Native Vegetation Clearing Referral Supporting Documentation

Murchison Green Hydrogen – Hydrogeological and Geotechnical Investigations

Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust

29 May 2024

→ The Power of Commitment

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1. Introduction

1.1 Project background

Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust (Murchison Hydrogen Renewables) is developing the Murchison Green Hydrogen Project (the Project), a planned 5.4 GW Power-to-X Project that uses combined onshore wind and solar energy to produce 100% green ammonia for export to global markets. The Project site is in the Shire of Northampton, approximately 20 km north of Kalbarri, entirely within the Murchison Pastoral Lease (registered number N050525) (Figure 1).

Murchison Hydrogen Renewables has referred the Project under Part IV of the *Environmental Protection Act 1986* (EP Act, Assessment No. 2339). Similarly, the Project has been referred to DCCEEW under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act, 2022/09217). The assessment level for this Project has been set at Public Environmental Review.

1.2 Early investigative studies

To support the development of the Project, geotechnical and hydrogeological investigations are required across the Project Development Envelope (DE) to further understand the varying soil systems, underlying geology, and groundwater volume. These studies will inform engineering and design of the Project.

The investigative works will consist of sixteen geotechnical Investigation Sites, located within or adjacent to existing cleared tracks to minimise disturbance to the native vegetation. Within two of the Investigation Sites, two production bores and associated monitoring wells will be installed, and test pumped to confirm that the groundwater resource and hydraulic properties are suitable for the Project. One additional Investigation Site will be cleared around the Long Thickett Bore.

1.3 Purpose of this report

The purpose of this document is to support the Native Vegetation Clearing Referral (NVCR) submitted to the Department of Water and Environmental Regulation (DWER). This document provides further context and understanding of the clearing referred to DWER and assesses the proposed clearing against the ten clearing principles as required under Schedule 5 of the EP Act.

1.4 Scope and limitations

This report: has been prepared by GHD for Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust and may only be used and relied on by Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust for the purpose agreed between GHD and Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust as set out in section 1.3 of this report.

GHD otherwise disclaims responsibility to any person other than Murchison Hydrogen Renewables Pty Ltd as trustee for the Murchison Hydrogen Renewables Trust arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

2. Description of clearing activities

2.1 Boreholes and test pits

To accommodate each geotechnical test pit, an Investigation Area of approximately 15 m by 30 m (0.045 ha) must be disturbed. Sixteen geotechnical test pits will be required. Two production bores and associated monitoring wells will be installed and test pumped to confirm that the groundwater resource and hydraulic properties are suitable for the Project. Two suitable locations have been identified within two of the geotechnical Investigation Sites: Site 4 and Site 7. Hydrogeological investigations require a larger pad footprint, hence Investigation Sites 4 and 7 will be 30 m by 30 m (0.090 ha). One additional Investigation Site will be located at Long Thickett Bore, 30 m x 53 m (0.160 ha).

The locations of the Investigation Areas are shown in Figure 2 and their coordinates are in Appendix A. The sites have been placed on paths of existing clearing as far as practicable; however, some clearing of native vegetation will be required. As a result, the area of native vegetation needing to be cleared is approximately 0.54 ha.

The investigation teams will utilise existing tracks and roads to access each of the 17 Investigation Areas. Equipment likely required to undertake the geotechnical investigation will be one heavy vehicle drill rig and one supporting light vehicle. The clearing of vegetation, where necessary, will be undertaken by a bulldozer. Where practicable, vegetation within the Investigation Area will be driven over and not removed. At each site the team will drill narrow, deep holes into the ground and obtain samples in order to assess properties of the geology and its suitability for the Project. Within the hydrogeological Investigation Sites, production bores and associated monitoring wells will be installed, and test pumped.

The drilling program will take approximately three months to complete and will commence immediately upon approval. Drilling will take place over several mobilisations across the three-month period.

At the conclusion of drilling the test pits will be filled and flattened. Topsoil will be reinstated to facilitate natural regrowth. The same existing access track will be used to return to the main road.

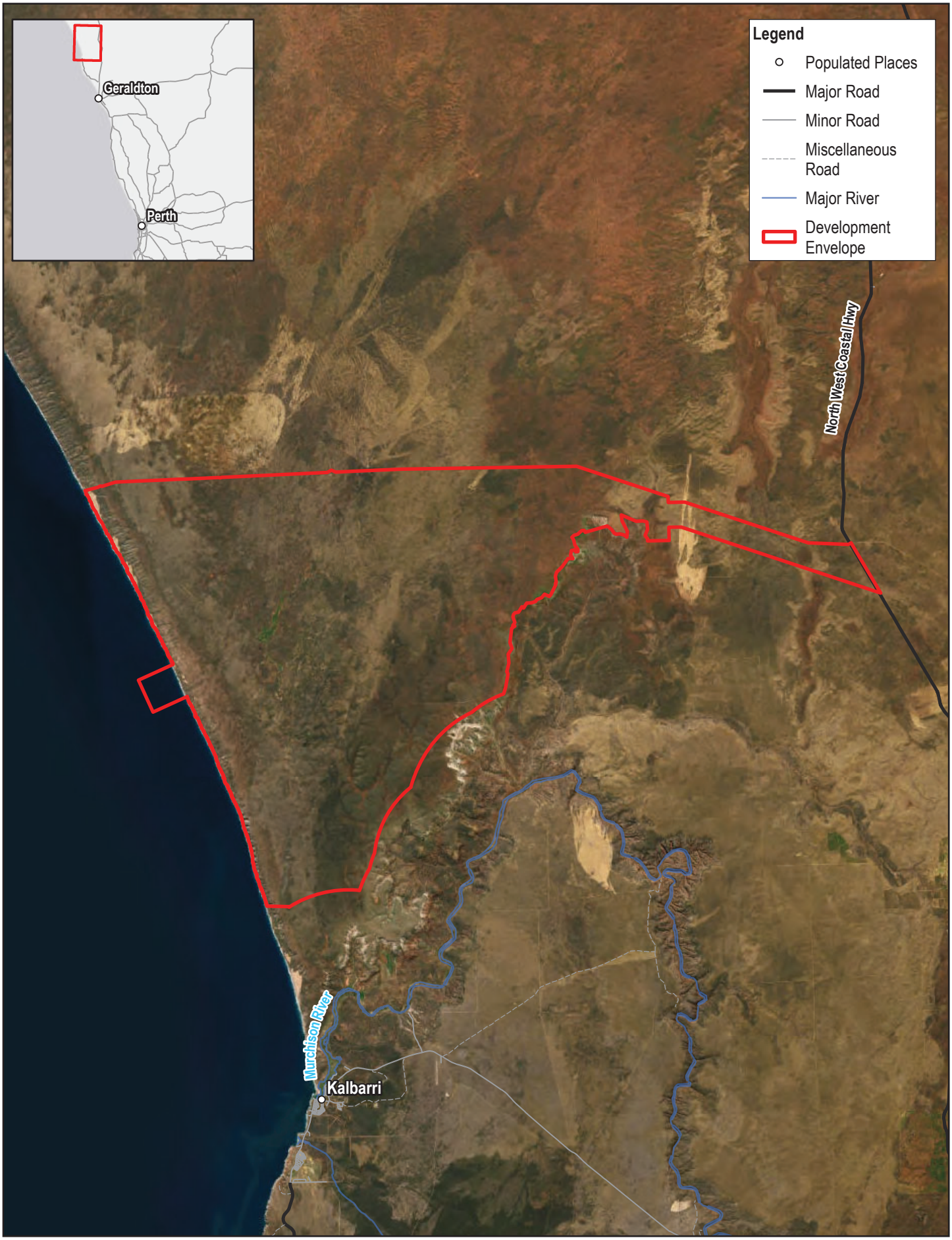
3. Field surveys

A summary of the key ecological surveys that have previously been undertaken in relation to the Investigation Area is presented in Table 1 below. As the impact assessment is still ongoing, these reports are still being in preparation.

Table 1 Ecology baseline studies

Survey	Key Findings
Flora and vegetation survey - Murchison Hydrogen Renewables Project (GHD 2023)	GHD botanists conducted flora and vegetation surveys and targeted Orchid surveys over 177 days throughout 2021, 2022 and 2023. Thirty-one vegetation types were described and mapped within the survey area, excluding areas previously cleared for tracks, sand dunes, beach, and ocean. No Threatened Ecological Communities (TECs) listed under the EPBC Act or *Biodiversity Conservation Act 2016* (BC Act), or Priority Ecological Communities (PECs) listed by the Department of Biodiversity, Conservation and Attractions (DBCA) were identified within the survey area during the field surveys. A total of 49 significant flora were recorded within the survey area. Of these, two species were Threatened, eight species were Priority 1, 14 species Priority 2, 20 species Priority 3 and five species Priority 4.
Fauna Assessment - Murchison Green Hydrogen Project (GHD 2023)	Targeted vertebrate fauna surveys were undertaken between November 2021 and February 2023, as well as a detailed two-phase and targeted vertebrate fauna survey between August and October 2022. Twelve broad fauna habitat types were recorded in the Survey Area: York Gum woodland, Jam shrubland, Mallee woodland, Mixed shrubland, Acacia shrubland, Coastal heathland, Beach / Coastal dunes and ridges, Limestone hills and

Survey	Key Findings
	ridgelines, Coastal shrublands, Clay Pans / Lake Culcurdoo, Minor creeks and drainage line and Cleared areas / Farmland. The fauna survey recorded 262 vertebrate species in the survey area, comprising 28 mammals, 156 birds, 72 reptiles and six amphibians. Seven of these taxa were introduced fauna. The fauna assessment identified six significant vertebrate species and 11 Migratory bird species within the survey area.



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Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 50

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Murchison Hydrogen Renewables Pty Ltd
Murchison Hydrogen Renewables Project

Regional Location and Development Envelope

Project No. **12553823**
Revision No. **B**
Date **26/03/2024**

FIGURE 1

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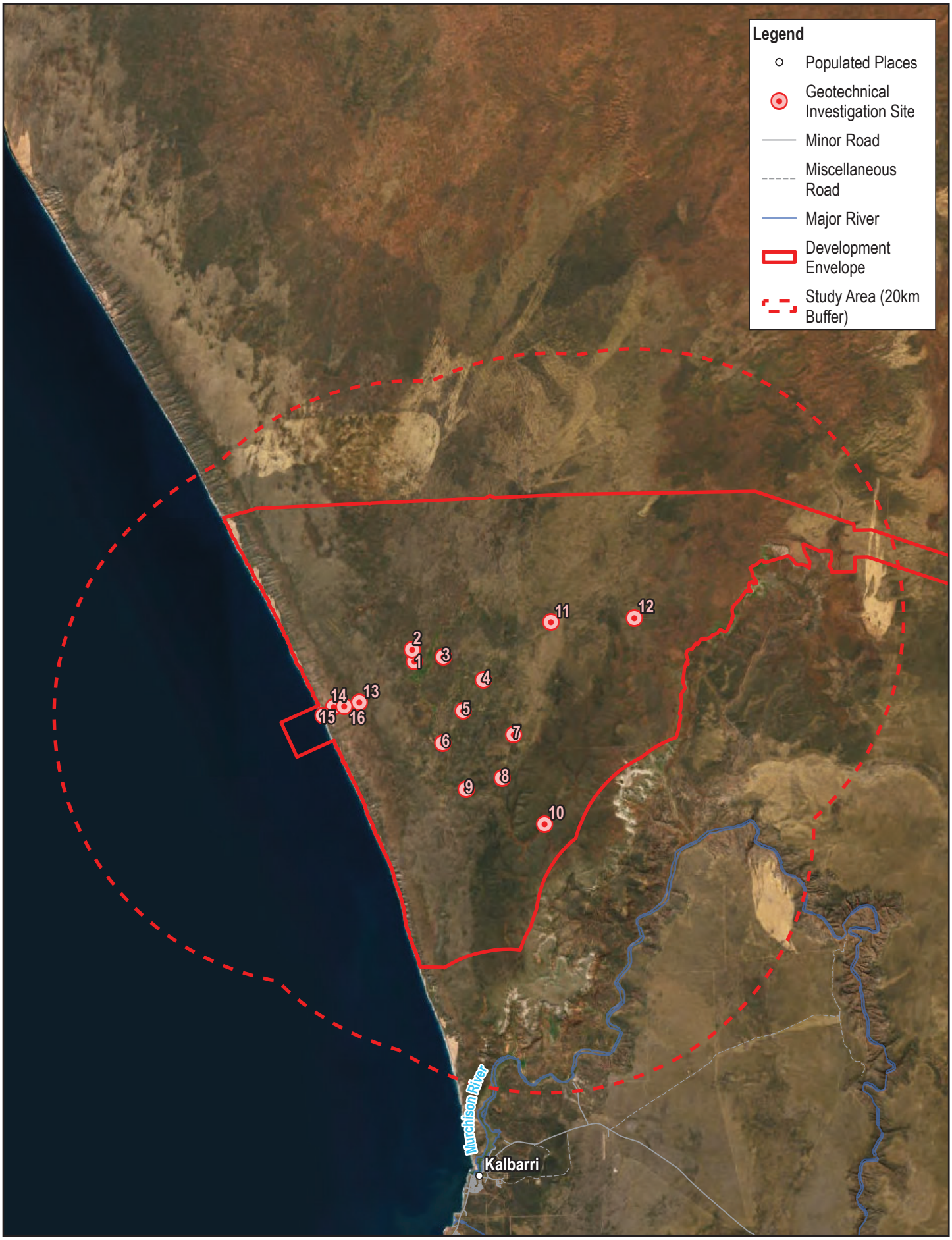

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Proposed Geotechnical Investigation Sites and Study Area

FIGURE 2

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4. Existing environment

4.1 Climate

The Murchison area experiences a warm Mediterranean climate with mild, wet winters and warm, dry summers. The Bureau of Meteorology (BoM) Kalbarri Station (site number: 008251) is the nearest weather station with long term data. Temperature data from the Kalbarri weather station indicates that the mean maximum temperature ranges from 34.1˚C in February to 21.9 ˚C in July, with an annual mean maximum temperature of 27.7˚C. The Kalbarri area has a mean annual rainfall of 334.8 mm, predominantly falling May through August (BoM, 2024). Figure 3 presents the temperature and rainfall statistics from the Kalbarri weather station.

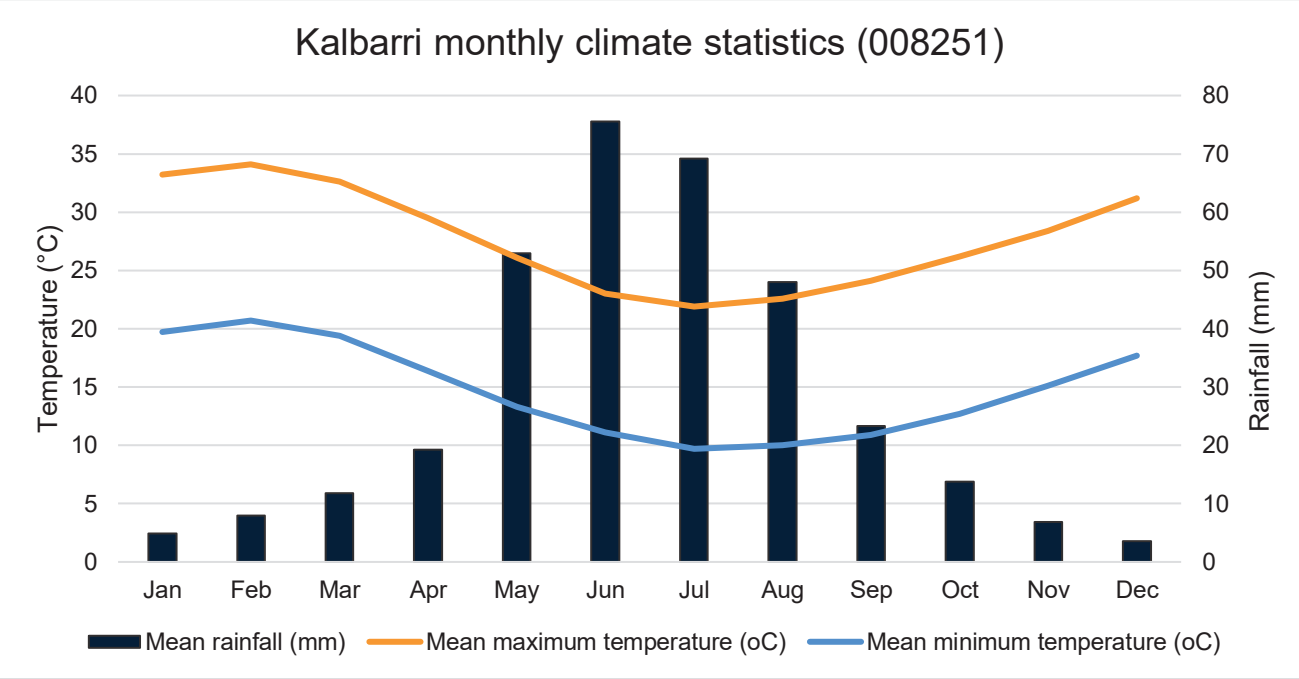


Figure 3 Kalbarri monthly climate statistics (BoM weather station: 008251) (BoM 2024)

4.2 Land use

The investigation areas lie within a Pastoral station that is used for grazing goats; Murchison Pastoral Lease (registered number N050525). Murchison Hydrogen Renewables currently have authority to access this lease via a Section 91 licence (Appendix B).

