
MONOCOT	Panicum	Panicum effusum
MONOCOT	Paspalidium	Paspalidium constrictum
MONOCOT	Paspalidium	Paspalidium gracile
MONOCOT	Paspalidium	Paspalidium reflexum
MONOCOT	Pennisetum	Pennisetum villosum
MONOCOT	Pentameris	Pentameris airoides subsp. airoides
MONOCOT	Phalaris Dterest dis	Phalaris paradoxa
MONOCOT	Pterostylis	Pterostylis roensis
MONOCOT	Pterostylis	Pterostylis sp. dainty brown (N. Gibs Pterostylis sp. inland (A.C. Beaugleh
MONOCOT	Pterostylis Pterostylis	
MONOCOT	Rostraria	Pterostylis tryphera Rostraria pumila
MONOCOT	Ruppia	Ruppia polycarpa
MONOCOT	Rytidosperma	Rytidosperma acerosum
MONOCOT	Rytidosperma	Rytidosperma caespitosum
MONOCOT	Rytidosperma	Rytidosperma setaceum
MONOCOT	Schismus	Schismus arabicus
MONOCOT	Schismus	Schismus barbatus
MONOCOT	Schoenus	Schoenus hexandrus
MONOCOT	Schoenus	Schoenus subaphyllus
MONOCOT	Setaria	Setaria dielsii
MONOCOT	Sorghum	Sorghum halepense
MONOCOT	Stipa	Stipa eremophila
MONOCOT	Stipa	Stipa nitida
MONOCOT	Stipa	Stipa puberula
MONOCOT	Thelymitra	Thelymitra antennifera
MONOCOT	Thysanotus	Thysanotus manglesianus
MONOCOT	Triodia	Triodia irritans
MONOCOT	Triodia	Triodia scariosa
MONOCOT	Typha	Typha orientalis
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MONOCOT	Urochloa	Urochloa panicoides

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Vertebrate Fauna

Class	Genus	Taxon	Conservation Status
AMPHI	Litoria	Litoria moorei	
AMPHI	Neobatrachus	Neobatrachus kunapalari	
AMPHI	Neobatrachus	Neobatrachus pelobatoides	
AMPHI	Neobatrachus	Neobatrachus sutor	
AMPHI	Neobatrachus	Neobatrachus wilsmorei	
AMPHI	Pseudophryne	Pseudophryne occidentalis	
BIRD	Acanthagenys	Acanthagenys rufogularis	
BIRD	Acanthiza	Acanthiza apicalis	
BIRD	Acanthiza	Acanthiza chrysorrhoa	
BIRD	Acanthiza	Acanthiza robustirostris	
BIRD	Acanthiza	Acanthiza uropygialis	
BIRD	Accipiter	Accipiter cirrocephalus	
BIRD	Accipiter	Accipiter fasciatus	
BIRD	Actitis	Actitis hypoleucos	MI
BIRD	Aegotheles	Aegotheles cristatus	
BIRD	Anas	Anas gracilis	
BIRD	Anas	Anas platyrhynchos	
BIRD	Anas	Anas rhynchotis	
BIRD	Anas	Anas superciliosa	
BIRD	Anhinga	Anhinga melanogaster subsp. novaehollandiae	
BIRD	Anhinga	Anhinga novaehollandiae	
BIRD	Anthochaera	Anthochaera carunculata	
BIRD	Anthus	Anthus australis	
BIRD	Anthus	Anthus australis subsp. australis	
BIRD	Aphelocephala	Aphelocephala leucopsis	
BIRD	Aphelocephala	Aphelocephala leucopsis subsp. castaneiventris	
BIRD	Aquila	Aquila audax	
BIRD	Ardea	Ardea modesta	
BIRD	Ardea	Ardea pacifica	
BIRD	Ardeotis	Ardeotis australis	
BIRD	Artamus	Artamus cinereus	
BIRD	Artamus	Artamus cyanopterus	
BIRD	Artamus	Artamus personatus	
BIRD	Aythya	Aythya australis	
BIRD	Barnardius	Barnardius zonarius	
BIRD	Biziura	Biziura lobata	
BIRD	Cacatua	Cacatua roseicapilla	
BIRD	Cacatua	Cacatua sanguinea	
BIRD	Cacomantis	Cacomantis flabelliformis	
BIRD	Cacomantis	Cacomantis pallidus	
BIRD	Calidris	Calidris acuminata	MI
BIRD	Calidris	Calidris alba (Crocethia alba)	MI
BIRD	Calidris	Calidris ferruginea	CR
BIRD	Calidris	Calidris ruficollis	MI
BIRD	Calyptorhynchus	Calyptorhynchus latirostris	EN
BIRD	Charadrius	Charadrius ruficapillus	
BIRD	Chenonetta	Chenonetta jubata	
BIRD	Cheramoeca	Cheramoeca leucosterna	
BIRD	Cheramoeca	Cheramoeca leucosternus	
BIRD	Chroicocephalus	Chroicocephalus novaehollandiae	
BIRD	Chrysococcyx	Chrysococcyx basalis	
BIRD	Chrysococcyx	Chrysococcyx osculans	
BIRD	Cincloramphus	Cincloramphus cruralis	
BIRD	Cincloramphus	Cincloramphus mathewsi	
BIRD	Cinclosoma	Cinclosoma castanotus	
BIRD	Cladorhynchus	Cladorhynchus leucocephalus	
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Class	Genus	Taxon
BIRD	Climacteris	Climacteris rufa
BIRD	Colluricincla	Colluricincla harmonica
BIRD	Columba	Columba livia
BIRD	Coracina	Coracina maxima
BIRD	Coracina	Coracina novaehollandiae
BIRD	Corvus	Corvus bennetti
BIRD	Corvus	Corvus coronoides
BIRD	Corvus	Corvus orru
BIRD	Coturnix	Coturnix pectoralis
BIRD	Cracticus	Cracticus nigrogularis
BIRD	Cracticus	Cracticus tibicen
BIRD	Cracticus	Cracticus torquatus
BIRD	Cuculus	Cuculus pallidus
BIRD	Cygnus	Cygnus atratus
BIRD	Daphoenositta	Daphoenositta chrysoptera
BIRD	Dicaeum	Dicaeum hirundinaceum
BIRD	Dromaius	Dromaius novaehollandiae
BIRD	Drymodes	Drymodes brunneopygia
BIRD	Egretta	Egretta novaehollandiae
BIRD	Elanus	Elanus axillaris
BIRD	Elanus	Elanus caeruleus
BIRD	Elanus	Elanus caeruleus subsp. axillaris
BIRD	Elseyornis	Elseyornis melanops
BIRD	Eolophus	Eolophus roseicapillus
BIRD	Eopsaltria	Eopsaltria australis subsp. griseogula
BIRD	Epthianura	Epthianura albifrons
BIRD	Epthianura	Epthianura tricolor
BIRD	Erythrogonys	Erythrogonys cinctus
BIRD	Eurostopodus	Eurostopodus argus
BIRD	Falco	Falco berigora
BIRD	Falco	Falco berigora subsp. berigora
BIRD	Falco	Falco cenchroides
BIRD	Falco	Falco longipennis
BIRD	Fulica	Fulica atra
BIRD	Gerygone	Gerygone fusca
BIRD	Glossopsitta	Glossopsitta porphyrocephala
BIRD	Grallina	Grallina cyanoleuca
BIRD	Haliastur	Haliastur sphenurus
BIRD	Hieraaetus	Hieraaetus morphnoides
BIRD	Himantopus	Himantopus himantopus
BIRD	Himantopus	Himantopus himantopus subsp. leuco
BIRD	Hirundo	Hirundo neoxena
BIRD	Hirundo	Hirundo nigricans
BIRD	Hylacola	Hylacola cauta subsp. whitlocki
BIRD	Lalage	Lalage tricolor
BIRD	Leipoa	Leipoa ocellata
BIRD	Lichenostomus	Lichenostomus leucotis
BIRD	Lichenostomus	Lichenostomus leucotis subsp. novae
BIRD	Lichenostomus	Lichenostomus ornatus
BIRD	Lichenostomus	Lichenostomus plumulus
BIRD	Lichenostomus	Lichenostomus virescens
BIRD	Lichmera	Lichmera indistincta
BIRD	Malacorhynchus	Malacorhynchus membranaceus
BIRD	Malurus	Malurus leucopterus
BIRD	Malurus	Malurus pulcherrimus