4.3 Geology and soils

4.3.1 Soils

The soil landscape changes from calcrete plateaux, mesas, hills and footslopes supporting annual grasslands, herbfields and degraded chenopod shrublands in the east, through to elevated, undulating limestone plains with thin sand cover, sea cliffs and low hills supporting low heath, mallee shrublands and paper bark thickets in the western coastal section. Commonly found throughout the mid-region is undulating sand plains and occasional dunes supporting shrub heath and tree heath vegetation (GoWA 2024a).

4.3.2 Topography

Topography within the area of the Investigation Sites varies from low lying draining lines, to flats, up to more highly elevated sandy dunes and limestone ridges. The limestone is rugged and reaches elevations of greater than

150 m along the coastal areas in the western portion. Topography through the mid-region lies lower in the landscape, allowing water to pool and infiltrate the ground. The topography rises again in the southeastern region, to a height comparable to that of the limestone ridge.

4.3.3 Acid sulfate soils

A review of Acid Sulfate Soil (ASS) risk mapping indicates that ASS is not present in any hydrogeological/geotechnical Investigation Sites. The closest potential ASS site is along the Murchison River, which at its closest point is approximately 5 km south of the area. Review of CSIRO (2020) mapping indicates the area has an Extremely Low probability of ASS occurrence, with 1-5% chance of occurrence in mapping unit with any occurrences in small, localised areas. Given the presence of limestone throughout the area, the occurrence of any ASS is not expected.

4.4 Hydrology

The Government of WA data layers identified the water resources present in the DE. These are detailed below in Table 2 and mapped in Figure 4b.

Table 2 Water resources present within the development envelope

Aspect	Details	Results
Groundwater areas	Groundwater areas proclaimed under the Rights in Water and Irrigation Act, 1914.	The Investigation Sites are located within the Gascoyne Groundwater Area. No other groundwater areas are located within the Investigation Sites.
Surface Water Areas	Surface water areas proclaimed under the RIWI Act.	None present.
Irrigation Districts	Irrigation Districts proclaimed under the RIWI Act.	None present.
Rivers	Rivers proclaimed under the Rights in RIWI Act.	None present.
Public Drinking Water Source Areas (PDWSAs)	PDWSA is a collective term used for the description of Water Reserves, Catchment Areas and Underground Pollution Control Areas declared (gazetted) under the provisions of the *Metropolitan Water Supply, Sewage and Drainage Act 1909* (WA) or the *Country Areas Water Supply Act 1947* (WA).	None present within the Investigation Sites. Kalbarri Water Reserve is located approximately 10 km south.
Waterways Management Areas	Areas proclaimed under the Waterway Conservation Act 1976 (WA). These are Albany waterways, Avon River, Wilson Inlet, Peel – Harvey estuaries and Leschenault Inlet.	None present.

4.4.1 Groundwater

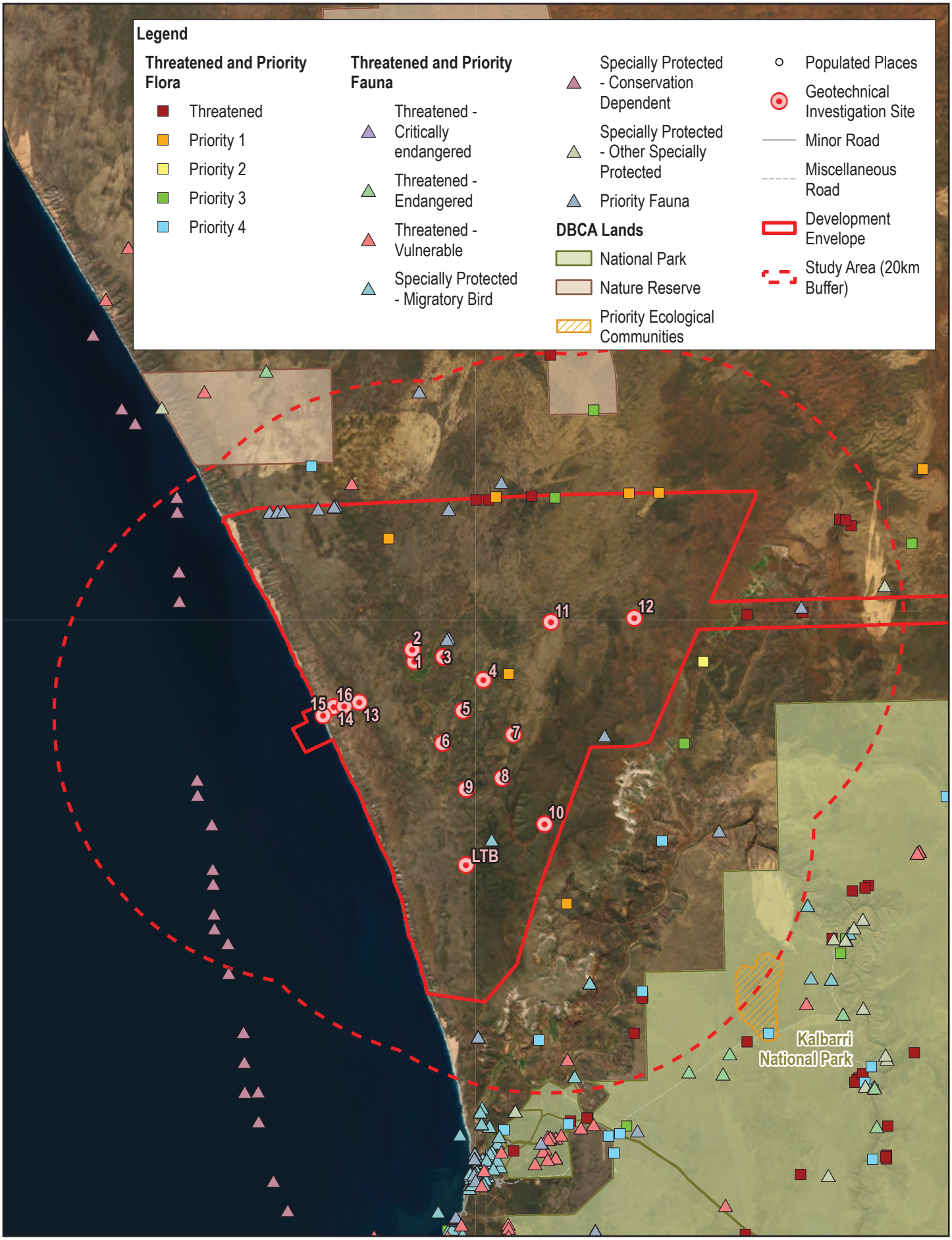
The Investigation Sites are situated on the Proclaimed Gascoyne Groundwater Area under the RIWI Act (GoWA 2024b). There are no PDWSAs within the Investigation Sites. The Kalbarri Water Reserve is located approximately 10 km south (Figure 4b).

4.4.2 Surface water and drainage

No rivers, as recognised under the RIWI Act, intercept or are within the vicinity of the Investigation Sites (GoWA 2024c). Additionally, no RIWI Act protected surface waters or management areas are found within 20 km of the Investigation Sites.

4.4.3 Wetlands

No internationally (Ramsar) or nationally important wetlands are located within the Investigation Sites. The closest important wetland is the Murchison River (Lower Reaches) listed in the Directory of Important Wetlands in Australia (GoWA 2024d). This wetland is approximately 10 km southeast of the nearest Investigation Sites (Figure 4b).



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Kilometers

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Grid: GDA 1994 MGA Zone 50

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Environmental Constraints

FIGURE 004a

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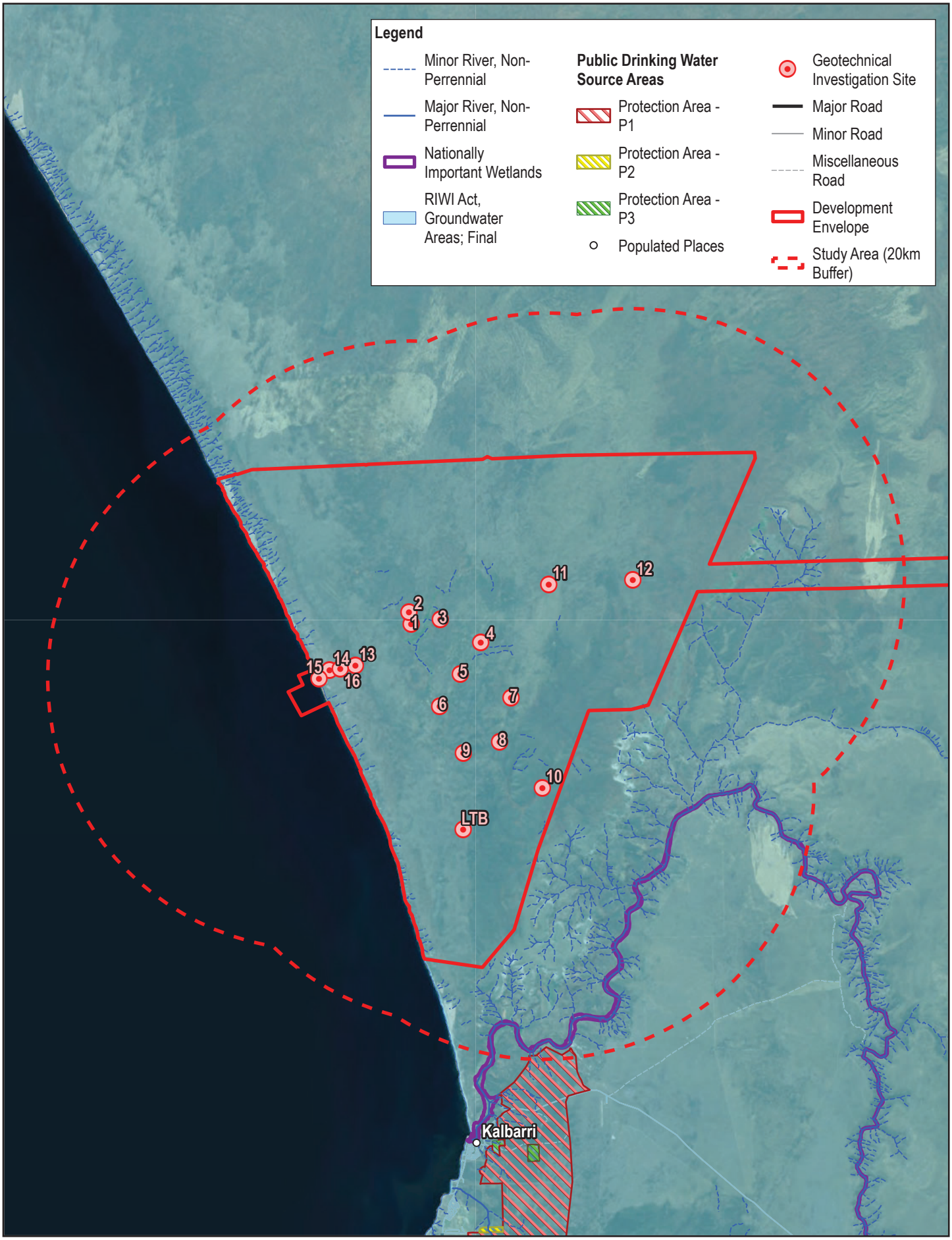

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Environmental Constraints

FIGURE 004b

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4.5 Flora and vegetation

4.5.1 Survey effort

GHD botanists completed a reconnaissance flora and vegetation survey in November 2021. A targeted Orchid survey was also completed in August 2022 and August 2023. The detailed and targeted assessment of the survey area was completed over three phases to capture the spring flowering period, with surveys in September, October, and November 2022 (Table 3). A total of 177 field survey days were completed across all surveys. The field surveys were led by Joel Collins (Technical Director Botany/Team Leader) who has over 19 years' experience undertaking flora and vegetation surveys across the Geraldton Sandplains and Yalgoo bioregions. Joel has previously undertaken numerous targeted orchid surveys for significant species, including for *Caladenia bryceana* subsp*. cracens* near Port Gregory. The survey team comprised three senior botanists, one botanist, and two environmental scientists. The three senior botanists (12-17 years' experience) and the botanist (five years' experience) have undertaken numerous flora and vegetation surveys across the Geraldton Sandplains and Yalgoo bioregions.

Table 3 Flora and vegetation survey timing and effort (GHD 2023)

Date	Survey effort	Total number of field survey days
15 – 19 November 2021	Late spring reconnaissance flora and vegetation survey, site investigation	5
18 – 29 August 2022	Targeted Orchid survey	32
5 – 12 September 2022	Spring detailed and targeted flora and vegetation survey	40
9 – 18 October 2022	Spring detailed and targeted flora and vegetation survey	42
21 – 27 November 2022	Spring detailed and targeted flora and vegetation survey	42
22 – 25 August 2023	Targeted Orchid Survey	16
Total		177

4.5.2 Regional biogeography

The Investigation Sites lie within the Geraldton Sandplains IBRA bioregion and the Geraldton Hills IBRA subregion. The Geraldton Sandplains bioregion comprises the central and northern Perth Basin, the Pinjarra Orogen, and the south end of the Carnarvon Basin. Outcrops of Jurassic siltstones and sandstones can be heavily lateralized. Extensive proteaceous heaths and scrub-heaths, often with emergent mallee *Banksia* and *Actinostrobus*, occur on an undulating, lateritic sandplain mantling Permian to Cretaceous strata. These heaths are rich in endemics. Sandplains are most extensive in the north and southeast where the region overlaps the edges of the Carnarvon Basin and Yilgarn Craton respectively. Extensive York Gum and Acacia woodlands occur on alluvial outwash plains associated with drainage and with valleys in the hill country. Areas of coastal aeolian sands and limestone support proteaceous heath and Acacia scrubs (Desmond and Chant 2002).

4.5.3 Broad vegetation mapping and extents

Broad scale (1:250,000) pre-European vegetation mapping of the area was completed by Beard (1975) at an association level. Mapping indicates five vegetation associations are present within the Investigation Sites:

– Shrublands; *Acacia rostellifera* thicket (association 17)
– Shrublands; scrub-heath on sandplain (association 380)
– Mosaic: Shrublands; scrub-heath on coastal association on yellow sandplain / Shrublands; Acacia patchy scrub (association 401)
– Shrublands; heath on coastal limestone (association 402)
– Shrublands; *Acacia ligulata* scrub-heath (association 403)

The pre-European mapping has been adapted and digitised by Shepherd et al. (2002). The extent of vegetation associations has been determined by the state-wide vegetation remaining extent calculations maintained by DBCA

(latest update April 2020 – GoWA 2020b). As shown in Table 4, the proposed hydrogeological/geotechnical Investigation Sites represent less than 0.001% of each vegetation association's calculated current extents at all scales (State, IBRA Bioregion, IBRA Subregion, and LGA).