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BOTANICA

CONSULTING

Class	Genus	Taxon	Conservatior Status
BIRD	Manorina	Manorina flavigula	
BIRD	Melanodryas	Melanodryas cucullata	
BIRD	Melithreptus	Melithreptus brevirostris	
BIRD	Melopsittacus	Melopsittacus undulatus	
BIRD	Merops	Merops ornatus	
BIRD	Microcarbo	Microcarbo melanoleucos	
BIRD	Microeca	Microeca fascinans	
BIRD	Microeca	Microeca fascinans subsp. assimilis	
BIRD	Ninox	Ninox novaeseelandiae	
BIRD	Nycticorax	Nycticorax caledonicus subsp. hilli	
BIRD	Nymphicus	Nymphicus hollandicus	
BIRD	Ocyphaps	Ocyphaps lophotes	
BIRD	Oreoica	Oreoica gutturalis	
BIRD	Oreoica	Oreoica gutturalis subsp. gutturalis	
BIRD	Pachycephala	Pachycephala inornata	
BIRD	Pachycephala	Pachycephala pectoralis	
BIRD	Pachycephala	Pachycephala rufiventris	
BIRD	Pardalotus	Pardalotus punctatus	
BIRD	Pardalotus	Pardalotus striatus	
BIRD	Pardalotus	Pardalotus striatus subsp. westraliensis	
BIRD	Petrochelidon	Petrochelidon ariel	
BIRD	Petrochelidon		
		Petrochelidon nigricans	
BIRD	Petroica	Petroica cucullata	
BIRD	Petroica	Petroica goodenovii	
BIRD	Phalacrocorax	Phalacrocorax carbo	
BIRD	Phalacrocorax	Phalacrocorax sulcirostris	
BIRD	Phaps	Phaps chalcoptera	
BIRD	Phylidonyris	Phylidonyris albifrons	
BIRD	Platalea	Platalea flavipes	
BIRD	Platycercus	Platycercus icterotis	
BIRD	Platycercus	Platycercus varius	
BIRD	Platycercus	Platycercus zonarius	
BIRD	Platycercus	Platycercus zonarius subsp. zonarius	
BIRD	Podargus	Podargus strigoides	
BIRD	Poliocephalus	Poliocephalus poliocephalus	
BIRD	Polytelis	Polytelis anthopeplus subsp. westralis	
BIRD	Pomatostomus	Pomatostomus superciliosus	
BIRD	Pomatostomus	Pomatostomus superciliosus subsp. ashbyi	
BIRD	Porzana	Porzana fluminea	
BIRD	Ptilotula	Ptilotula ornatus	
BIRD	Ptilotula	Ptilotula plumulus	
BIRD	Purnella	Purnella albifrons	
BIRD	Pyrrholaemus	Pyrrholaemus brunneus	
BIRD	Recurvirostra	Recurvirostra novaehollandiae	
BIRD	Rhipidura	Rhipidura albiscapa	
BIRD	Rhipidura	Rhipidura abiscapa Rhipidura fuliginosa	
BIRD	Rhipidura	Rhipidura lauginosa Rhipidura leucophrys	
BIRD	Smicrornis	Smicrornis brevirostris	
BIRD			
	Stictonetta	Stictonetta naevosa	
BIRD	Strepera	Strepera versicolor	
BIRD	Streptopelia	Streptopelia senegalensis	
BIRD	Sugomel	Sugomel niger	
BIRD	Tachybaptus	Tachybaptus novaehollandiae	
BIRD	Tadorna	Tadorna tadornoides	
BIRD	Taeniopygia	Taeniopygia guttata	
BIRD	Thinornis	Thinornis rubricollis	P4
BIRD	Threskiornis	Threskiornis spinicollis	
BIRD	Todiramphus	Todiramphus pyrrhopygia	
BIRD	Todiramphus	Todiramphus pyrrhopygius	

lass	Genus	Taxon	Conservation Status
IRD	Todiramphus	Todiramphus sanctus	
RD	Tribonyx	Tribonyx ventralis	
RD	Tringa	Tringa brevipes	MI & P4
IRD	Tringa	Tringa glareola	MI
RD	Tringa	Tringa nebularia	MI
RD	Turnix	Turnix velox	
RD	Tyto	Tyto alba subsp. delicatula	
RD	Vanellus	Vanellus tricolor	
IRD	Zosterops	Zosterops lateralis	
AMMAL	Bos	Bos taurus	
	Canis	Canis lupus subsp. dingo	
	Capra	Capra hircus	
	Cercartetus	Cercartetus concinnus	
	Chalinolobus	Chalinolobus gouldii	
	Chalinolobus	Chalinolobus morio	
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	Dasyurus Felis	Dasyurus geoffroii	٧Ŭ
		Felis catus	
	Macropus	Macropus fuliginosus	
	Macropus	Macropus robustus subsp. erubescens	
	Macropus	Macropus rufus	
IAMMAL	Macrotis	Macrotis lagotis	VU
IAMMAL	Mormopterus	Mormopterus planiceps	
IAMMAL	Mus	Mus musculus	
IAMMAL	Myrmecobius	Myrmecobius fasciatus	EN
IAMMAL	Ningaui	Ningaui yvonneae	
AMMAL	Notomys	Notomys mitchellii	
IAMMAL	Nyctophilus	Nyctophilus geoffroyi	
AMMAL	Nyctophilus	Nyctophilus timoriensis subsp. timoriensis	
AMMAL	Oryctolagus	Oryctolagus cuniculus	
	Ovis	Ovis aries	
	Pseudomys	Pseudomys bolami	
	Pseudomys	Pseudomys hermannsburgensis	
	Scotorepens	Scotorepens balstoni	
	Sminthopsis	Sminthopsis crassicaudata	
	Sminthopsis	Sminthopsis dolichura	
	Sminthopsis	Sminthopsis gilberti	
	Sminthopsis	Sminthopsis murina Sminthopsis ooldea	
	Sminthopsis		
	Sminthopsis	Sminthopsis sp.	
	Tachyglossus	Tachyglossus aculeatus	
	Tadarida	Tadarida australis	
AMMAL	Taphozous	Taphozous hilli	
AMMAL	Vespadelus	Vespadelus baverstocki	
AMMAL	Vespadelus	Vespadelus finlaysoni	
IAMMAL	Vespadelus	Vespadelus regulus	
EPTILE	Acanthophis	Acanthophis pyrrhus	
EPTILE	Brachyurophis	Brachyurophis fasciolata	
EPTILE	Brachyurophis	Brachyurophis fasciolatus subsp. fasciolatus	
EPTILE	Brachyurophis	Brachyurophis semifasciata	
EPTILE	Brachyurophis	Brachyurophis semifasciatus	
EPTILE	Chelodina	Chelodina colliei	
EPTILE	Crenadactylus	Crenadactylus ocellatus subsp. ocellatus	
EPTILE	Cryptoblepharus	Cryptoblepharus buchananii	
EPTILE	Cryptoblepharus	Cryptoblepharus plagiocephalus	
EPTILE	Ctenophorus	Ctenophorus caudicinctus	
EPTILE	-		
EPTILE	Ctenophorus	Ctenophorus cristatus	
	Ctenophorus	Ctenophorus fordi	
	Ctenophorus	Ctenophorus isolepis subsp. citrinus	
EPTILE	Ctenophorus	Ctenophorus nuchalis	

Class	Genus	Taxon	Conservation Status
REPTILE	Ctenophorus	Ctenophorus reticulatus	
REPTILE	Ctenophorus	Ctenophorus salinarum	
REPTILE	Ctenophorus	Ctenophorus scutulatus	
REPTILE	Ctenotus	Ctenotus atlas	
REPTILE	Ctenotus	Ctenotus leonhardii	
REPTILE	Ctenotus	Ctenotus schomburgkii	
REPTILE	Ctenotus	Ctenotus uber	
REPTILE	Ctenotus	Ctenotus uber subsp. uber	
REPTILE	Cyclodomorphus	Cyclodomorphus melanops subsp. elongatus	
REPTILE	Delma	Delma australis	
REPTILE	Delma	Delma butleri	
REPTILE	Delma	Delma fraseri	
REPTILE	Demansia	Demansia psammophis	
REPTILE	Demansia	Demansia psammophis subsp. psammophis	
REPTILE	Diplodactylus	Diplodactylus granariensis	
REPTILE	Diplodactylus	Diplodactylus granariensis subsp. granariensis	
REPTILE	Diplodactylus	Diplodactylus maini	
REPTILE	Diplodactylus	Diplodactylus pulcher	
REPTILE	Echiopsis	Echiopsis curta	
REPTILE	Egernia	Egernia depressa	
REPTILE	Egernia	Egernia formosa	
REPTILE	Egernia	Egernia inornata	
REPTILE	Egernia	Egernia stokesii subsp. badia	VU
REPTILE	Eremiascincus	Eremiascincus richardsonii	
REPTILE	Furina	Furina ornata	
REPTILE	Gehyra	Gehyra purpurascens	
REPTILE	Gehyra	Gehyra variegata	
REPTILE	Hemidactylus	Hemidactylus frenatus	
REPTILE	Hemiergis	Hemiergis initialis subsp. initialis	
REPTILE	Hemiergis	Hemiergis peronii subsp. peronii	
REPTILE	Hesperoedura	Hesperoedura reticulata	
REPTILE	Heteronotia	Heteronotia binoei	
REPTILE	Lerista	Lerista kingi	
REPTILE	Lerista	Lerista muelleri	
REPTILE	Lerista	Lerista picturata	
REPTILE	Lerista	Lerista rhodonoides	
REPTILE	Lerista	Lerista sp.	
REPTILE	Lerista	Lerista stictopleura	
REPTILE	Lerista	Lerista timida	
REPTILE	Lialis	Lialis burtonis	
REPTILE	Liopholis	Liopholis inornata	
REPTILE	Liopholis	Liopholis multiscutata	
REPTILE	Lucasium	Lucasium damaeum	

Class	Genus	Taxon	Conservatior Status
REPTILE	Lucasium	Lucasium maini	
REPTILE	Menetia	Menetia greyii	
REPTILE	Moloch	Moloch horridus	
REPTILE	Morelia	Morelia spilota subsp. imbricata	
REPTILE	Morethia	Morethia adelaidensis	
REPTILE	Morethia	Morethia butleri	
REPTILE	Morethia	Morethia obscura	
REPTILE	Neelaps	Neelaps bimaculatus	
REPTILE	Nephrurus	Nephrurus laevissimus	
REPTILE	Nephrurus	Nephrurus milii	
REPTILE	Nephrurus	Nephrurus vertebralis	
REPTILE	Oedura	Oedura reticulata	
REPTILE	Parasuta	Parasuta gouldii	
REPTILE	Parasuta	Parasuta monachus	
REPTILE	Pogona	Pogona minor	
REPTILE	Pogona	Pogona minor subsp. minor	
REPTILE	Pseudechis	Pseudechis australis	
REPTILE	Pseudonaja	Pseudonaja affinis subsp. affinis	
REPTILE	Pseudonaja	Pseudonaja mengdeni	
REPTILE	Pseudonaja	Pseudonaja modesta	
REPTILE	Pseudonaja	Pseudonaja nuchalis	
REPTILE	Pygopus	Pygopus lepidopodus	
REPTILE	Pygopus	Pygopus nigriceps	
REPTILE	Ramphotyphlops	Ramphotyphlops australis	
REPTILE	Ramphotyphlops	Ramphotyphlops bicolor	
REPTILE	Ramphotyphlops	Ramphotyphlops bituberculatus	
REPTILE	Ramphotyphlops	Ramphotyphlops hamatus	
REPTILE	Ramphotyphlops	Ramphotyphlops waitii	
REPTILE	Rhynchoedura	Rhynchoedura ornata	
REPTILE	Simoselaps	Simoselaps bertholdi	
REPTILE	Strophurus	Strophurus assimilis	
REPTILE	Strophurus	Strophurus elderi	
REPTILE	Strophurus	Strophurus sp.	
REPTILE	Suta	Suta fasciata	
REPTILE	Tiliqua	Tiliqua occipitalis	
REPTILE	Tiliqua	Tiliqua rugosa	
REPTILE	Tiliqua	Tiliqua rugosa subsp. rugosa	
REPTILE	Tympanocryptis	Tympanocryptis cephalus	
REPTILE	Tympanocryptis	Tympanocryptis lineata	
REPTILE	Underwoodisaurus	Underwoodisaurus milii	
REPTILE	Varanus	Varanus caudolineatus	
REPTILE	Varanus	Varanus gouldii	
REPTILE	Varanus	Varanus tristis	