4.5.4 Vegetation types and condition

The GHD (2023) field survey identified seven native vegetation types within the Investigation Sites, as well previously cleared areas (Figure 5). Vegetation condition was rated from Degraded to Excellent, with the majority being in Excellent or Very Good condition (Figure 6). Vegetation structure was intact across the majority of the area, supporting high diversity and limited introduced species. However, the tracks were described as Completely Degraded (cleared). These previously cleared areas are typical where the hydrogeological/geotechnical investigations will primarily occur. The vegetation in Very Good to Excellent condition is found several metres from the track clearing. Vegetation directly adjacent to the track is considered Good to Degraded due to disturbances associated with pastoralist use of the track.

In total, seventeen Investigation Sites have been identified. All sites are found adjacent to cleared tracks that currently exist within the pastoral station. Six sites sit entirely within existing cleared tracks. The remaining 11 sites require additional clearing adjacent to the track to accommodate the testing. Table 5 details the vegetation types and conditions recorded within the Investigation Sites.

Table 4 Extent of pre-European vegetation associations within the Investigation Sites (Beard 1975, GoWA 2021b)

Pre-European Vegetation Association	Scale	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	% current extent in all DBCA managed land (proportion of current extent)	Area within the Investigation Sites (ha)	% of current extent within the Investigation Sites
402	State: Western Australia	51,592.94	51,155.81	99.15	63.13	0.090	Less than 0.001
	IBRA bioregion: Geraldton Sandplains	50,723.54	50,406.65	99.38	62.78	0.090	Less than 0.001
	IBRA subregion: Geraldton Hills	50,723.54	50,406.65	99.38	62.78	0.090	Less than 0.001
	LGA: Shire of Northampton	21,286.52	20,913.05	98.25	14.65	0.090	Less than 0.001
380	State: Western Australia	580,374.88	351,916.09	60.64	40.01	0.090	Less than 0.001
	IBRA bioregion: Geraldton Sandplains	507,696.88	319,288.64	62.89	39.60	0.090	Less than 0.001
	IBRA subregion: Geraldton Hills	507,696.88	319,288.64	62.89	39.60	0.090	Less than 0.001
	LGA: Shire of Northampton	323,476.98	249,037.61	76.99	31.88	0.090	Less than 0.001
17	State: Western Australia	76,633.84	67,605.49	88.22	13.06	0.045	Less than 0.001
	IBRA bioregion: Geraldton Sandplains	54,078.08	45,159.85	83.51	13.44	0.045	Less than 0.001
	IBRA subregion: Geraldton Hills	49,605.04	42,016.28	84.70	13.26	0.045	Less than 0.001
	LGA: Shire of Northampton	49,549.89	41,939.33	84.64	13.29	0.045	Less than 0.001
401	State: Western Australia	32,726.65	32,726.65	100.00	24.91	0.494	0.001
	IBRA bioregion: Geraldton Sandplains	32,603.86	32,603.86	100.00	24.63	0.494	0.001
	IBRA subregion: Geraldton Hills	32,603.86	32,603.86	100.00	24.63	0.494	0.001
	LGA: Shire of Northampton	32,401.50	32,401.50	100.00	24.16	0.494	0.001

Pre-European Vegetation Association	Scale	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	% current extent in all DBCA managed land (proportion of current extent)	Area within the Investigation Sites (ha)	% of current extent within the Investigation Sites
403	State: Western Australia	11,635.38	11,113.55	95.52	56.89	0.090	Less than 0.001
	IBRA bioregion: Geraldton Sandplains	11,536.78	11,105.99	96.27	56.93	0.090	Less than 0.001
	IBRA subregion: Geraldton Hills	11,536.78	11,105.99	96.27	56.93	0.090	Less than 0.001
	LGA: Shire of Northampton	5,740.51	5,440.62	94.78	12.15	0.090	Less than 0.001

Table 5 Recorded vegetation types

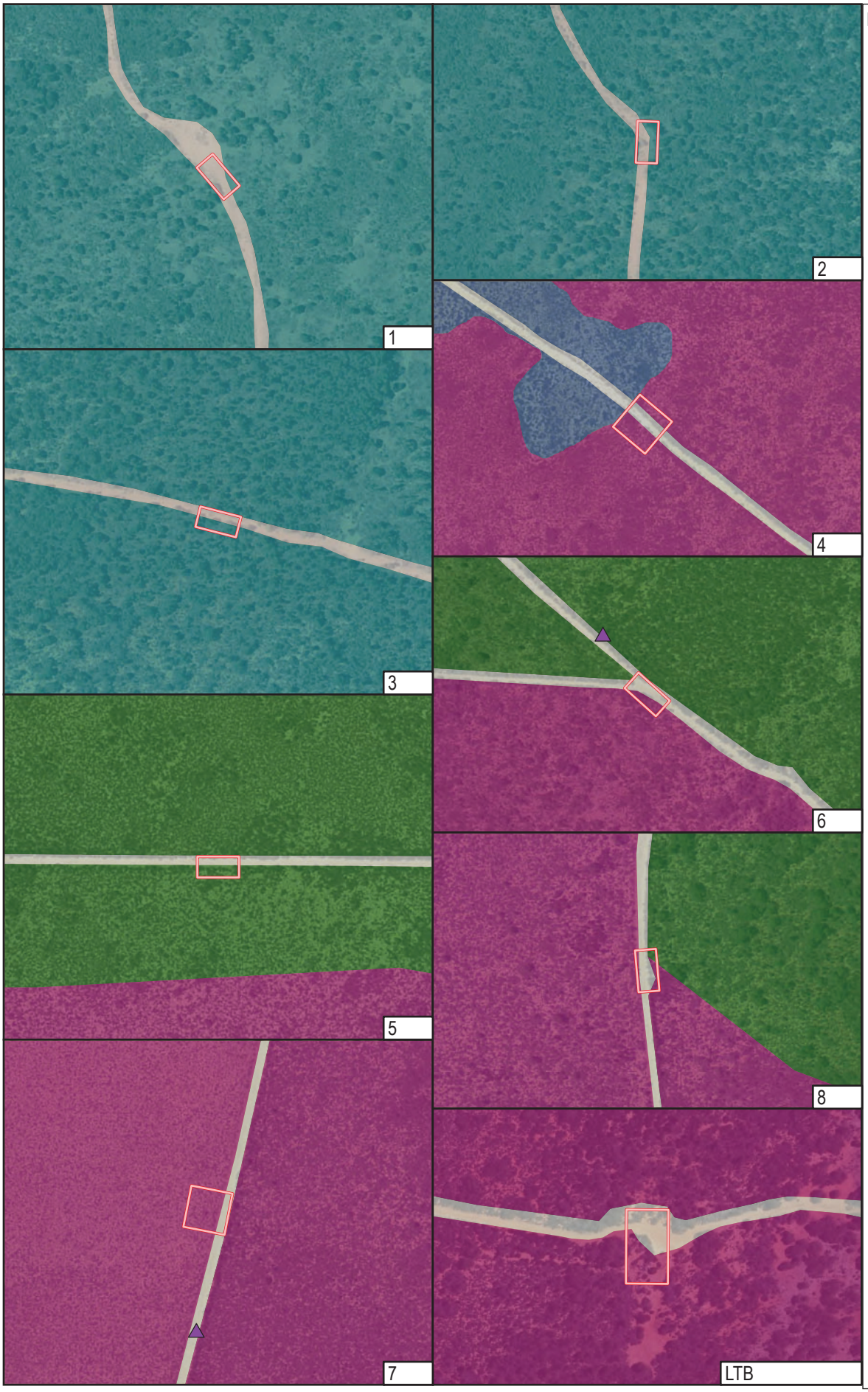
Vegetation Type	Vegetation Type Description	Condition and extent	Investigation Sites located in Vegetation Type	Photograph
VT01	*Melaleuca cardiophylla* sparse low shrubland over *Olearia axillaris*, *Rhagodia drummondii* and *Scholtzia oligandra* low open shrubland over *Acanthocarpus robustus* and *Desmocladus asper* sparse sedgeland over *Lomandra maritima*, *Ptilotus exiliflorus* and *Pimelea gilgiana* open forbland on light brown sand over limestone rocks and outcropping on coastal cliffs and drainage coastal gullies. Other associated species include *Eremophea spinosa*, *Solanum oldfieldii*, *Austrostipa crinita*, *Diplopeltis intermedia* var. *intermedia* and *Frankenia pauciflora*.	Very good – excellent 0.13 ha	Three total: Site 9 Site 13 Site 16	

Vegetation Type	Vegetation Type Description	Condition and extent	Investigation Sites located in Vegetation Type	Photograph
VT02	*Acacia rostellifera* isolated shrubs over *Melaleuca cardiophylla*, *Melaleuca leiopyxis* and *Olearia* sp. Kennedy Range (G. Byrne 66) open shrubland over *Lepidosperma* sp. Zuytdorp (G.J. Keighery & N. Gibson 1710), *Acanthocarpus* sp. Ajana (C.A. Gardner 8596) and *Desmocladus asper* open sedgeland over *Lomandra maritima*, *Roepera apiculata* and *Conostylis aculeata* subsp. *septentrionora* open forbland over *Rytidosperma setaceum* and *Austrostipa crinita* open tussock grassland on pale brown sand over limestone on coastal low secondary dunes and slopes. Other associated species include *Calothamnus oldfieldii*, *Scholtzia oligandra*, *Diplolaena mollis*, *Rhagodia latifolia* subsp. *latifolia*, *Melaleuca campanae*, *Quoya atriplicina* and *Lysiandra calycina*.	Very good – excellent 0.04 ha	One total: Site 14	
VT04	*Melaleuca cardiophylla*, *Acacia rostellifera*, *Scholtzia oligandra* and *Melaleuca venusta* open shrubland over *Desmocladus asper* open sedgeland over *Trachymene pilosa*, *Calandrinia* sp. Shark Bay (A. Markey 1405) and *Podotheca angustifolia* open forbland over *Austrostipa crinita* and **Rostraria pumila* open tussock grassland on pale brown sand over limestone on flat coastal sand dunes. Other associated species include *Diplopeltis intermedia* var. *intermedia*, *Lysiandra calycina*, *Solanum oldfieldii* and *Pimelea gilgiana*.	Very good – excellent 0.04 ha	One total: Site 15	

Vegetation Type	Vegetation Type Description	Condition and extent	Investigation Sites located in Vegetation Type	Photograph
VT08	*Melaleuca cardiophylla* open shrubland over *Olearia* sp. Kennedy Range (G. Byrne 66), *Eremophila oldfieldii* subsp. *oldfieldii, Pimelea gilgiana* and *Diplolaena grandiflora* open shrubland over *Ptilotus eriotrichus, Ptilotus divaricatus* and **Lysimachia arvensis* open forbland over *Austrostipa crinita, *Ehrharta brevifolia* var. *cuspidata* and **Rostraria pumila* tussock grassland on brown sand on limestone low hills, outcrops, and ridges.	Excellent 0.04 ha	One total: Site 10	
VT11	*Grevillea eriostachya*, *Acacia chartacea* and *Hakea stenophylla* subsp. *notialis* open shrubland over *Thryptomene denticulata*, *Melaleuca leiopyxis* and *Calytrix brevifolia* open shrubland over *Acanthocarpus* sp. *Ajana* (C.A. Gardner 8596) open sedgeland over *Goodenia berardiana* and *Waitzia corymbosa* open forbland on red sandy plain and low rises.	Very good – excellent 0.04 ha	One total: Site 6	

Vegetation Type	Vegetation Type Description	Condition and extent	Investigation Sites located in Vegetation Type	Photograph
VT12	*Allocasuarina campestris*, *Acacia rostellifera* and *Acacia blakelyi* shrubland to closed shrubland with occasional *Eucalyptus gittinsii* subsp. *gittinsii* and *Eucalyptus eudesmioides* isolated mallee trees over *Melaleuca leiopyxis*, *Melaleuca venusta* and *Malleostemon hursthousei* open shrubland over *Ecdeiocolea monostachya* and *Desmocladus asper* open sedgeland over *Gnephosis tenuissima*, *Hyalosperma demissum* and *Thysanotus exfimbriatus* open forbland on light brown sand flats and low rises. Other associated species include *Acanthocarpus humilis*, *Grevillea stenomera* (P3), *Thryptomene denticulata* and *Dioscorea hastifolia*.	Very good – excellent 0.04 ha	One total: Site 5	
VT16	*Acacia acuminata*, *Melaleuca eleuterostachya* and *Dodonaea inaequifolia* shrubland over *Cephalipterum drummondii*, *Waitzia corymbosa* and *Erodium cygnorum* forbland over *Austrostipa crinita* and **Pentameris airoides* subsp. *airoides* open tussock grassland on brown loamy clay flats and minor drainage lines (Weerinoogudda creek).	Very good – excellent 0.18 ha	Three total: Site 3 Site 7 Site 8	

Vegetation Type	Vegetation Type Description	Condition and extent	Investigation Sites located in Vegetation Type	Photograph
Cleared	Cleared tracks/farmland/dams	Degraded 0.43 ha	Five total: Site 1 Site 2 Site 4 Site 11 Site 12 Long Thickett Bore	



Legend

Geotechnical Investigation Site

Threatened Flora

Priority 3

Vegetation Type

Cleared

VT12: *Allocasuarina campestris*, *Acacia rostellifera* and *Acacia blakelyi* Shrubland to closed shrubland on light brown sand flats and low rises

VT14: *Acacia rostellifera* and *Melaleuca cardiophylla* open woodland to shrubland on brown sand on limestone rocky slopes and ridges and brown sandy flats

VT22: *Banksia sceptrum* open woodland to isolated trees over *Acacia rostellifera*, *Acacia blakelyi* and *Allocasuarina campestris* open shrubland on yellow sandplains and low rises

VT23: *Melaleuca concreta*, *Calytrix harvestiana* (P2) *Scholtzia oleosa* (P3) low shrubland on pink/orange sand on low depressions / water gaining areas within the sandplains