APPENDIX C: POTENTIALLY OCCURRING INTRODUCED (WEED) FLORA SPECIES

Family	Taxon	Common Name	WAOL Status	Control Category	WONS
Aizoaceae	Mesembryanthemum crystallinum	lceplant			
Aizoaceae	Mesembryanthemum nodiflorum	Slenderleaf Iceplant			
Aizozceae	Aizoon pubescens	Coastal Galenia			
Amaranthaceae	Amaranthus viridis	Green Amaranth			
Anacardiaceae	Schinus molle var. areira	-			
Apocynaceae	Asclepias curassavica	Redhead Cottonbush			
Apocynaceae	Orbea variegata	-			
Asparagaceae	Agave americana	Century Plant			
Asteraceae	Arctotheca calendula	Cape dandelion			
Asteraceae	Carthamus lanatus	Saffron Thistle			
Asteraceae	Centaurea melitensis	Maltese Cockspur			
Asteraceae	Cichorium intybus	Chicory			
Asteraceae	Conyza bonariensis	Flaxleaf Fleabane			
Asteraceae	Conyza sumatrensis	Tall Fleabane			
Asteraceae	Gazania linearis	Treasure Flower			
Asteraceae	Helianthus annuus	Sunflower			
Asteraceae	Lactuca serriola forma serriola	Prickly Lettuce			
Asteraceae	Monoculus monstrosus	-			
Asteraceae	Oligocarpus calendulaceus	-			
Asteraceae	Oncosiphon suffruticosum	Calomba Daisy			
Asteraceae	Symphyotrichum squamatum	Bushy Starwort			
Asteraceae	Xanthium spinosum	Common Cockleburr	Declared Pest - s22(2)	C3 Management	No
Boraginaceae	Buglossoides arvensis	Corn Gromwell			



Family	Taxon	Common Name	WAOL Status	Control Category	WONS
Boraginaceae	Echium plantagineum	Patersons Curse	Declared Pest - s22(2)	No Control Category, Whole of Stat	No
Borginaceae	Heliotropium europaeum	Common Heliotrope			
Borginaceae	Heliotropium supinum	Prostrate Heliotrope			
Brassicaceae	Alyssum linifolium	Flax-leaf Alyssum			
Brassicaceae	Brassica tournefortii	Mediterranean Turnip			
Brassicaceae	Capsella bursa-pastoris	Shepherd's Purse			
Brassicaceae	Carrichtera annua	Ward's Weed			
Brassicaceae	Lepidium africanum	Rubble Peppercress			
Brassicaceae	Sisymbrium irio	London Rocket			
Brassicaceae	Sisymbrium orientale	Indian Hedge Mustard			
Cactaceae	Cylindropuntia fulgida var. mamillata	Boxing glove cactus			
Cactaceae	Cylindropuntia imbricata	Tree Cholla	Declared Pest - s22(2)	C3 Management	Yes
Cactaceae	Cylindropuntia kleiniae	Klein's Cholla	Declared Pest - s22(2)	C3 Management	Yes
Cactaceae	Cylindropuntia tunicata	Sheathed Cholla	Declared Pest - s22(2)	C3 Management	Yes
Cactaceae	Opuntia elata	-	Declared Pest - s22(2)	C3 Management	Yes
Cactaceae	Opuntia ficus-indica	Indian Fig	Declared Pest - s22(2)	C3 Management	Yes
Caryophyllaceae	Spergularia diandra	Lesser Sand Spurry			
Chenopodiaceae	Atriplex semibaccata	Berry Saltbush			
Chenopodiaceae	Chenopodium album	Fat Hen			
Chenopodiaceae	Chenopodium murale	Nettle-leaf Goosefoot			
Crassulaceae	Bryophyllum delagoense	Mother-of-millions			
Cucurbitaceae	Cucumis myriocarpus subsp. myriocarpus	Paddy Melon			
Didiereaceae	Portulacaria afra	Elephant Bush			
Fabaceae	Acacia pycnantha	Golden Wattle			
Fabaceae	Alhagi maurorum	Camel Thorn	Declared Pest - s22(2)	C3 Management	No
Fabaceae	Erythrostemon gilliesii	desert bird of paradise			
Fabaceae	Medicago laciniata	Cutleaf Medic			

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Family	Taxon	Common Name	WAOL Status	Control Category	WONS
Fabaceae	Medicago minima	Small Burr Medic			
Fabaceae	Medicago polymorpha	Burr Medic			
Fabaceae	Vicia monantha subsp. triflora	Square-stemmed Vetch			
Geraniaceae	Erodium cicutarium	Common Storksbill			
Lamiaceae	Marrubium vulgare	Horehound			
Lamiaceae	Salvia reflexa	Mintweed			
Lamiaceae	Salvia verbenaca	Wild Sage			
Luthraceae	Lythrum hyssopifolia	Lesser Loosestrife			
Malvaceae	Malva parviflora	Marshmallow			
Martyniaceae	Proboscidea louisianica	Purple Flower Devil's Claw	Declared Pest, Prohibited - s12	C1 Exclusion	No
Oxalidaceae	Oxalis bowiei	Bowie Wood Sorrel			
Oxalidaceae	Oxalis pes-caprae	Soursob			
Papaveraceae	Argemone ochroleuca subsp. ochroleuca	Mexican poppy			
Papaveraceae	Papaver hybridum	Rough Poppy			
Plumbaginaceae	Limonium sinuatum	Perennial Sea Lavender			
Poaceae	Bromus catharticus	Prairie Grass			
Poaceae	Bromus diandrus	Great Brome			
Poaceae	Cenchrus ciliaris	Buffel Grass			
Poaceae	Cenchrus setaceus	Fountain Grass			
Poaceae	Ehrharta villosa	Pyp Grass			
Poaceae	Eragrostis curvula	African Lovegrass			
Poaceae	Hordeum glaucum	Northern Barley Grass			
Poaceae	Hordeum leporinum	Barley Grass			
Poaceae	Pentameris airoides subsp. airoides				
Poaceae	Phalaris paradoxa	Paradoxa Grass			
Poaceae	Rostraria pumila	Roughtail			
Poaceae	Schismus arabicus	Araby Grass			

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Family	Taxon	Common Name	WAOL Status	Control Category	WONS
Poaceae	Schismus barbatus	Kelch Grass			
Poaceae	Urochloa panicoides	Urochloa Grass, Liverseed	l Grass		
Polygonaceae	Polygonum aviculare	Wireweed			
Polygonaceae	Rumex vesicarius	Ruby Dock			
Primulaceae	Lysimachia arvensis	Pimpernel			
Solanaceae	Datura ferox	Fierce Thornapple			
Solanaceae	Datura inoxia	Angel's Trumpet			
Solanaceae	Lycium ferocissimum	African Boxthorn	Permitted -s11	No Control Category, Whole of Stat	Yes
Solanaceae	Nicotiana glauca	Tree Tobacco			
Solanaceae	Solanum nigrum	Black Berry Nightshade			
Sonchus	Sonchus oleraceus	Common Sowthistle			
Sonchus	Sorghum halepense	Johnson Grass			
Tamaricaceae	Tamarix chinensis	Chinese tamarisk	Declared Pest, Prohibited - s12	C1 Exclusion	No
Urticaceae	Urtica urens	Small Nettle			
Verbenaceae	Glandularia aristigera	Mayne's pest			
Verbenaceae	Lantana camara	Common Lantana	Declared Pest, Prohibited - s12	C1 Exclusion	Yes
Verbenaceae	Phyla canescens	Carpet Weed			
Zygophyllaceae	Tribulus terrestris	Caltrop			

APPENDIX D: LIST OF FLORA SPECIES IDENTIFIED WITHIN THE SURVEY AREA

			osed ression		Op Depre				Clay	y-Loam I	Plain			Rocky Plain			Rocky-	Hillslope			Sand	Dune	San	d-Loam	Plain	Sand- plain	Dist.
Family	Species		CD- C FW1 C	D- (OD- AFW1	OD- MS1	CLP- AFW1	CLP- CS1	CLP- EW1	CLP- EW2	CLP- EW3	CLP- EW4	CLP- EW5	QRP- CS1	RH- AFW1	RH- EW1	RH- EW2	RH- EW3	RH- MWS1	RH-	D- MFW1	D-	SLP- CFW1	SLP- EW1	SLP- MWS1	SP- MWS1	Dist.
Aizoaceae	Disphyma crassifolium				X	NIS I	AFVVI	0.51		X	EVVS		X	631	AFVVI			EVVS	1010031	1010032			x		IVIVISI	1010031	
Aizoaceae	Gunniopsis quadrifida				x					~			~										~			<u> </u>	
Aizoaceae	*Mesembryanthemum nodiflorum (W)				~																						x
Amaranthaceae	Ptilotus exaltatus (A)											x	x											x			~
Amaranthaceae	Ptilotus holosericeus											x	x							х							
Amaranthaceae	Ptilotus obovatus			(x		x				x		x		x	x	x						x			<u> </u>	x
Amaranthaceae	Surreya diandra			(x																					<u> </u>	
Anacardiaceae	*Schinus molle var. areira (W)			-																							x
Apocynaceae	Alyxia buxifolia									х			x	x		x		x	x			x	x		x	x	
Araliaceae	Trachymene ornata														x											<u> </u>	
Asparagaceae	*Asphodelus fistulosus (W)													x													x
Asparagaceae	Lomandra effusa													~							x					<u> </u>	~
Asparagaceae	Thysanotus manglesianus (A)														x	x		x	х				x			x	
Asteraceae	Asteridea athrixioides (A)									x			x														
Asteraceae	Brachyscome ciliaris (A)			(x							x															
Asteraceae	*Carthamus Ianatus (W)									x																	x
Asteraceae	*Centaurea melitensis (W)									~																	x
Asteraceae	Cephalipterum drummondii																									<u> </u>	~
Asteraceae	Chrysocephalum eremaeum (A)											x	x		x												
Asteraceae	Cratystylis conocephala								x			x	x		~		x		х		x						
Asteraceae	Cratystylis microphylla			(x			x	~	x		~	~				~		~			x	x	x		<u> </u>	
Asteraceae	Cratystylis subspinescens				x	х		x		~				x							x	~	x	~		<u> </u>	
Asteraceae	*Dittrichia graveolens (W)				~	~		~						~							~		^			<u> </u>	x
Asteraceae	*Gazania linearis (W)																									<u> </u>	x
Asteraceae	Olearia muelleri										x	x	x			x		x	х					x			~
Asteraceae	Olearia pimeleoides										~	~	~	x		~		~	~		x	x		x		<u> </u>	
Asteraceae	*Oncosiphon suffruticosum (W)											x		~							~			~			x
Asteraceae	Vittadinia eremaea (A)											~			x												
Asteraceae	Waitzia acuminata (A)														x												
Boraginaceae	Halgania andromedifolia										x	x	x		~				х					x		<u> </u>	
Boraginaceae	Halgania integerrima										^								X					~		x	
Brassicaceae	*Brassica tournefortii (W)																		~								x
Brassicaceae	*Carrichtera annua (W)								x	x	x	x	x						х							<u> </u>	x
Cactaceae	*Opuntia ficus-indica(W)								^	^	^	^	^	x					Λ								
Casuarinaceae	Allocasuarina campestris													~				x	х								+
Casuarinaceae	Allocasuarina helmsii															x		x	X	x						x	
Casuarinaceae	Casuarina pauper									x		x	x	x		x	x	x	х	~	x	x	x				x
Chenopodiaceae	Atriplex codonocarpa (A)	x		(x					~		~	~	~		^	~	^			~	~	~				x
Chenopodiaceae	Atriplex lindleyi	x			~	х		x						x												<u> </u>	x
Chenopodiaceae	Atriplex lindleyi subsp. inflata		x	,	x	X								~							x					<u> </u>	
Chenopodiaceae	Atriplex nummularia				x				x					x		x					~					<u> </u>	
Chenopodiaceae	Atriplex quadrivalvata				~	х		x	x			x	x	x												<u> </u>	┼──┤
Chenopodiaceae	Atriplex semibaccata					٨		^	<u> </u>			^	^													<u> </u>	x
Chenopodiaceae	Atriplex semibaccata								x	x		x	x								x					<u> </u>	
Chenopodiaceae	Atriplex vesicaria		v ,	,	x				x	x			x			~	x				<u> </u>					<u> </u>	
Chenopodiaceae	Chenopodium curvispicatum		x	(^	x	x		x			x x				X	x		Y							<u> </u>	X
Chenopodiaceae	Didymanthus roei			,	x		^		-	x		^	X	x			~		Х		-					<u> </u>	┼───┤
Chenopodiaceae	Dissocarpus paradoxus		× 2		^	Х		x					~													<u> </u>	┼───┤
Chenopoulaceae	Διδουταιρύδ μαι αυθχύδ		x						l			I	x			l		I			<u> </u>	ļ	ļ	l	<u> </u>	L	<u> </u>