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

N

GHD

Murchison Hydrogen Renewables Pty Ltd
Murchison Hydrogen Renewables Project

Native Vegetation and Significant Flora

Project No. **12553823**
Revision No. **B**
Date **16/05/2024**

FIGURE 4-2

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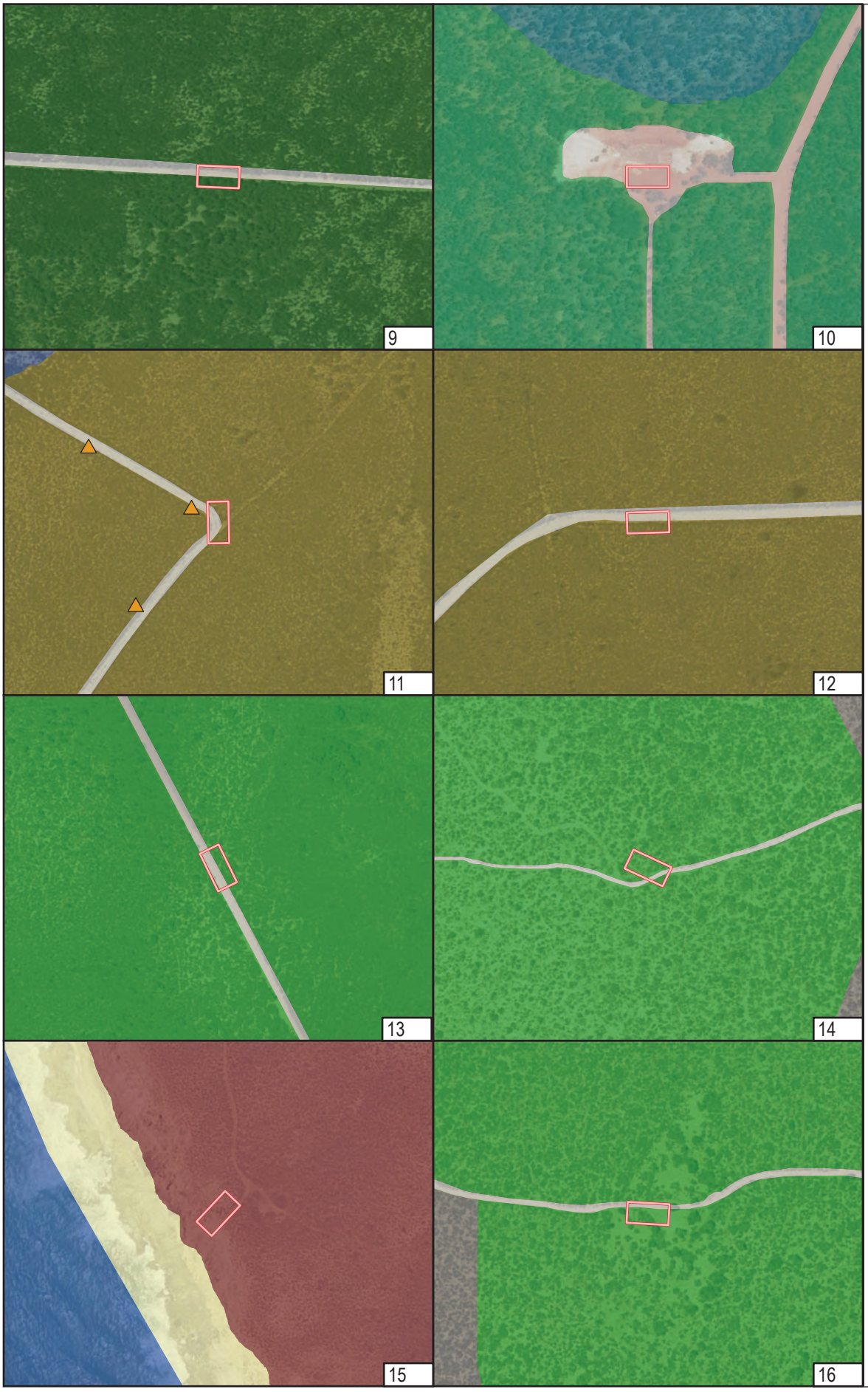

Legend

Geotechnical Investigation Site

Threatened Flora

Priority 1

Vegetation Type

Beach

Cleared

Ocean

VT01: Coastal low shrubland

VT02: Coastal shrublands on secondary dunes and slopes

VT12: *Allocasuarina campestris*, *Acacia rostellifera* and *Acacia blakelyi* Shrubland to closed shrubland on light brown sand flats and low rises

VT14: *Acacia rostellifera* and *Melaleuca cardiophylla* open woodland to shrubland on brown sand on limestone rocky slopes and ridges and brown sandy flats

VT18: *Banksia sceptrum* open woodland to isolated trees over *Allocasuarina campestris, Callitris arenaria* and *Grevillea eriostachya* open shrubland on yellow sandplains, sandy rises and low sandy hills and linear dunes

VT25: *Eucalyptus eudesmioides* and *Eucalyptus pallida* open mallee over *Melaleuca atroviridis, Acacia blakelyi* and *Melaleuca leiopyxis* shrubland on orange/brown sandy loam in areas near claypans and plains

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

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Revision No. **B**
Date **16/05/2024**

Native Vegetation and Significant Flora

FIGURE 4-3

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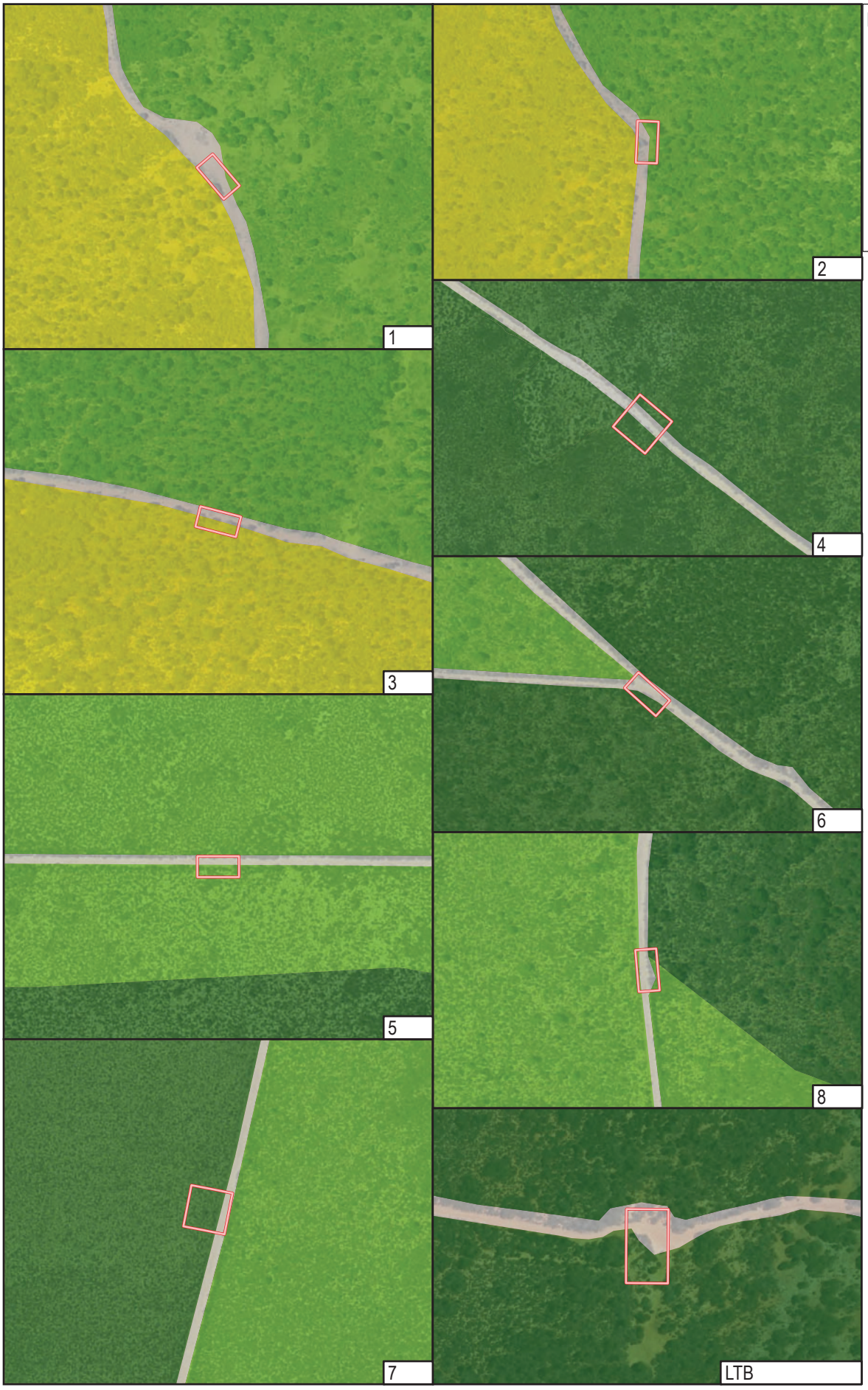

Legend

Geotechnical Investigation Site

Vegetation Condition

- Cleared
- Excellent
- Very Good
- Good

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

N

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Murchison Hydrogen Renewables Pty Ltd
Murchison Hydrogen Renewables Project

Project No. **12553823**
Revision No. **B**
Date **16/05/2024**

Vegetation Condition

FIGURE 5-2

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Print date: 16 May 2024 - 11:39

Data source: WA Now Imagery (SLIP Token): World Imagery: Maxar. Created by: rbrown3

Legend

Geotechnical Investigation Site

Vegetation Condition

- Ocean
- Cleared
- No condition
- Excellent
- Very Good
- Good

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

N

GHD

Murchison Hydrogen Renewables Pty Ltd
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Project No. **12553823**
Revision No. **B**
Date **16/05/2024**

Vegetation Condition

FIGURE 5-3

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Print date: 16 May 2024 - 11:39

Data source: WA Now Imagery (SLIP Token): World Imagery: Maxar. Created by: rbrown3

4.5.5 Significant ecological communities

No TEC's listed under the EPBC Act or BC Act or PECs listed by the DBCA were identified within the survey area during the field survey (GHD 2023). The survey area does not contain any ironstone vegetation types and the Highway, Cullawarra and Tamala Land Systems associated with PECs do not occur in the survey area (GHD 2023).

4.5.6 Flora diversity

The NatureMap search identified 1043 previously recorded taxa within a 40 km radius from the centre of the survey area (114º 10' 40" E, 27º 22' 43" S).

The NatureMap database search is provided in Appendix D.

4.5.7 Conservation significant flora

The EPBC Act PMST (DCCEEW 2022a), *Dandjoo* (DBCA 2020-), DBCA TPFL and WAHERB databases (DBCA 2022b) and WANOSCG (2022) database were incorporated into the desktop assessment and to inform the targeted orchid survey. The presence/potential of 148 significant flora species was identified within the desktop study area. The desktop searches recorded:

– 15 Threatened taxa
– 16 Priority 1 (P1) taxa
– 45 Priority 2 (P2) taxa
– 46 Priority 3 (P3) taxa
– 16 Priority 4 (P4) taxa

The full species list is provided in Appendix E. No conservation significant flora was found within the Investigation Sites during GHD (2023) field survey (Figure 5).

Likelihood of occurrence

A likelihood of occurrence (LOO) assessment was undertaken post-field survey to assess species with potential to occur in the Investigation Sites. The LOO assessment incorporated field survey results, records from DBCA, previous studies, and reported habitats. The post-survey LOO concluded that 13 taxa are Known to occur and that 45 taxa are Possible to occur within Investigation Site vegetation types. The 58 flora taxa that are Known or Possible to occur are shown in Table 6. The entire post-survey LOO assessment for the full DE is included in Appendix E.

Table 6 Post-survey Likelihood of Occurrence Assessment within the Investigation Sites

Taxon	EPBC Status	DBCA Status	Likelihood of Occurrence
Caladenia barbarella	Endangered	Endangered	Known
Caladenia bryceana subsp. *cracens*	Vulnerable	Endangered	Known
Chamelaucium sp. Coolcalalaya (A.H. Burbudge 4233)	Not listed	Priority 1	Possible
Desmocladus ferruginipes	Not listed	Priority 1	Possible
Lepidobolus eurardyensis	Not listed	Priority 1	Possible
Malleostemon nerrenensis	Not listed	Priority 1	Possible
Pileanthus aurantiacus	Not listed	Priority 1	Possible
Pterostylis macrocalymma	Not listed	Priority 1	Possible
Scaevola sp. Golden hairs (D. & B. Bellairs 1450 A)	Not listed	Priority 1	Known
Thryptomene sp. Carrarang (M.E. Trudgen 7420)	Not listed	Priority 1	Possible
Verticordia lepidophylla var. *quantula*	Not listed	Priority 1	Possible
Acacia leptospermoides subsp. obovate	Not listed	Priority 2	Possible

Taxon	EPBC Status	DBCA Status	Likelihood of Occurrence
Acacia stereophylla var. cylindrata	Not listed	Priority 2	Possible
Calytrix harvestiana	Not listed	Priority 2	Possible
Chthonocephalus tomentellus	Not listed	Priority 2	Possible
Geleznowia amabilis	Not listed	Priority 2	Known
Grevillea stenomera	Not listed	Priority 2	Known
Hemiandra sp. Kalbarri (D. Bellairs 1505)	Not listed	Priority 2	Possible
Melaleuca boeophylla	Not listed	Priority 2	Possible
Ptilotus alexandri	Not listed	Priority 2	Possible
Scaevola chrysopogon	Not listed	Priority 2	Possible
Schoenus badius	Not listed	Priority 2	Possible
Scholtzia corrugata	Not listed	Priority 2	Possible
Scholtzia sp. Folly Hill (M. E. Trudgen 12097)	Not listed	Priority 2	Possible
Thryptomene calcicola	Not listed	Priority 2	Known
Thryptomene johnsonii	Not listed	Priority 2	Possible
Thryptomene sp. Eagle Gorge (A. G. Gunness 2360)	Not listed	Priority 2	Known
Thysanotus fragrans	Not listed	Priority 2	Possible
Malleostemon microphyllus	Not listed	Priority 2	Possible
Acacia plautella	Not listed	Priority 3	Possible
Acanthocarpus parviflorus	Not listed	Priority 3	Known
Anthocercis intricata	Not listed	Priority 3	Possible
Anthotroche myoporoides	Not listed	Priority 3	Possible
Bossiaea calcicole	Not listed	Priority 3	Possible
Carpobrotus sp. Thevenard Island (M. White 050)	Not listed	Priority 3	Known
Dasymalla glutinosa	Not listed	Priority 3	Possible
Dicrastylis micrantha	Not listed	Priority 3	Possible
Grevillea rogersoniana	Not listed	Priority 3	Possible
Hemigenia saligna	Not listed	Priority 3	Possible
Lasiopetalum oppositifolium	Not listed	Priority 3	Known
Lepidium biplicatum	Not listed	Priority 3	Possible
Macarthuria intricata	Not listed	Priority 3	Possible
Mirbelia corallina	Not listed	Priority 3	Possible
Physopsis chrysophylla	Not listed	Priority 3	Possible
Scholtzia oleosa	Not listed	Priority 3	Possible
Stenanthemum divaricatum	Not listed	Priority 3	Known
Thryptomene caduca	Not listed	Priority 3	Possible
Verticordia cooloomia	Not listed	Priority 3	Possible
Verticordia dichroma var. *dichroma*	Not listed	Priority 3	Possible
Verticordia dichroma var. *syntoma*	Not listed	Priority 3	Possible
Macarthuria georgeana	Not listed	Priority 1	Possible
Eremophila microtheca	Not listed	Priority 4	Possible
Eucalyptus zopherophloia	Not listed	Priority 4	Known

Taxon	EPBC Status	DBCA Status	Likelihood of Occurrence
Jacksonia dendrospinosa	Not listed	Priority 4	Possible
Jacksonia velutina	Not listed	Priority 4	Possible
Lepidium puberulum	Not listed	Priority 4	Possible
Triodia bromoides	Not listed	Priority 4	Known
Verticordia capillaris	Not listed	Priority 4	Possible

Likelihood of Occurrence Guidelines	Meaning
Known	The species was recorded during field survey, within a vegetation type that occurs in Investigation Sites
Possible	The species was recorded during field survey, but within a vegetation type that was not recorded in Investigation Sites OR species is known from previous record to occur close to Investigation Sites, but was not located during field survey

4.5.8 Weeds

The EPBC Act PMST (DAWE 2024) did not identify any Weeds of National Significance (WoNS) occurring within the Investigation Sites or within a 5 km radius of the DE.

The GHD (2023) field survey recorded 48 introduced flora taxa within the survey area. One recorded species, **Echium plantagineum* (Paterson's Curse) is listed as a Declared Pest and a WoNS. Paterson's Curse was not found within the Investigation Sites.

4.6 Fauna

4.6.1 Survey effort

A basic fauna survey was undertaken by Senior Zoologist Glen Gaikhorst and Senior Botanist Joel Collins in Spring of 2021, from November 15 to November 19 (GHD 2023). The goal of this survey was to scope suitable sites for the hydrogeological/geotechnical investigation, ensuring conservation significant fauna would be avoided. Fauna habitats within the Investigation Sites were assigned by Senior Zoologist Glen Gaikhorst through reviewing vegetation types.

Targeted assessments were conducted in March and April 2022 to assess the presence of migratory birds in the study area. Detailed fauna assessments were conducted in August and October 2022, consisting of trapping, remote equipment collection and deployment (Camera, Bird Acoustic, Bat detector), significant fauna searches and habitat mapping. Malleefowl mound assessment and LiDAR identification was conducted in February 2023.