			Closed Depressio			pen ession			Clay	-Loam F	Plain			Rocky Plain			Rocky-	Hillslope			Sand	Dune	Sand-Loam	Plain	Sand- plain	Dist.
Family	Species	CD-	CD-	CD-	OD-	OD-	CLP-	CLP-	CLP-	CLP-	CLP- C	LP-	CLP-	QRP-	RH-	RH-	RH-	RH-	RH-	RH-	D-	D-	SLP- SLP-	SLP-	SP-	Dist.
Chenopodiaceae	Enchylaena tomentosa	OS1	MFW1	CS1	AFW1	MS1 X	AFW1	CS1 x	EW1	EW2 x		W4 x	EW5	CS1 X	AFW1 x	EW1 x	EW2	EW3 x	MWS1	MWS2	MFW1	MWS1	CFW1 EW1	MWS1	MWS1	
Chenopodiaceae	Eriochiton sclerolaenoides (A)					^		^		^		x		^	^	^		^								x
Chenopodiaceae	Maireana brevifolia			x	x							^	-													x
Chenopodiaceae	Maireana carnosa			~	~	x		x				x	x	х								x				
Chenopodiaceae	Maireana georgei			x	x					х					x	x	x	x	x							+
Chenopodiaceae	Maireana glomerifolia			x	x	x		x		x			x	х		x							x			
Chenopodiaceae	Maireana oppositifolia							x								x			x	x						<u> </u>
Chenopodiaceae	Maireana pentatropis					x						x	х			x					x					x
Chenopodiaceae	Maireana platycarpa													х	x											
Chenopodiaceae	Maireana pyramidata					x		x				x	x	х												
Chenopodiaceae	Maireana sedifolia									х		x	х			x			x							x
Chenopodiaceae	Maireana tomentosa		x			x		x																		
Chenopodiaceae	Maireana trichoptera											x	х			x	x									
Chenopodiaceae	Maireana triptera	x															x									
Chenopodiaceae	Rhagodia drummondii											x	х	Х					х							
Chenopodiaceae	Rhagodia eremaea			x	х												x				x					
Chenopodiaceae	Salsola australis (A)																									х
Chenopodiaceae	Sclerolaena diacantha			x	x									х	x		x		x	x						x
Chenopodiaceae	Sclerolaena eriacantha					x		x			x															x
Chenopodiaceae	Sclerolaena eurotioides																		x				x			
Chenopodiaceae	Sclerolaena uniflora		x							х		x	х													
Chenopodiaceae	Tecticornia disarticulata		x	x	x	x		x				x	х						x							
Chenopodiaceae	Tecticornia doliiformis			x	x	x								х												
Chenopodiaceae	Tecticornia halocnemoides			x	x	x		x						х												
Chenopodiaceae	Tecticornia indica			x	x	x		x						х												
Chenopodiaceae	Tecticornia pergranulata			x	x	x								х												
Cupressaceae	Callitris preissii			x	x																x					
Euphorbiaceae	Beyeria sulcata																	x								
Fabaceae	Acacia acanthoclada subsp. acanthoclada																					x				
Fabaceae	Acacia acuminata						x			х			х		x				x						x	x
Fabaceae	Acacia colletioides											x	х									x				
Fabaceae	Acacia duriuscula										x															
Fabaceae	Acacia erinacea										x	x	х			x			x							
Fabaceae	Acacia hemiteles									х	x	x	х			x	x		x			x	x			
Fabaceae	Acacia jennerae			x	x	x				х				х												
Fabaceae	Acacia kalgoorliensis			x	х					х		x	х	Х		х				x			x			
Fabaceae	Acacia ligulata																				x	х				
Fabaceae	Acacia merrallii												х										x			
Fabaceae	Acacia rendlei								x	х						x							x			
Fabaceae	Acacia tetragonophylla												x				x	x						<u> </u>		<u> </u>
Fabaceae	Acacia xerophila																					x		<u> </u>		<u> </u>
Fabaceae	Acacia camptoclada												x						x			x		<u> </u>		<u> </u>
Fabaceae	Acacia eremophila																	x					x			
Fabaceae	Acacia heteroneura																						x			
Fabaceae	Acacia nyssophylla									х	х					x				x						
Fabaceae	Acacia oswaldii									х											x					<u> </u>
Fabaceae	Bossiaea walkeri																						x		x	
Fabaceae	Daviesia aphylla																					x	x		x	
Fabaceae	Dillwynia acerosa										x		х			X										
Fabaceae	*Erythrostemon gilliesii (W)																									х
Fabaceae	Glycyrrhiza acanthocarpa							Х	Х	х	х	х		Х												



		D	Closed Depressio			pen ession			Clay	y-Loam I	Plain			Rocky Plain			Rocky	-Hillslope	•		Sand	Dune	San	d-Loam F	Plain	Sand- plain	Dist.
Family	Species	CD-	CD-	CD-	OD-	OD-	CLP-	CLP-	CLP-	CLP-	CLP-	CLP-	CLP-	QRP-	RH-	RH-	RH-	RH-	RH-	RH-	D-	D-	SLP-	SLP-	SLP-	SP-	Dist.
Fabaceae	Jacksonia arida	OS1	MFW1	CS1	AFW1	MS1	AFW1	CS1	EW1	EW2	EW3	EW4	EW5	CS1	AFW1	EW1	EW2	EW3	MWS1	MWS2	MFW1	MWS1	CFW1 x	EW1	MWS1	MWS1	
Fabaceae	Mirbelia granitica						x								x	x		x				^	^				
	Senna artemisioides (DC.) Randell															^											
Fabaceae	subsp. ×artemisioides						x			x			x		X			X								<u> </u>	X
Fabaceae	Senna artemisioides subsp. filifolia									x		x	x		x	x	x		x			x	x		х	<u> </u>	
Fabaceae	Senna cardiosperma						x					x	x													<u> </u>	
Fabaceae	Senna pleurocarpa var. angustifolia									x					x	x			x							<u> </u>	<u> </u>
Fabaceae	Swainsona canescens								х	x	x	x	x													<u> </u>	
Fabaceae	Swainsona colutoides					x		x		x		x	x													<u> </u>	
Fabaceae	Swainsona kingii (A)			x	x									x								x	x				
Fabaceae	Templetonia sulcata											x	x									x			х		
Fabaceae	Trigonella suavissima (A)	x	x			x		x																			
Frankeniaceae	Frankenia interioris			x	x		x					x	x				x						x				
Frankeniaceae	Frankenia setosa	x																									
Goodeniaceae	Brunonia australis (A)																										
Goodeniaceae	Coopernookia strophiolata																					x		х	x		
Goodeniaceae	Goodenia mimuloides (A)														x												
Goodeniaceae	Scaevola spinescens						x		x	х		x	x		x	x	x	x		x		x	x	х	х		
Hemerocallidaceae	Dianella revoluta						x			х												x	x				
Lamiaceae	Prostanthera althoferi																x	x	x								
Lamiaceae	Prostanthera grylloana															x	x			x							
Lamiaceae	*Salvia verbenaca (W)														x												
Lamiaceae	Teucrium sessiliflorum							x	x	х																	x
Lamiaceae	Westringia rigida										x	x	x			x	x	x	x	x					x	x	
Lamiaceae	Westringia cephalantha F.Muell. var. cephalantha										x							x	x			x					
Malvaceae	Brachychiton gregorii						x									x	x										
Malvaceae	Lawrencia glomerata																				x						
Malvaceae	Lawrencia helmsii			x	x																x						
Malvaceae	*Malva parviflora (W)		x																								x
Malvaceae	Radyera farragei								x			x															
Malvaceae	Sida calyxhymenia								x		x		x			x	x										
Malvaceae	Sida fibulifera								x																		
Malvaceae	Sida intricata									x	x	x		x		x											
Malvaceae	Sida spodochroma								x				x														
Myrtaceae	Darwinia sp. Karonie																							x	x		
Myrtaceae	Eucalyptus oleosa											x	x		x	x									x	x	
Myrtaceae	Eucalyptus lesouefii								x			x	x			x	x	x			x			x			x
Myrtaceae	Eucalyptus calycogona								x	x																	
Myrtaceae	Eucalyptus celastroides										x				1	x	x		x							<u> </u>	
Myrtaceae	Eucalyptus cylindrocarpa														1							x				x	
Myrtaceae	Eucalyptus gracilis		x									x	x														
Myrtaceae	Eucalyptus griffithsii		~						x			~	~			x	x		x	x					x	x	
Myrtaceae	Eucalyptus longissima														x	~		x	x	x							
Myrtaceae	Eucalyptus moderata									x			x											х			
Myrtaceae	Eucalyptus platycorys									^					-						x			X		<u> </u>	+
Myrtaceae	Eucalyptus ravida										x	x	x		-									~		<u> </u>	+
Myrtaceae	Eucalyptus salicola											^										x	x			<u> </u>	
Myrtaceae	Eucalyptus salmonophloia								x	x		x	x				x					^	^			<u> </u>	
-	Eucalyptus salubris								^	^							^									<u> </u>	
Myrtaceae												X	X					~								<u> </u>	
Myrtaceae	Eucalyptus torquata																	X								<u> </u>	
Myrtaceae	Eucalyptus urna																							X		<u> </u>	
Myrtaceae	Eucalyptus yilgarnensis											X												Х		<u> </u>	L