4.6.2 Fauna habitat

The field survey identified 12 broad fauna habitat types, excluding cleared areas, during a preliminary survey of proposed hydrogeological/geotechnical Investigation Sites. Fauna habitats generally aligned with vegetation types, with some similar vegetation types grouped together. Investigation Sites lie within five habitat types as well as cleared area. The fauna habitats found are described in Table 7 and shown in Figure 7.

Table 7 Fauna habitat types within the Investigation Areas

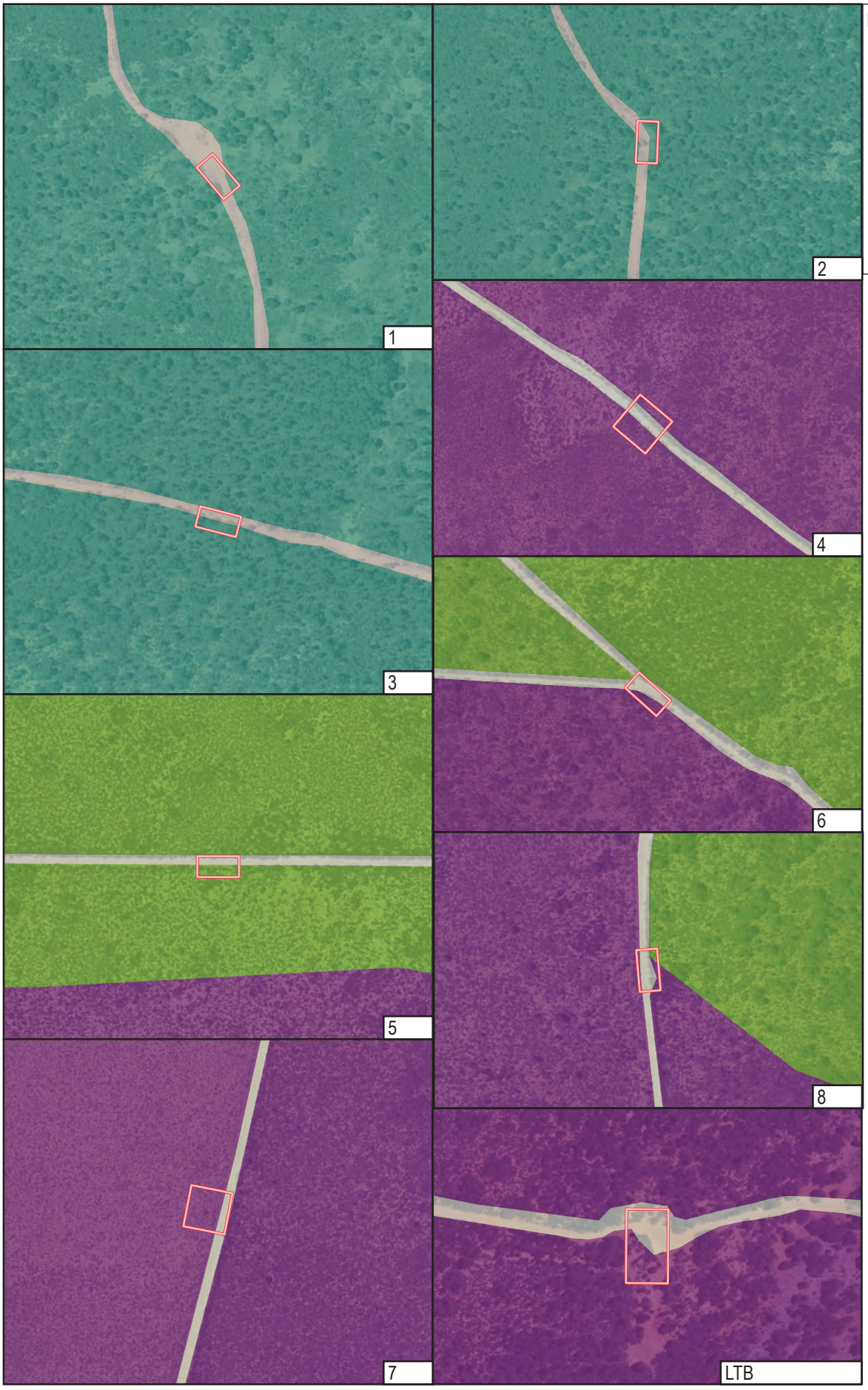
Habitat type	Habitat Description	Photograph	Sites located in habitat type
Beach and associated dunes and limestone ridge	The coastal strip comprises a mosaic of beaches, reef, rock shelf, pools, dunes, and limestone ridges (with areas of breakaway or wind-swept ridgelines) creating a diverse sweet of microenvironments for species. The vegetation consisted of coastal heathlands however the primary dune contains scattered areas of Beach Spinifex (*Spinifex longifolius*) and coastal Saltbush (*Atriplex cinerea*) as well as other low salt and wind tolerant plants. This habitat was diverse in structure and was evidently sculptured by wind, water, and salt. Some areas were deep sands while others loam, shell or rock or combinations of all. There were high points in the environment and areas where water ran or pooled during large weather events. There was no evidence of fire in this environment. Most tracks leading to the coast had evidence of human use such as camping, fishing, old shacks, and associated rubbish. Additionally, goats were recorded on all habitat features and seen grazing on seaweed and drinking water. Some areas were degraded from goat use however large portions were in very good condition. This habitat provides a variety of habitat resources for fauna species, and patches had a greater structural diversity than the surrounding coastal heaths and shrublands. This habitat provides for burrowing species such as West Coast Banded Snake (*Simoselaps littoralis*), Northern Dotted-line Robust Slider (*Lerista miopus*) and rocky area provide for Barking Gecko (*Underwoodisaurus milli*). The Shark Bay Heath Dragon (*Ctenophorus butlerorum*) was only recorded in this habitat.		– 15

Habitat type	Habitat Description	Photograph	Sites located in habitat type
Coastal Heathlands	The western (coastal) side of the Survey Area is dominated by low coastal heathlands on coastal dunes, moving sands or minor limestone ridges. Coastal heaths are continuous along the coast however the beach and associated limestone is described as a separate habitat type due to the possible uses by fauna species and features present. The coastal heathland vegetation is much lower (up to about 50cm) along the coast, than further inland which reaches up to 1.5m. The difference in vegetation growth structure appears to be influenced by winds and in some areas grazing by goats. It is also possible that changes in soil composition i.e. limestone capping or moving sands will influence growth and structure. This habitat supports a continuous homogonous vegetation belt along the coast which varies in species composition from the southern to northern portions of the survey area i.e. Lomandra densities much higher in the south. This is likely due to slight changes in rainfall as the habitat extends north. However, the environment supports mixed shrubs of *Olearia*, *Frankenia*, *Carpobrotus*, *Acacia*, *Thryptomene*, *Eremophila glabra*, *Ptilotus* and Lomandra. The environment has dominant ground covers, some litter and debris with few logs. his is possibly due to the lack of tall or structured vegetative material and/or by grazing from goats and rabbits. There was no evidence of fire within this habitat type. Other disturbances present include old farming fencing and yards, however these compromise small areas of the environment. Due to the habitat present specialised coastal species such as Western Heath Dragon (*Ctenophorus adelaidensis*), West Coast Banded Snake (*Simoselaps littoralis*), Javelin Legless Lizard (*Delma concinna*) and White-spotted Ground Gecko (*Lucasium alboguttatum*) were present. Small passerine birds were also abundant which included White-winged Fairy-wren (*Malurus leucopterus*), Splendid Wren (*Malurus splendens*), Purple-backed Fairy-wren (*Malurus assimilis*), Southern Emu-wren (*Stipiturus malachurus*) and Rufous Field-wren (*Calamanthus campestris*).		– 13 – 14 – 16

Habitat type	Habitat Description	Photograph	Sites located in habitat type
Mixed Shrublands	A variety of different mixed/diverse shrublands occur throughout the sand plain and dune systems present within the survey area. These shrublands are characterised by differing dominance of Acacia, Melaleuca, Hakea, Grevillea, Allocasuarina, Calytrix and Verticordia species. The composition and high structural diversity of these shrublands varies, ranging from open shrublands to areas with dense patches of shrubs, dependent on the position in the landscape, age since fire and level of disturbance. Typically, there is a dominant mid-storey layer of shrubs, with few open patches of bare ground and scattered trees. Dominant ground covers included Lomandra spp. clumps or Triodia hummocks, sedges which provide excellent cover to small terrestrial reptiles. The shrublands provide high value habitat for birds, with foraging opportunities (flowers) and the dense patches of shrubs providing refuge areas. In areas with older fire history there are large amounts of nonvascular ground cover present, including fallen branches, bark, and leaf litter. There are also numerous flowering species, in particular proteaceous and myrtaceous species (e.g. Grevillea, Hakea, Verticordia, Calytrix). Where dune systems and deep sands are present digging species such as Ash Grey Mouse (*Pseudomys albocinereus*), Smooth Knob-tailed Gecko (*Nephrurus levis occidentalis*) and Southern Sandhill Frog (*Arenophryne xiphorhyncha*) were recorded.	 	– 5 – 9
Limestone hills and Ridgelines	The majority of southern and south eastern portion of the Survey Area comprises a mosaic of limestone hills and ridgelines. The formations are usually associated with Melaleuca spp. vegetation types or other low shrubs probably due to the shallow soils and limestone cap rock. Other species associated include Acacia, Eremophila, Grevillia, Hakea, and Borya and an abundance of grasses and herbs. The environment had areas of good ground covers, litter and debris but lacked large logs due to vegetation present. This habitat appeared particularly use by feral goats and pigs with noticeable grazing present and large areas where rocks and surface soils were ploughed by pigs. However despite the disturbances the habitat provides a range of cover to fauna species of outcropping with exfoliating rock, crevices and large rocks.		– 1 – 2 – 3

Habitat type	Habitat Description	Photograph	Sites located in habitat type
Banksia Shrubland	The southern, western and eastern portions of the survey area is characterised by Banksia shrubland withdominant species of Banksia ashbyi, B. sceptrum and B. prionotes. The understorey is of mixed low proteaceous and myrtaceous shrubs, with ground cover of sedges, hummock grasses or low shrubs. This habitat is quite dense with some areas almost impenetrable. Banksia shrubland had areas of dense littler, fallen branches and debris over deep sands creating excellent habitat for fossorial reptile and amphibian species. Limited tree hollows are available in this habitat however dead banksia provides excellent exfoliating bark for sheltering species, particularly bats and arboreal reptiles. Most of this habitat appeared long unburnt with grazing from goats the biggest impact. This habitat is an important foraging resource for Carnaby's Cockatoo, and also provides nectar for many nectivorous species such as the 11 honeyeater species recorded. Additionally the flowering plants lure insects to the area and in turn predatory birds with large flocks of Masked and Black Faced Wood-swallows utilising the resource.		– 4 – 6 – 7 – 8 – 11 – 12 – Long Thickett Bore

Habitat type	Habitat Description	Photograph	Sites located in habitat type
Cleared areas devoid of native vegetation (paths/roads)	Cleared areas including tracks, tank infrastructure and farmland, some scattered native shrubs/trees over weeds. Habitat value: Low to negligible	 	- 10



Legend

Geotechnical Investigation Site

Fauna Habitat

- Banksia Shrubland
- Cleared/Farmland
- Limestone hills and Ridgelines
- Mixed Shrublands

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

N

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Revision No. **B**
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Fauna Habitat and Significant Fauna

FIGURE 6-2

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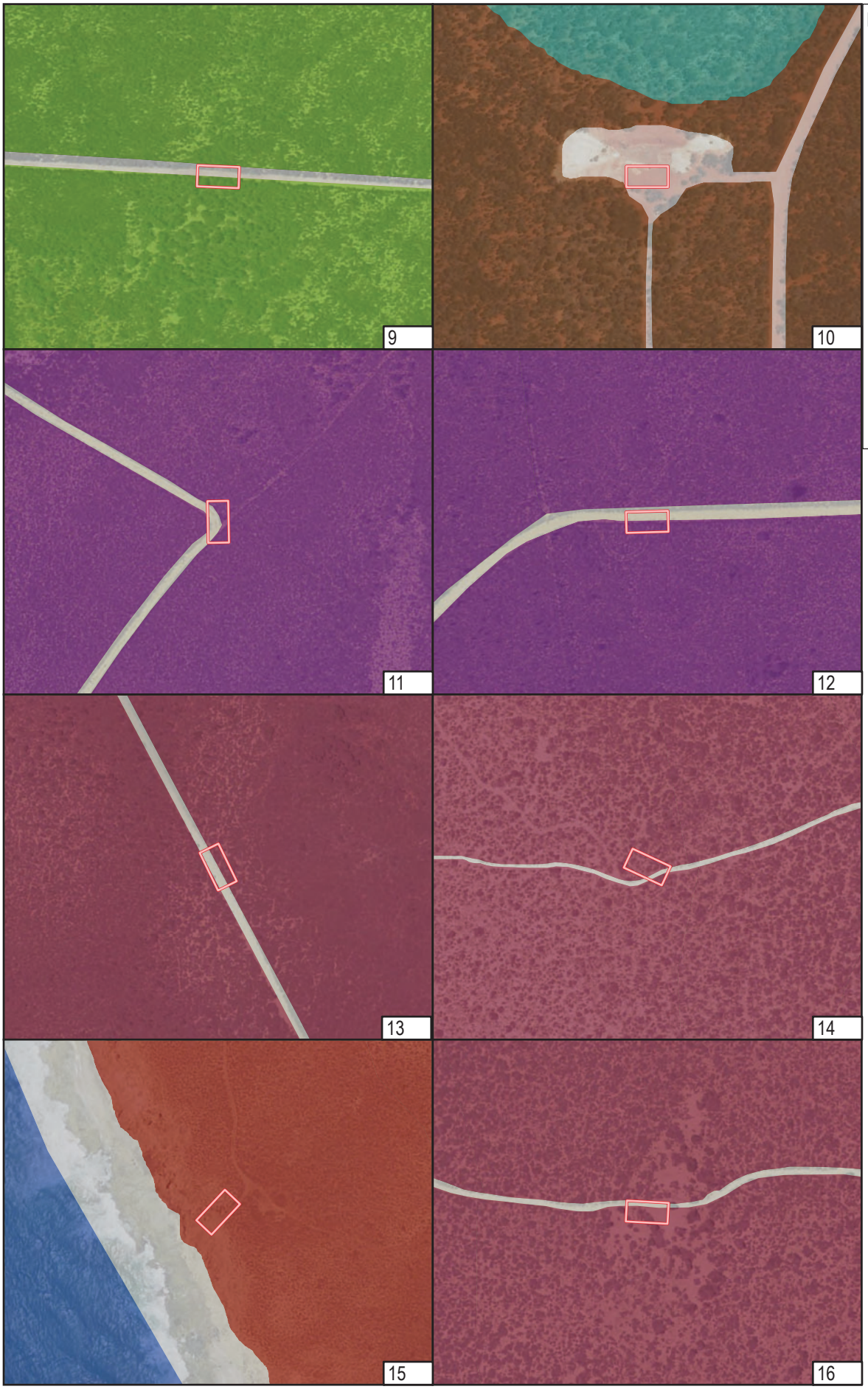

Legend

Geotechnical Investigation Site

Fauna Habitat

- Banksia Shrubland
- Beach and associated dunes and limestone ridge
- Cleared/Farmland
- Coastal Heathlands
- Limestone hills and Ridgelines
- Mallee Woodland
- Mixed Shrublands
- Ocean

Paper Size ISO A4

0 25 50 75 100

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 50

N

GHD

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Fauna Habitat and Significant Fauna

FIGURE 6-3

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Data source: WA Now Imagery (SLIP Token): World Imagery: Maxar. Created by: rbrown3

4.6.3 Fauna diversity

A study area was defined with a 40 km radius from the centre of the DE (114º 10’ 40” E, 27º 22’ 43” S), encompassing the Investigation Sites and the surrounding area. The DBCA database identified 478 species previously recorded within this radius. This total comprised nine amphibians, 153 bird, 91 fish, 133 invertebrate, 18 mammal and 74 reptile species. Of these species recorded, 472 are native and six are naturalised (introduced) species.

The field fauna survey recorded 262 vertebrate fauna species by trapping, hand searches, nocturnal searches, remote equipment, and observations undertaken by GHD (GHD 2023). This includes 28 mammals, 156 birds, 72 reptiles and six amphibians. Of these, seven were introduced fauna species.

4.6.3.1 Significant fauna species

The following seven significant vertebrate species were recorded in the fauna survey area (GHD 2023) (Figure 4a):

– Bar-tailed Godwit (*Limosa lapponica menzbieri*)
– Carnaby’s Cockatoo (*Zanda latirostris*)
– Greater Sand Plover (*Charadrius leschenaultia*)
– Malleefowl (*Leipoa ocellata*)
– Taper-tailed West Coast slider (*Lerista humphriesi*)
– Western Grasswren (*Amytornis textilis* subsp. *textilis*)
– Western Spiny-tailed Skink (*Egernia stokesii badia*)

No significant fauna species were found within the Investigation Sites.

4.6.3.1.1 Bar-tailed Godwit (*Limosa lapponica)*

The Bar-tailed Godwit is listed as Endangered under the EBPC Act and Critically Endangered under the BC Act. During the Phase 2 assessment in October 2022, a small flock was observed within the northwestern portion of the survey area feeding on a beach. Additionally, numerous specimens were recorded during the regional surveys on the northern beaches and at the Murchison River feeding on mudflats with other species such as Common Greenshank.

4.6.3.1.2 Carnaby’s Cockatoo (*Zanda latirostris*)

Carnaby’s Black Cockatoo is listed as Endangered under the BC Act and EPBC Act. There is suitable habitat within the survey area and foraging evidence was recorded on the southern edge of the survey area in November 2021. During the spring 2022 survey Carnaby’s Cockatoo were heard calling (up to 4 birds) in the central eastern portion of the survey area. These birds were likely moving between foraging areas.

The survey area lies in the northern most extremity of the Carnaby’s Cockatoo distribution (DCCEEW 2022). The species is likely to utilise foraging habitats within the survey area: Banksia Shrubland, Acacia Shrubland and Mixed Shrubland habitats. The survey area lies approximately 6-7 km north of known breeding locations along the Murchison River, therefore at least the southern portion of the survey area is likely to be utilised during the breeding season as a foraging resource for the species. No records or potential Carnaby’s Cockatoo nests were recorded in any of the York Gum woodlands identified. This is likely due to the lack of natural water bodies in the northern portion of the survey area. With the Murchison River utilised as the primary permanent water source in the region, roosting is likely to reside along the river.

4.6.3.1.3 Malleefowl (*Leipoa ocellata*)

The Malleefowl is listed as Vulnerable under the BC Act and EPBC Act. There is suitable habitat present in the survey area and numerous known previous database records within the northern and north-western portion of the survey area (Benshemesh 2007). GHD identified many records of Malleefowl (mounds, prints, scratchings, scats, and sightings) throughout the survey area, particularly through the central, southern, and eastern portions. In total 35 active mounds and 64 inactive mounds have been recorded within the survey area with an additional 84 suspected mounds identified from LiDAR imagery not yet assessed, due to being inaccessible at the time of the

surveys. Approximately 50% of mounds assessed over the survey period demonstrated profile stages consistent with being active - recently used or currently laden with eggs undergoing thermoregulation.

4.6.3.1.4 Taper-tailed West Coast Slider (*Lerista humphriesi*)

The Taper-tailed West Coast Slider is listed as Priority 3 by DBCA. The species is only known from the Murchison River district where it occurs in Acacia-dominated sandplains and other sandy habitats (Cogger 2014). There are known records from north of Kalbarri on Murchison House Station from 1979 and along the Vermin Proof Fence Zuytdorp section (GHD 2023).

Approximately 80 active searches were conducted throughout the survey area, recording the species on two occasions. These were in the northwest portion of the survey area, in acacia shrubland on red sandplain habitat within or close to Limestone hills and ridgelines. The habitat for this species extends into the Limestone hills and ridgelines due to the vegetation units present. However, the species requires the deep sands associated with this habitat type. Despite the number of searches undertaken, no pattern was observed between capture areas and similar active searches with no result. It appears this species is not abundant in the environment and is patchily disbursed within suitable habitat.

4.6.3.1.5 Western Grasswren (*Amytornis textilis* subsp. *textilis*)

The Western Grasswren is listed as Priority 4 by DBCA. Individuals of the species were observed by GHD in November 2021. The sighting was brief and unconfirmed, with no other observations undertaken during the remainder of the surveys. The sighting was in the coastal shrubland habitat type in the central western portion of the survey area. Habitat is present for this species, particularly along the coastal strip, therefore a population in low numbers is likely.

4.6.3.1.6 Western Spiny-tailed Skink (*Egernia stokesii badia*)

The Western Spiny-tailed Skink is listed as Endangered under the EPBC Act and Vulnerable under the BC Act. The species is known to occur in the region, with the closest record prior to the GHD surveys being approximately 65 km northeast at the Billabong Roadhouse (GHD 2023) and 30 km east on Eurardy Station. Therefore, records from the GHD fauna survey represent a slight range extension west and fill a distributional gap between the Shark Bay population and those east at Mullewa and south of Geraldton.

Numerous transects were completed within suitable habitat (primarily at the eastern portion of the survey area) within the York Gum/ Mallee woodland and Jam shrubland habitats throughout the survey periods. The Western Spiny-tailed Skink was recorded at several locations, and evidence of the species included both fresh and historical scats on the ground next to logs or on logs or latrines, as well as sightings of skinks basking in the sun on logs. During one observation, skink adults, sub-adults, and juveniles were recorded, with the colony estimated at eight individuals. Log selection by a colony appears complex as not all logs are utilised. It is likely that location in the environment, hollowness, aspect, size and degree of surrounding vegetation and type are key requirements for the species to persist.

4.6.3.2 Significant migratory birds

The following Migratory birds (including Migratory/Marine and International Agreement) were recorded in the survey area (GHD 2023):

- Caspian Tern (*Hydroprogne caspia*)
- Common Greenshank (*Tringa nebularia*)
- Common Sandpiper (*Actitis hypoleucos*)
- Crested Tern (*Thalasseus bergii*)
- Eastern Osprey (*Pandion cristatus*)
- Fork-tailed swift *(Apus pacificus*)
- Gull-billed Tern (*Sterna nilotica*)
- Red-necked Stint (*Calidris ruficollis*)
- Sanderling (*Calidris alba*)
- Wedge-tailed Shearwater (*Ardenna pacifica*)

– Wilson's Storm Petrel (*Oceanites oceanicus*)

4.6.3.2.1 Caspian Tern (*Hydroprogne caspia*)

The Caspian Tern is listed as Migratory under the BC Act and EPBC Act. During the regional assessment in November 2022 one individual was observed in the western portion of the survey area flying north to south. Additionally numerous specimens were also recorded at the Murchison River mouth loafing on a sandbar with other tern and gull species. The Caspian Tern is a widespread species and generally common along the West Australian coast.

4.6.3.2.2 Common Greenshank (*Tringa nebularia*)

The Common Greenshank is listed as Migratory under the BC Act, and Endangered and Migratory under the EPBC Act. During the regional assessment in November 2022, numerous individuals were recorded along the Murchison River singularly or in small flocks. The species was recorded utilising the rocky shoreline, shell beaches and mudflat fringe habitats. The species is typically widespread and would utilise survey area habitats as required.

4.6.3.2.3 Common Sandpiper (*Actitis hypoleucos*)

The Common Sandpiper is listed as Migratory under the BC Act and EPBC Act. During the regional assessment in November 2022, numerous individuals along the Murchison River utilising the rocky shoreline, shell beaches, and mudflat fringe habitats. The species is typically widespread and would utilise survey area habitats as required.

4.6.3.2.4 Crested Tern (*Thalasseus bergii*)

The Crested Tern is listed as Migratory under the BC Act and EPBC Act. There are known records within the southern portion of the survey area, as observed by GHD in November 2021, as well as up to 12 separate observations in the southwestern portion of the survey area during the March 2022 survey. Numerous sightings were recorded during the phase 1, 2 and regional assessments along the entire coastal strip. This species is generally considered common and widespread.

4.6.3.2.5 Eastern Osprey (*Pandion cristatus*)

The Eastern Osprey is listed as Migratory under the BC Act and EPBC Act. During the targeted assessment in March 2022 and the phase 2 surveys, the species was observed on numerous separate occasions within the western portion of the survey area and regionally along the Murchison River. Birds were either feeding or loafing in beach or mudflat habitats.

4.6.3.2.6 Fork-tailed swift (*Apus pacificus*)

The Fork-tailed swift is listed as Migratory under the BC Act and EPBC Act. During the targeted assessment in March 2022 flocks of the Fork-tailed swift were observed on three separate days, with each flock consisting of up to 40 individuals within the limestone calcrete outcrops and coastal dune habitat types on the western side of the survey area. It is possible that the observed groups were the same flock. These birds were recorded using thermal coastal winds above the ridge and appeared to be sedentary, less typical of the normal observation of a brief viewing while mobile at height. One observation was during the late afternoon, with birds possibly roosting on the rocky ridgeline face, although this was not observed.

4.6.3.2.7 Greater Sand Plover (*Charadrius leschenaultii*)

The Greater Sand Plover is listed as Vulnerable under the BC Act, and Vulnerable and Migratory under the EPBC Act. During the targeted assessment in March 2022 one individual was recorded on a south beach in the survey area. Additional birds were noted in phase 2 and regional surveys, utilising beach habitats on the northern beaches of the survey area. In total at least four locations were identified to be utilised by the Greater Sand Plover, all within beach or tidal habitats.

4.6.3.2.8 Gull billed Tern (*Sterna nilotica*)

The Gull-billed Tern is listed as Migratory under the EPBC Act. During the targeted assessment in March 2022, one individual was observed within the western portion of the survey area.

4.6.3.2.9 Red-necked stint (*Calidris ruficollis*)

The Red-necked Stint is listed as Migratory under the BC Act and EPBC Act. The species was observed on several occasions in flocks of between three and sixteen birds within the western portion / beach habitat type of the survey area. Additionally, there is a historical record 5 km south of the survey area.

4.6.3.2.10 Sanderling (*Calidris alba)*

The Sanderling is listed as Migratory under the BC Act and EPBC Act. During the regional assessment in November 2022, numerous individuals were recorded along the Murchison River utilising the rocky shoreline, shell beaches and mudflat fringe habitats. The species is typically widespread and would utilise habitats within the survey area as required.

4.6.3.2.11 Wedge-tailed Shearwater (*Ardenna pacifica*)

The Wedge tailed Shearwater is listed as Migratory under the BC Act and EPBC Act. In March 2022 the species was recorded on numerous occasions along the west coast of the survey area, in flocks of up to 30 birds. Birds did not reach land, rather gliding and swooping the open ocean on gusty breeze, foraging. The closest record to the mainland was approximately 300m, with most birds recorded beyond 500m.

4.6.3.2.12 Wilson's Storm Petrel (*Oceanites oceanicus*)

The Wilson's Storm-Petrel is listed as Migratory under the BC Act and EPBC Act. This species was recorded the same time as the Wedge-tailed Shearwater. The Petrels were recorded on at least two occasions during the March survey, with one record being four individual birds. This species did not come close to the mainland and were typically seen approximately 500 m out to sea. All individuals appeared to be foraging.

4.6.4 Likelihood of occurrence

An assessment of the likelihood of occurrence of conservation significant fauna species occurring in the survey area was undertaken for the reconnaissance field survey based on desktop literature. This assessment was refined over subsequent field surveys to incorporate species identified in field surveys, fauna species' biology and habitat requirements, quality and availability of suitable habitat as determined during the field survey and further examination of fauna database records and literature review. Some species identified in the Commonwealth Protected Matters Search Tool (PMST) such as "Marine" flyover or sole ocean inhabiting, and/or pelagic species have been omitted from the assessment. The full assessment is present in Appendix E.

Amongst several migratory birds the assessment also identified the likely presence of the Peregrine Falcon (Falco peregrinus), Gilled Slender Bluetongue (*Cyclodomorphus branchialis*), Chuditch (*Dasyurus geoffroii*) and the Tammar Wallaby (*Notamacropus eugenii derbianus*), as the survey area provides suitable habitat for these regionally occurring species. The Western Grasswren was thought to be briefly observed in November 2021 but was not recorded during subsequent surveys, therefore remains as likely until confirmed. A summary of the full assessment is presented below in Table 8.

A brief description of species classified as "known" or "likely" and their assessment outcome within the survey area are described below in Table 9. The full likelihood of occurrence assessment is provided in Appendix E.

Table 8 Likelihood of occurrence assessment

Species	BC Act/ DBCA	EPBC Act	Assessment Outcome
Birds			
Common Sandpiper *(Actitis hypoleucos)*	MI	MI	**Known.** This species was recorded on the beach in the Northwest portion of the survey area and also regionally along the Murchison River.
Western Grasswren *(Amytornis textilis subsp. textilis)*	P4		**Likely.** The species is known from north of the survey area (Coburn Station area). A possible sighting was recorded in November 2021 in coastal shrubland habitat of the survey area, however no other observations were made during other assessments to verify the account, therefore in this table likely status has been allocated.
Fork-tailed swift (*Apus pacificus)*	MI	MI	**Known.** The species was recorded on three separate occasions during the March survey with flocks of up to 40 birds being recorded within the survey area.
Ruddy turnstone (*Arenaria interpres)*	MI	MI	**Likely.** There are records of the species within the Survey area and 2 km east of the survey area. There is suitable habitat within the survey area.
Wedge-tailed Shearwater (*Ardenna pacifica*)	MI	MI	**Known.** The species was recorded on several occasions during the survey, with up to 30 individual birds within the survey area.
Sharp-tailed Sandpiper (*Calidris acuminata)*	MI	MI	**Likely.** There is some rocky shoreline habitat for this species within the survey area and the nearest record is 16 km east of the survey area (Murchison River). Typically, this species occurs on inland water systems, therefore, use may be opportunistic.
Sanderling (*Calidris alba)*	MI	MI	**Known.** This species was recorded on the beach in the Northwest portion of the survey area.
Red Knot (*Calidris canutus)*	EN	EN	**Likely.** There is suitable habitat within the survey area.
Red-necked Stint (*Calidris ruficollis)*	MI	MI	**Known.** There is suitable habitat within the survey area and the closest known record is 5 km south of the survey area. The species was also recorded on several occasions during the survey with up to 16 birds at a time.
Carnaby's Cockatoo (*Zanda latirostris)*	EN	EN	**Known.** Foraging evidence was recorded on the southern edge of the survey area. Additionally, up to four birds were heard calling during the Phase 1 assessment in the central east region.
Greater Sand Plover *(Charadrius leschenaultia)*	VU	VU	**Known.** The species was recorded during the survey. There is suitable habitat within the survey area on the coastal strip and the closest known record is 10km south of the survey area.
Lesser Sand Plover (*Charadrius mongolus)*	EN	EN	**Likely.** There are known records of the species at Chinaman's Rock Lookout approximately 10km south of the survey area.
Peregrine Falcon (*Falco peregrinus*)	OS	-	**Likely.** The species is known from the region (records within 4 km east of the Survey Area), however use would be opportunistic and utilised for foraging purposes only. No breeding habitat was present.
Malleefowl *(Leipoa ocellata)*	VU	VU	**Known.** Observations of active birds, tracks, scat, and mounds recorded throughout the survey area.
Bar-tailed Godwit (*Limosa lapponica*)	MI	MI	**Known.** Species was recorded on the beach in the Northwest portion of the survey area and along the Murchison River.
Eastern Curlew *(Numenius madagascariensis)*	CR	CR	**Likely.** Suitable habitat is present within the survey area on the coastal strip and the closest known record is 17 km east of the survey area.