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		D	Closed Depressio			pen ession			Cla	y-Loam I	Plain			Rocky Plain			Rocky-	Hillslope)		Sand	Dune	San	d-Loam I	Plain	Sand- plain	Dist.
Family	Species	CD- OS1	CD- MFW1	CD- CS1	OD- AFW1	OD- MS1	CLP- AFW1	CLP- CS1	CLP- EW1	CLP- EW2	CLP- EW3	CLP- EW4	CLP- EW5	QRP- CS1	RH-	RH- EW1	RH- EW2	RH- EW3	RH-	RH- MWS2	D- MFW1	D-	SLP- CFW1	SLP- EW1	SLP- MWS1	SP- MWS1	Dist.
Myrtaceae	Melaleuca hamata	051		CSI		10151	AFVVI				EVVS		Evvo	CSI	AFWI			EVVS	MWS1	1010052		IVIVISI	CEVVI		X	X	
Myrtaceae	Melaleuca lateriflora			x	x					x							x			x			x	x	x		
Myrtaceae	Melaleuca pauperiflora				~					~													~				<u> </u>
Myrtaceae	Melaleuca sheathiana		x									x	x			x	x			x				x			<u> </u>
Myrtaceae	Melaleuca zeteticorum	x		x	x	x																			x		
Pittosporaceae	Marianthus bicolor												x												x		
Pittosporaceae	Pittosporum angustifolium			x	x					x		x	x			x											
Poaceae	Amphipogon caricinus										x					x											
Poaceae	Aristida contorta (A)			x	x																						
Poaceae	Austrostipa elegantissima						x		x	x	x			x			x	x	x								
Poaceae	Austrostipa nitida (A)												x														x
Poaceae	Austrostipa plumigera									x			x			x	x			x							x
Poaceae	Austrostipa scabra								x	x		x			x						x						-
Poaceae	*Avena barbata (W)																										x
Poaceae	*Cenchrus ciliaris (W)														x												
Poaceae	Cynodon dactylon(A)																										x
Poaceae	Enneapogon caerulescens (A)												x		x												
Poaceae	Enteropogon ramosus						x		x	x	x		~		~												-
Poaceae	Eragrostis setifolia (A)						~	x	x	X									x								x
Poaceae	Eriachne pulchella							~	~	~					x	x		x	~	x							~
Poaceae	Hordeum leporinum					x		x						x	~			~									x
Poaceae	Thyridolepis mitchelliana					~		~				x	x	~		x						х		x			
Poaceae	Tragus australianus(A)											^	~			~						~		~		'	
Poaceae	Triodia rigidissima														x							х		x			
Poaceae	Triodia scariosa												x		~	x		x			x	x		x	x	x	
Polygonaceae	Duma florulenta	x																~				~		~	~	~	
Polygonaceae	*Rumex vesicarius (W)	~																									x
Proteaceae	Grevillea acuaria									x	x	x	x				x					х					~
Proteaceae	Grevillea nematophylla						x			~	~	~	~				~					~					
Proteaceae	Hakea preissii		x				~																x				
Rhamnaceae	Cryptandra aridicola		~																				~			x	
Rhamnaceae	Pomaderris forrestiana															x				x							
Rhamnaceae	Trymalium myrtillus															x				~							
Santalaceae	Exocarpos aphyllus			x	x				x			x	x		x	x	x			x		х	x	x			
Santalaceae	Santalum acuminatum			~	~				~			~	~		~	x	~			~		~	~	~			
Santalaceae	Santalum murrayanum															^				x			x				
Santalaceae	Santalum spicatum											x	x					x		<u>^</u>			^				
Santalaceae	Alectryon oleifolius						x			x		x	x					^								<u> </u>	
Sapindaceae	Dodonaea adenophora														x			x								<u> </u>	
Sapindaceae	Dodonaea lobulata								x	x						x		x					x		x		
Sapindaceae	Dodonaea microzyga								<u>^</u>	^					x	^		^								<u> </u>	
Sapindaceae	Dodonaea stenozyga									x					^					x						<u> </u>	
Sapindaceae	Dodonaea sieriozyga Dodonaea viscosa			x	x					x		x	x							^		x					
Scrophulariaceae	Eremophila alternifolia			x	x		x		-	^		^					x					~				<u> </u>	
Scrophulariaceae	Eremophila caperata			<u>^</u>	^		^										^								x		
Scrophulariaceae	Eremophila clarkei																x	x								<u> </u>	
Scrophulariaceae	Eremophila clarkei Eremophila decipiens			~	~							~	~			~									~		
	Eremophila decipiens Eremophila georgei			X	X							X	x			x				~					X	<u> </u>	
Scrophulariaceae Scrophulariaceae				-					-				x		X					X		v					
	Eremophila gibbosa																					х				x	
Scrophulariaceae	Eremophila glabra															X		X			X		X		X	<u> </u>	
Scrophulariaceae	Eremophila interstans subsp. virgata											X				х		Х								<u> </u>	



			Closed epressio	on		pen ession			Cla	y-Loam I	Plain			Rocky Plain			Rocky-	Hillslope	•		Sand	l Dune	San	d-Loam	Plain	Sand- plain	Dist.
Family	Species	CD- OS1	CD- MFW1	CD- CS1	OD- AFW1	OD- MS1	CLP- AFW1	CLP- CS1	CLP- EW1	CLP- EW2	CLP- EW3	CLP- EW4	CLP- EW5	QRP- CS1	RH- AFW1	RH- EW1	RH- EW2	RH- EW3	RH- MWS1	RH- MWS2	D- MFW1	D- MWS1	SLP- CFW1	SLP- EW1	SLP- MWS1	SP- MWS1	Dist.
Scrophulariaceae	Eremophila ionantha											x	x											x		1	
Scrophulariaceae	Eremophila longifolia			x	x	x																					
Scrophulariaceae	Eremophila maculata								x	х			x														
Scrophulariaceae	Eremophila metallicorum											x				х				x							
Scrophulariaceae	Eremophila miniata			x	x							x	x														
Scrophulariaceae	Eremophila oldfieldii										x					х						x					
Scrophulariaceae	Eremophila oldfieldii subsp. angustifolia									x				x		x	х	x									x
Scrophulariaceae	Eremophila oppositifolia						x		x			x	x														
Scrophulariaceae	Eremophila paisleyi											x	x			х				x							
Scrophulariaceae	Eremophila parvifolia subsp. auricampi																										
Scrophulariaceae	Eremophila praecox (P2)								x																		
Scrophulariaceae	Eremophila scoparia			x	x			x	x		x	x	x	x		х	х			x			x				
Scrophulariaceae	Myoporum platycarpum			x	x									x													
Solanaceae	Duboisia hopwoodii																					x		x			
Solanaceae	Lycium australe					x		х						x													
Solanaceae	*Nicotiana glauca (W)																										x
Solanaceae	Nicotiana rosulata (A)		х					х																			
Solanaceae	Solanum hoplopetalum								x	x		x	x														x
Solanaceae	Solanum lasiophyllum			x	x		x						x		x				x			x					x
Solanaceae	Solanum nigrum																										x
Solanaceae	Solanum nummularium		х										x												x		
Solanaceae	Solanum orbiculatum								x	x								x					x				
Solanaceae	Solanum plicatile								x	х									x				x				x
Thymelaeaceae	Pimelea microcephala											x	x						x								
Thymelaeaceae	Pimelea trichostachya													x								x		x		1	
Zygophyllaceae	Roepera eremaea (A)													x	x												
Zygophyllaceae	Roepera glauca (A)											x	x		x						x				x		
Zygophyllaceae	Tribulus terrestris					x	x	x	x	x																	x