Species	BC Act/ DBCA	EPBC Act	Assessment Outcome
Curlew sandpiper (Calidris ferruginea)	CR	CR	**Likely.** Suitable habitat is present within the survey area on the coastal strip and the closest known record is 10 km of the survey area.
Whimbrel *(Numenius phaeopus)*	MI	MI	**Likely.** There is suitable habitat within the survey area on the coastal strip and the closest known record is 17 km east of the survey area.
Wilson's Storm Petrel (*Oceanites oceanicus*)	MI	MI	**Known.** The species was recorded on several occasions during the survey.
Pacific Golden Plover *(Pluvialis fulva*)	MI	MI	**Likely.** There is suitable habitat within the survey area on the coastal strip and the closest known record is 17 km east of the survey area.
Grey Plover (*Pluvialis squatarola)*	MI	MI	**Likely.** There is suitable habitat within the survey area on the coastal strip and the closest known record is 10 km east of the survey area.
Roseate Tern (*Sterna dougallii*)	MI	MI	**Likely.** There is suitable habitat within the survey area on the coastal strip and the closest record is 16 km east of the survey area.
Australian Fairy Tern (*Sternula nereis nereis)*	VU	VU	**Likely.** There is suitable habitat within the survey area on the coastal strip and the species has been identified from database searches as being in the survey area**.**
Crested Tern (*Thalasseus bergii)*	MI	MI	**Known.** The species was recorded on several occasions, in flocks of up to 30 birds during the survey within the southern and southwestern portions of the survey area.
Gull-billed Tern (*Gelochelidon nilotica)*	MI	MI	**Known.** The species was recorded during the survey flying along the coast. Additionally, there is numerous small claypans and dams that are habitat for the species within the survey area.
Caspian Tern (*Hydroprogne caspia)*	MI	MI	**Known.** This species was recorded on the beach in the Northwest and southwest portion of the survey area and also regionally along the Murchison River.
Eastern Osprey (*Pandion cristatus)*	MI	MI	**Known.** The species was recorded during the survey. Additionally, there is suitable habitat and known previous records within the survey area.
Grey-tailed Tattler (*Tringa brevipes*)	P4, MI	MI	**Likely.** There is suitable habitat within the survey area on the coastal strip and known records of the species 10 km south of the survey area.
Common Greenshank (*Tringa nebularia*)	MI	MI	**Known.** There is suitable habitat within the survey area on the coastal strip and specimens were recorded along the Murchison River during the survey.
Mammals			
Chuditch, Western Quoll (*Dasyurus geoffroii*)	VU	VU	**Likely.** There are known records of approximately 9 km south of the survey area within the Kalbarri gorge system. The species has also been recorded from Eurardy Station to the east and Hamelin Station to the north.
Tammar wallaby (*Notamacropus eugenii derbianus*)	P4	-	**Likely**. There are known records of approximately 9 km south of the survey area near the Kalbarri gorge system.
Reptiles			
Gilled Slender Bluetongue *(Cyclodomorphus branchialis)*	VU	VU	**Likely.** The species is known to be from the region, with the closest record approximately 30km southeast of the survey area in the Galena and Warribano areas**.** Habitat is present.

Species	BC Act/ DBCA	EPBC Act	Assessment Outcome
Western Spiny-tailed Skink (*Egernia stokesii badia)*	VU	EN	**Known.** The species is known to be from the region and was recorded (specimens and scats) at several locations on numerous occasions at the eastern portion of the survey area.
Woma (SW pop.) (*Aspidites ramsayi*)	P1	-	**Likely.** The species is known from the region and recently recorded approximately 80km north of the survey area. Habitat is present for this species.
Zuytdorp Worm Slider/ Taper-tailed West Coast Slider *(Lerista humphriesi)*	P3	-	**Known**. There are known records from Murchison House Homestead north to the Vermin Proof Fence (Zuytdorp section). Additionally, the species was recorded at two locations in the northwestern portion of the survey area.

Key			
Status	**Code**	**EPBC Act**	**BC Act (DBCA)**
Critical	CR	X	X
International Agreement	IA	X	
Marine	MA	X	
Migratory	MI	X	X
Other Special Protection	OS		X
Vulnerable	VU	X	X
Endangered	EN	X	X
Priority 3	P3		X
Priority 4	P4		X
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*		
BC Act	*Biodiversity Conservation Act 2016*		
DBCA	Department of Biodiversity, Conservation and Attractions		

Table 9 Fauna likelihood of occurrence assessment guidelines

Assessment outcome	Description
Known	The species was recorded or has been recorded recently by reputable observers.
Likely	Species are **likely** to occur in the study area where there is suitable habitat within the study area and there are recent records of occurrence of the species in close proximity to the study area. OR Species known distribution overlaps with the study area and there is suitable habitat within the study area.
Unlikely	Species assessed as **unlikely** include those species previously recorded in the study area however: There is limited (i.e. the type, quality and quantity of the habitat is generally poor or restricted) habitat in the study area. The suitable habitat within the study area is isolated from other areas of suitable habitat and the species has no capacity to migrate into the study area. OR Those species that have a known distribution overlapping with the study area however: There is limited habitat in the study area (i.e. the type, quality and quantity of the habitat is generally poor or restricted). The suitable habitat within the study area is isolated from other areas of suitable habitat and the species has no capacity to migrate into the study area.

Assessment outcome	Description
Highly unlikely	Species that are considered **highly unlikely** to occur in the study area include: Those species that have no suitable habitat within the study area. Those species that have become locally extinct or are not known to have ever been present in the region of the study area.

4.7 Conservation areas

The Investigation Sites do not intersect any DBCA managed land or water areas. The closest DBCA managed lands are Zuytdorp Nature Reserve and Kalbarri National Park, 15.3 km north and 13.6 km southeast of the nearest Investigation Sites respectively (GoWA 2020c) (Figure 4a).

4.8 Environmentally Sensitive Areas

No Environmentally Sensitive Areas (ESAs) intersect or are adjacent to the DE. Two ESAs do exist to the north and south of the DE, 15.3 km and 13.2 km to the nearest Investigation Sites respectively (GoWA 2020e).

5. Environmental management framework

Murchison Hydrogen Renewables has used and will use the hierarchy of avoid, minimise, reduce, and rehabilitate to mitigate the environmental impacts of the hydrogeological/geotechnical works. Potential impacts to the following environmental factors have been considered during avoidance, mitigation, and establishing appropriate management efforts. Impact avoidance, mitigation and management measures are detailed in Sections 5.1 and 5.2.

5.1 Impact avoidance and minimisation through design

5.1.1 Flora and Vegetation

Flora and vegetation loss has been avoided through design of the hydrogeological/geotechnical locations, which are all on, or adjacent to, existing cleared access tracks within the DE. When considering placement of the geotechnical tests, a site-by-site assessment with geotechnical and environmental teams occurred to identify constraints and the most practicable location of the geotechnical sites. Existing access tracks and cleared areas were selected as far as practicable, resulting in the area to be cleared being reduced to 0.54 ha.

Impacts to flora and vegetation will be minimised by continuing to select existing access tracks and sparsely vegetated or bare soil borehole/ test pit locations within the Investigation Areas where possible during hydrogeological/geotechnical works.

Conservation significant locations/areas to be avoided will be provided to the investigative team in hard copy and digital format, to ensure sites of environmental significance are avoided in the field when deciding the location of boreholes and test pits within the Investigation Areas.

5.1.2 Fauna

Fauna loss has been avoided through design of the hydrogeological/geotechnical locations, which are all on or adjacent to existing access tracks within the DE. Impacts will further be minimised by selecting existing access tracks and sparsely vegetated or bare soil pit locations where possible during works. This will minimise the area of fauna habitat to be cleared.

No Threatened or Priority fauna species are expected to be present within the Investigation Sites.

5.2 Impact avoidance and management measures applied onsite

5.2.1 Loss of flora, vegetation, and fauna habitat

The following avoidance strategies will be adopted onsite during the hydrogeological/geotechnical investigations:

– The investigation team will utilise existing tracks and roads, only veering off existing tracks and roads within the predefined Investigation Sites to allow for the drill rig and light vehicle access to borehole locations. Where practicable, vegetation will be driven over and not removed.
– Preference will be given to Degraded or already cleared vegetation in proximity to access tracks when selecting borehole locations.
– Boreholes are to be capped and the cleared drill pad area will have topsoil reinstated to facilitate natural regrowth.
– Upon conclusion of drilling each borehole, the same access track will be used to return to the main road.
– All vehicles will be cleaned before entering site to minimise the risk of weeds and/ or disease entering the site.

6. Suitability for referral process

The DWER Guideline: Native vegetation clearing referrals (GoWA 2021a) outlines nine suitability aspects for clearing activities to be deemed appropriate for a clearing referral. Table 10 assesses the proposed clearing activity against the GoWA (2021a) criteria.

Table 10 Clearing referral suitability

Aspect	Assessment	Suitability
Land that is subject to reserve or conservation covenant under the Soil and Land Conservation Act 1945 (SLC Act)	The hydrogeological/geotechnical site land is not subject to reserve or conservation covenant under the SLC Act.	Suitable for clearing referral
Land that is subject to an environmental protection covenant under Part VB of the EP Act	The hydrogeological/geotechnical site land is not subject to an environmental protection covenant.	Suitable for clearing referral
Clearing timeframe	The clearing will be completed within two years.	Suitable for clearing referral
Will contravene the requirements of a soil conservation notice issued under Part V of the SLC Act	Hydrogeological/geotechnical investigation will not contravene the requirements of a soil conservation notice.	Suitable for clearing referral
Will or is likely to have a significant impact on matters of national environmental significance (MNES)	The hydrogeological/geotechnical works will not have a significant impact on MNES.	Suitable for clearing referral
Includes marine native vegetation clearing activities	The hydrogeological/geotechnical sites are terrestrial and no marine vegetation will be cleared.	Suitable for clearing referral
May impact on protected or otherwise significant flora or fauna	No significant flora or fauna were found in the hydrogeological/geotechnical sites during field survey (GHD 2023)	Suitable for clearing referral
Will be within a highly cleared landscape or an area containing limited or restricted native vegetation types	Native vegetation within the hydrogeological/geotechnical sites is contiguous with surrounding vegetation.	Suitable for clearing referral

Aspect	Assessment	Suitability
	The proposed clearing represents less than 0.001% of each vegetation association's current extents at all scales.	
Is on land previously reserved as an environmental offset under the conditions of another approval under the EP Act	The hydrogeological/geotechnical sites are not on land previously reserved as an environmental offset.	Suitable for clearing referral

6.1 Assessment against the DWER Criterion

A Project that meets the four DWER criteria is exempt from requiring a permit (DWER 2021). The clearing required within the Investigation Sites for hydrogeological/geotechnical work satisfies the four DWER criteria and hence no permit will be required.

6.1.1 Criterion 1: The area proposed to be cleared is small relative to the total remaining vegetation

Under consideration of Criterion 1, DWER assess the size of the proposed clearing relative to the remaining vegetation in the region and the remaining vegetation of the ecological community to be cleared.

The area proposed to be cleared is small relative to the total remaining vegetation, as shown in Table 11.

Table 11 DWER Criterion 1 Thresholds

Thresholds for a permit to be required	Proposed clearing
More than 5 ha is proposed to be cleared (Extensive Land Use Zone)	Disturbance to 0.97 ha of which up to 0.54 ha is native vegetation and the remainder is existing, cleared tracks.
Less than 30% of that native vegetation association or complex is remaining within the relevant IBRA bioregion	All vegetation associations have at least 60% remaining across all extents (see Table 4 for further information).
Less than 30% native vegetation is remaining within a 10 km buffer of the proposed clearing	Near all native vegetation is remaining within a 10 km buffer of the Investigation Sites.

The proposal satisfies this criterion.

6.1.2 Criterion 2: There are no known or likely significant environmental values within the area

Under consideration of Criterion 2, DWER consider the potential impacts on various environmental values within the proposed clearing. There are no known or likely significant environmental values within the clearing area as described in Table 12.

Table 12 DWER Criterion 2 Considerations

Environmental Value	Impacts of proposed clearing
Vegetation condition	Vegetation condition ranges from Degraded to Excellent. The tracks, where 44.3% of impacted area (Investigation Site) will occur, are Completely Degraded.
Significant fauna	No Threatened or Priority fauna were identified in the hydrogeological/geotechnical Investigation Sites during field survey. Any Conservation Significant species that could possibly occur are highly mobile and could easily relocate during clearing or drilling.
Fauna habitat	The fauna habitat types within the Investigation Sites will remain well connected and part of a larger contiguous landscape of similar habitats within the local area and surrounding region. Habitats present within the Investigation Sites are well represented in the local and regional area. Clearing at each Investigation Site is minor (<0.16 ha) and is co-located next to existing cleared tracks.
Significant ecological linkage	The proposed clearing is not part of a significant ecological linkage, nor will it disrupt the movement of fauna through the region.

Environmental Value	Impacts of proposed clearing
Mapped ecological community	No TECs/PECs were identified within the Investigation Sites. The two nearest PECs are located approximately 15 km southeast and 15 km east.
Significant flora	No significant flora was identified in the hydrogeological/geotechnical Investigation Sites during field surveys.
Mapped wetland	The Investigation Sites do not intersect any mapped wetlands.
Mapped watercourse	The Investigation Sites do not intersect any mapped watercourses.
Water resources	It is considered unlikely that clearing will significantly disturb or interrupt natural drainage and surface run-off patterns. No Public Drinking Water Source Areas are present within the Investigation Sites, with the nearest approximately 8 km south.
Conservation reserve	The Investigation Sites do not intersect any conservation reserves. The nearest DBCA managed land areas are 15 km north and 13 km southeast.
Land and soil quality	Acid sulfate soils are not present in any hydrogeological/geotechnical Investigation Sites. The proposed clearing will not alter hydrogeological regimes due to the minimal extent of clearing within a larger area. The clearing is unlikely to cause deterioration in surface water or ground water quality.
Heritage and native title	No heritage or native title sites have been identified within the hydrogeological/geotechnical Investigation Sites.

The proposal satisfies this criterion.

6.1.3 Criterion 3: The state of scientific knowledge of native vegetation within the region is adequate

Under consideration of Criterion 3, DWER reviews the current state of scientific knowledge within the clearing area and the wider region. Details of native vegetation in the region are contained in DBCA databases. Further detailed understanding of vegetation within the region has been obtained through three years (2021 to 2023) of flora and vegetation field surveys (GHD 2023).

The state of scientific knowledge of native vegetation within the region is adequate for the minor nature of the proposed clearing. The proposal satisfies this criterion.

6.1.4 Criterion 4: Conditions will not be required to manage environmental impacts

Under consideration of Criterion 4, DWER assesses if the applicant has implicated the mitigation hierarchy when planning the clearing activity.

The hierarchy of avoid, minimise, reduce, and rehabilitate has been used while selecting the Investigation Areas to mitigate the environmental impacts of the hydrogeological/geotechnical works. Placement of hydrogeological/geotechnical sites was carefully selected to minimise direct impacts of vegetation clearing. Use of existing disturbed areas been prioritised to minimise the need for clearing. The clearing will not require offsets or any other conditions to manage effects on the environment.

The proposal satisfies this criterion.

7. Assessment against the 10 clearing principles

The clearing of vegetation in Western Australia is regulated by DWER and requires a permit under Part V of the EP Act, except when a project is assessed under Schedule 6 of the EP Act or is prescribed by regulation in the *Environmental Protection (Clearing Native Vegetation) Regulations 2004*.

In deciding about a clearing permit application under section 51O of the EP Act, the CEO of DWER must consider the clearing principles contained in Schedule 5 of the EP Act so far as they are relevant to the matter under consideration. The ten clearing principles aim to ensure that potential impacts resulting from removal of native vegetation can be assessed holistically.

Should DWER consider the clearing referral inadequate and require a NVCP, an assessment of the proposed clearing against the ten clearing principles, outlined in Schedule 5 of the EP Act, has been undertaken and presented in Table 13.

The assessment was undertaken with reference to DWER guideline *A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the* Environmental Protection Act 1986 (DWER 2014).