(A) Annual Species (W) Weed Species (P) Priority Species





APPENDIX E: LIST OF VERTEBRATE FAUNA SPECIES IDENTIFIED WITHIN THE SURVEY AREA

Class	Family	Species	Common Name	Conservatior Status
	Acanthizidae	Acanthiza apicalis	Broad-tailed Thornbill	LC
Aves		Acanthiza chrysorrhoa	Yellow-rumped Thornbill	LC
		Acanthiza uropygialis	Chestnut-rumped Thornbill	LC
		Pyrrholaemus brunneus	Redthroat	LC
		Smicrornis brevirostris	Weebill	LC
	Accipitridae	Accipiter cirrocephalus	Collared Sparrowhawk	LC
		Accipiter fasciatus	Brown Goshawk	LC
		Aquila audax	Wedge-tailed Eagle	LC
		Aquila morphnoides	Little Eagle	LC
	Artamidae	Artamus cinereus	Black-faced Woodswallow	LC
		Artamus cyanopterus	Dusky Woodswallow	LC
	Campephagidae	Coracina novaehollandiae	Black-faced Cuckoo-shrike	LC
		Lalage tricolor	White-winged Triller	LC
	Casuariidae	Dromaius novaehollandiae	Emu	LC
	Cinclosomatidae	Cinclosoma clarum	Copper-backed Quail Thrush	LC
	Climacterida	Climacteris rufa	Rufous Treecreeper	LC
	Columbidae	Ocyphaps lophotes	Crested Pigeon	LC
		Phaps chalcoptera	Common Bronzewing	LC
	Corvidae	Corvus coronoides	Australian Raven	LC
	Cracticidae	Cracticus nigrogularis	Pied Butcherbird	LC
		Cracticus tibicen	Australian Magpie	LC
		Cracticus torquatus	Grey Butcherbird	LC
		Strepera versicolor	Grey Currawong	LC
	Dicruridae	Rhipidura leucophrys	Willie Wagtail	LC
	Falconidae	Falco cenchroides	Australian Kestrel	LC
	Halcyonidae	Todiramphus pyrrhopygia	Red-backed Kingfisher	LC
	Hirundinidae	Hirundo nigricans	Tree Martin	LC
	Maluridae	Malurus leucopterus	White-winged Fairy-wren	LC
		Malurus splendens	Splendid Fairy-wren	LC
	Meliphagidae	Acanthagenys rufogularis	Spiny-cheeked Honeyeater	LC
		Anthochaera carunculata	Red Wattlebird	LC
		Lichenostomus ornatus	Yellow-plumed Honeyeater	LC
		Lichenostomus virescens	Singing Honeyeater	LC
		Lichmera indistincta	Brown Honeyeater	LC
		Manorina flavigula	Yellow-throated Miner	LC
		Melithreptus brevirostris	Brown-headed Honeyeater	LC
		Phylidonyris albifrons	White-fronted Honeyeater	LC
	Meropidae	Merops ornatus	Rainbow Bee-eater	LC
	Pachycephalidae	Colluricincla harmonica	Grey Shrike-thrush	LC
		Oreoica gutturalis	Crested Bellbird	LC
		Pachycephala rufiventris	Rufous Whistler	LC
	Pardalotidae	Pardalotus striatus	Striated Pardalote	LC
	Petroicidae	Eopsaltria griseogularis	Western Yellow Robin	LC



Class	Family	Species	Common Name	Conservation Status
		Microeca fascinans	Jacky Winter	LC
		Petroica goodenovii	Red-capped Robin	LC
	Podargidae	Podargus strigoides	Tawny Frogmouth	LC
	Pomatostomidae	Pomatostomus superciliosus	White-browed Babbler	LC
	Psittacidae	Platycercus varius	Mulga Parrot	LC
		Platycercus zonarius	Australian Ringneck Parrot	LC
	Bovidae	Bos taurus *	European Cattle	Introduced
Mammalia		Capra hircus *	Goat	Introduced
	Canidae	Canis lupus familiaris *	Dog	Introduced
	Felidae	Felis catus *	Cat	Introduced
	Leporidae	Oryctolagus cuniculus *	Rabbit	Introduced
	Macropodidae	Macropus fuliginosus	Western Grey Kangaroo	LC
		Macropus robustus	Euro	LC
	Molossidae	Austronomus australis	White-striped Freetail-bat	LC
		Ozimops sp.	Freetail-bat	LC
	Tachyglossidae	Tachyglossus aculeatus	Echidna	LC
	Vespertilionidae	Chalinolobus gouldii	Gould's Wattled Bat	LC
		Chalinolobus morio	Chocolate Wattled Bat	LC
		Nyctophilus geoffroyi	Lesser Long-eared Bat	LC
		Nyctophilus major tor	Central Long-eared Bat	P3
		Scotorepens balstoni	Inland Broad-nosed Bat	LC
		Vespadelus regulus	Southern Forest Bat	LC
	Agamidae	Ctenophorus cristatus	Crested Bicycle Dragon	LC
Reptilia		Ctenophorus isolepis	Military Dragon	LC
		Ctenophorus reticulatus	Western Netted Dragon	LC
		Ctenophorus scutulatus	Lozenged Marked Bicycle Dragon	LC
	Gekkonidae	Gehyra variegata	Variegated Dtella	LC
		Heteronotia binoei	Bynoe's Gecko	LC
		Underwoodisaurus milii	Barking Gecko	LC
		Varanus gouldii	Gould's Sand Monitor	LC
	Pygopodidae	Delma butleri	Unbanded Delma	LC
	Scincidae	Ctenotus schomburgkii	Barred Wedge-snout Ctenotus	LC
		Hemiergis initialis	Five-toed Mulch Skink	LC
		Tiliqua occipitalis	Western Blue-tongue	LC
		Tiliqua rugosa	Bobtail	LC

BC Act Status/EPBC Act Status - CR = Critically Endangered, EN = Endangered, VU = Vulnerable, EX = Extinct, Mig = Migratory, DBCA Priority Status - P1 to P4, Int. Agmts - CA = CAMBA, JA = JAMBA, RK = ROKAMBA, IUCN Red List Category Definitions LC = Least Concern, NT = Near Threatened - see https://www.iucnredlist.org/resources/categories-and-criteria for others



APPENDIX F: VEGETATION CONDITION RATING

Vegetation Condition Rating	South West and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non- aggressive weeds, or occasional vehicle tracks.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e., areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.