This assessment concluded the proposed clearing associated with the investigative works is unlikely to be at variance to any of the clearing principles.

Table 13 Assessment against the ten clearing principles

Clearing principle	Assessment of impacts	Outcome
(a) Native vegetation should not be cleared if it comprises a high level of biological diversity	Broad scale (1:250,000) pre-European vegetation mapping (Beard 1975) identifies five vegetation associations are present within the Investigation Sites. These associations are all well represented within the region with at least 83% of the pre-European vegetation extent remaining for most vegetation associations, except 380 which has approximately 60% of its pre-European extent remaining. The clearing in association 380 will be less than 0.001% of the remaining extent. The vegetation within the investigation sites is consistent and contiguous with native vegetation to the north, east and south. The vegetation present is also expected to be represented with conservation tenure including within Zuytdorp Nature Reserve (15 km north of the sites) and Kalbarri National Park (13 km southeast of the sites). The *Dandjoo (DBCA)* database identified 1043 taxa previously recorded within a 40 km radius from the centre of the DE. This total comprised 824 dicots, 208 monocots, 5 ferns, 4 gymnosperms, and 2 mosses. The EPBC Act PMST, NatureMap, DBCA TPFL, WAHERB and WABISCG databases identified the presence/potential presence of 148 conservation significant flora within a 40 km radius of the DE. This included: – 15 Threatened taxa – 16 Priority 1 taxa – 43 Priority 2 taxa – 46 Priority 3 taxa – 16 Priority 4 taxa. Based on the GHD (2023) survey, no Threatened flora species listed under the EPBC Act and/or the BC Act or Priority flora listed by DBCA are present within the area. On this basis no significant flora is proposed to be cleared. The *Dandjoo* (DBCA) database identified 478 fauna species previously recorded within a 40 km radius of the DE. This comprised nine amphibians, 153 birds, 91 fish, 133 invertebrates, 18 mammals, and 74 reptiles, 472 being native and six introduced species. The GHD (2023) field survey identified seven significant vertebrate species within the survey area: – Bar-tailed Godwit (*Limosa lapponica menzbieri*) – EPBC Endangered, BC Critically Endangered – Carnaby's Cockatoo (*Zanda latirostris*) – EPBC Endangered, BC Endangered – Greater Sand Plover (*Charadrius leschenaultia*) – EPBC Endangered, BC Endangered – Malleefowl (*Leipoa ocellata*) – EPBC Vulnerable, BC Vulnerable – Taper-tailed West Coast Slider (*Lerista humphriesi*) – Priority 3 – Western Grasswren (*Amytornis textilis* subsp. *textilis*) – Priority 4 – Western Spiny-tailed Skink (*Egernia stokesii badia*) – EPBC Endangered, BC Vulnerable No significant fauna was recorded within the Investigation Sites. Any conservation significant species that could possibly occur in the Investigation Sites occur are highly mobile and could easily relocate during clearing or drilling. The Investigation Sites occur within seven vegetation types., primarily in Excellent condition. Five habitat types occur in the Investigation Sites. The test sites were specifically chosen to minimise clearing requirements and have been located on or adjacent to existing access tracks, specifically in areas that are already cleared or are partially cleared with lower diversity.	The proposed clearing is unlikely to be at variance to this principle.

Clearing principle	Assessment of impacts	Outcome
	The native vegetation to be cleared is comprised of vegetation types and taxa typical to the region. The native vegetation is not considered to comprise a high level of biological diversity compared to the surrounding area and is anticipated to regrow following clearing. Therefore, it is considered unlikely that the clearing be at variance with this principle.	
(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	A *Dandjoo* database search identified 478 species previously recorded within a 40 km radius of the DE. This included: – nine amphibians – 153 birds – 91 fish – 133 invertebrates – 18 mammals – 74 reptile species. Of these species recorded, 472 are native and 6 are naturalised (introduced) species. A search of the EPBC Act PMST, *Dandjoo*, NatureMap, and DBCA Threatened and Priority fauna database identified the presence/potential presence of 65 conservation significant fauna within a 40 km buffer of the area. This total does not include those species that are exclusively marine as no marine habitat is present. The desktop assessment identified: – Three species listed as Critically Endangered under the EPBC Act and/or BC Act – Five species listed as Endangered under the EPBC Act and/or BC Act. – Thirty-three bird species listed as Migratory only under the EPBC Act. – Eight species listed as Vulnerable under the BC Act. – One species listed as Other Specially Protected Fauna under the BC Act – Ten species listed as Priority by DBCA. No Threatened or Priority fauna species or evidence of their presence were identified in the surveyed hydrogeological/geotechnical sites within the Investigation Sites. The removal of approximately 0.54 ha of suitable habitat for significant fauna is highly unlikely to have a significant impact on fauna habitat. The fauna habitat types within the Investigation Sites will remain well connected and part of a larger contiguous landscape of similar habitats within the local area and surrounding region. Habitats present within the Investigation Sites are well represented in the local and regional area given the extent of native vegetation adjacent to the investigation footprint, and in nearby conservation areas. The Investigation Sites are unlikely to support significant locally or regionally unique habitat for indigenous fauna dependent on the habitats present. The clearing will be small (fourteen 15 m x 30 m, two 30 x 30 m and one 30 x 53 m) test pit sites spread throughout a larger area. The proposed clearing is unlikely to have significant impact on the fauna habitat for conservation significant fauna. The proposed clearing is unlikely to be at variance with this principle.	The proposed clearing is unlikely to be at variance to this principle.
(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora	The EPBC Act PMST, *Dandjoo,* NatureMap, DBCA TPFL, WAHERB and WABISCG databases identified the presence/potential presence of 148 conservation significant flora within a 40 km radius of the DE. This included: – 15 Threatened taxa – 16 Priority 1 taxa – 43 Priority 2 taxa	The proposed clearing is unlikely to be at variance to this principle.

Clearing principle	Assessment of impacts	Outcome
	– 43 Priority 3 taxa – 16 Priority 4 taxa Results of the GHD (2023) survey determined that no Threatened flora species listed under the EPBC Act and/or the BC Act or Priority flora species listed by DBCA, are within the area proposed for hydrogeological/geotechnical investigation. To ensure these species are not impacted, a pre-clearance survey of each Investigation Site will be undertaken by a suitably qualified botanist. If conservation significant species are recorded, they will be flagged physically and digitally, and the Investigation Site will be minorly adjusted to avoid impacts. The proposed clearing is unlikely to be at variance with this principle.	
(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community	The Threatened Ecological Community (TEC) / Priority Ecological Community (PEC) database did not identify any TEC/PECs occurring within the Investigation Sites but did identify two PECs in the surrounding area. One occurring approximately 15 km to the southeast and the other 15 km east. Field surveys (GHD 2023) confirmed that no TECs occur within the Investigation Sites. The proposed clearing is unlikely to be at variance with this principle.	The proposed clearing is unlikely to be at variance to this principle.
(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	Broad scale (1:250,000) pre-European vegetation mapping (Beard 1975) identifies five vegetation associations are present within the DE. These associations are all well represented within the region with at least 83% of the pre-European vegetation extent remaining for most vegetation associations, except 380 which has approximately 60% of its pre-European extent remaining. The clearing in association 380 will be less than 0.001% of the remaining extent. The vegetation within the Investigation Sites is primarily acacia/melaleuca shrublands and areas of open woodland and is consistent and contiguous with native vegetation to the north, east and south. The vegetation present is also expected to be represented with conservation tenure including the Zuytdorp Nature Reserve (15 km north) and Kalbarri National Park (13 km southeast). Removal of approximately 0.54 ha of native vegetation is minor in impact to the surrounding region, which is historically intact with minor clearing and impacts to native vegetation. The proposed clearing is unlikely to be at variance with this principle.	The proposed clearing is unlikely to be at variance to this principle.
(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	The Investigation Sites have all been determined to avoid watercourses or associated vegetation. There will be no clearing of any vegetation associated with watercourses. The proposed clearing is unlikely to be at variance with this principle.	Not at variance to this principle.
(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	The underlying soil type is primarily sandy with limited drainage structures throughout the region. The Investigation Sites have been located on flat areas adjacent to existing tracks on flat locations. The test pits will be filled and flattened and then allowed to rehabilitate. There is no ASS in the DE. The proposed clearing is unlikely to be at variance with this principle.	The proposed clearing is unlikely to be at variance to this principle.

Clearing principle	Assessment of impacts	Outcome
(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area	The Investigation Sites do not intersect the nearby conservation areas, Zuytdorp Nature Reserve or Kalbarri National Park. No clearing will be undertaken within these conservation areas. The proposed clearing is unlikely to impact the environmental values of Zuytdorp Nature Reserve or Kalbarri National Park.	Not at variance to this principle.
(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	No Internationally (Ramsar) or Nationally Important Wetlands intersect the Investigation Sites. The Investigation Sites are located within the proclaimed Gascoyne Groundwater Area. The Investigation Sites do not intersect any surface water areas or rivers proclaimed under the RiWI Act. It is considered unlikely any clearing will significantly disturb or interrupt natural drainage and surface run-off patterns. However, during heavy localised rainfall events, erosion may occur in cleared areas resulting in localised, short-term soil erosion and/or sedimentation. It is unlikely clearing will have an impact on groundwater levels or quality. The proposed activity associated with the clearing will not alter the current hydrogeological regime due to the relatively minimal clearing proposed within an area causing minimal sheetflow over a short time scale, with adequate surrounding native vegetation to allow water to infiltrate. The proposed clearing is unlikely to cause deterioration in surface water or ground water quality.	Not at variance to this principle.
(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding	The underlying soil type is primarily sandy with limited drainage structures throughout the DE. The test sites have all been located on flat areas that are adjacent to existing tracks on flat locations. The test pits will be filled and flattened and then allowed to rehabilitate. The proposed clearing is unlikely to be at variance with this principle.	Not at variance to this principle.

8. Other approvals

8.1 Aboriginal heritage

Impacts on Aboriginal heritage sites has been assessed via public databases. The location of the Investigation Sites has been designed to avoid identified heritage sites, and as such, site disturbance approvals under the *Aboriginal Heritage Act 1972* are not necessary. Further, Investigation Sites will be cleared and / or monitored for heritage sites with traditional owners.

The Investigation Sites are considered low risk in terms of heritage sites as they are all located either on or adjacent to disturbed area.

8.2 Referral to the Department of Climate Change, Energy, the Environment and Water

The decision whether to refer the hydrogeological/geotechnical works to DCCEEW is based upon whether it may have a significant effect on Matters of National Environmental Significance (MNES) which are protected EPBC Act. These include World Heritage properties, National Heritage places, wetlands of international importance (listed under the Ramsar convention), Commonwealth land or marine areas, migratory species protected under international agreements, nuclear actions, nationally threatened species and ecological communities and water resources.

GHD assessed significant impacts of the works on MNES. Based on this assessment there are no obvious triggers to suggest referral of the project to DCCEEW (GHD 2020b). The hydrogeological/geotechnical works will not have a significant impact on MNES or impact Commonwealth land and therefore referral is not required.

8.3 Referral to the Environmental Protection Authority

The proposed clearing to support hydrogeological/geotechnical works will not have sufficient environmental impacts such to warrant referral to the EPA under Part IV of the EP Act. Environmental impacts can be adequately managed under Part V of the EP Act via a clearing referral or a clearing permit.

Murchison Hydrogen Renewables has referred the greater Project under Part IV of the *Environmental Protection Act 1986* (EP Act, assessment number 2339). Similarly, the Project has been referred to DCCEEW under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act, 2022/09217). The assessment level for this Project has been set at Public Environmental Review.

8.4 Offsets

Environmental offsets are conservation actions that provide environmental benefits intended to counterbalance significant residual environmental impacts associated with a proposal (GoWA 2014).

Murchison Hydrogen Renewables have considered requirements to counterbalance the residual impacts through environmental offsets for hydrogeological/geotechnical works. Consideration has been given to requirements of the Western Australian Government's Environmental Offset Policy (GoWA 2011) and the Western Australian Offsets Guidelines (GoWA 2014).

Murchison Hydrogen Renewables operates on a hierarchy of avoid, minimize, reduce, rehabilitate, and offset environmental impacts. This hierarchy is achieved primarily through changes in scope and design, development and implementation of the environmental management plans or strategies and, if required, development of an offset proposal. Application of the management hierarchy has been followed throughout this document.

Assessment against the ten clearing principles concluded that the proposed clearing is not at variance with any of the ten clearing principles. Therefore, offsets are not proposed as there are no significant residual impacts associated with the proposed clearing.

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Appendices

Appendix A

Investigation Area Coordinates

Table 14 Coordinates (latitude/longitude) of proposed geological testing sites

Hydrogeological/Geotechnical Test Site	Latitude	Longitude
1	-27.364682	114.1252
2	-27.357005	114.123731
3	-27.362294	114.147154
4	-27.378237	114.176502
5	-27.398826	114.160913
6	-27.419856	114.145129
7	-27.415172	114.198313
8	-27.444322	114.188944
9	-27.451333	114.161873
10	-27.475496	114.220146
11	-27.340458	114.228332
12	-27.338791	114.291052
13	-27.393667	114.071955
14	-27.393783	114.06322
15	-27.399405	114.055716
16	-27.393667	114.071955
Long Thickett Bore	-27.501957	114.160489

Appendix C

Protected Matters Search Tool Results

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 29-Apr-2024

Summary

Matters of National Environment Significance

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

World Heritage Properties:	1
National Heritage Places:	1
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	59
Listed Migratory Species:	46

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	74
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	1
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	7
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	2
Key Ecological Features (Marine):	1
Biologically Important Areas:	10
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status	Buffer Status
Shark Bay, Western Australia	WA	Declared property	In buffer area only

National Heritage Places [Resource Information]

Name	State	Legal Status	Buffer Status
Natural			
Shark Bay, Western Australia	WA	Listed place	In buffer area only

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name	Buffer Status
Commonwealth Marine Areas (EPBC Act)	In buffer area only
Commonwealth Marine Areas (EPBC Act)	In buffer area only

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anous tenuirostris melanops			
Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Aphelocephala leucopsis			
Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area	In feature area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat known to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat may occur within area	In buffer area only
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
Sternula nereis nereis			
Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Thalassarche carteri			
Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta			
Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida			
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris			
Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi			
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Zanda latirostris listed as Calyptorhynchus latirostris			
Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Species or species habitat known to occur within area	In feature area
FISH			
Thunnus maccoyii			
Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
MAMMAL			
Balaenoptera borealis			
Sei Whale [34]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus			
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat known to occur within area	In buffer area only
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Translocated population known to occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area	In buffer area only
Petrogale lateralis lateralis Black-flanked Rock-wallaby, Moororong, Black-footed Rock Wallaby [66647]	Endangered	Species or species habitat known to occur within area	In buffer area only
PLANT			
Androcalva bivillosa Straggling Androcalva [87807]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Beyeria lepidopetala Small-petalled Beyeria, Short-petalled Beyeria [18362]	Endangered	Species or species habitat known to occur within area	In buffer area only
Caladenia barbarella Small Dragon Orchid, Common Dragon Orchid [68686]	Endangered	Species or species habitat known to occur within area	In feature area
Caladenia bryceana subsp. cracens Northern Dwarf Spider-orchid [64556]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caladenia elegans Elegant Spider-orchid [56775]	Endangered	Species or species habitat known to occur within area	In feature area
Caladenia hoffmanii Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat known to occur within area	In feature area
Caladenia wanosa Kalbarri Spider-orchid [5878]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Drakaea concolor Kneeling Hammer-orchid [56777]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eucalyptus beardiana Beard's Mallee [18933]	Vulnerable	Species or species habitat known to occur within area	In feature area
Eucalyptus cuprea Mallee Box [56773]	Endangered	Species or species habitat may occur within area	In buffer area only
Hypocalymma longifolium Long-leaved Myrtle [8081]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Lechenaultia chlorantha Kalbarri Leschenaultia [16763]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Stachystemon nematophorus Three-flowered Stachystemon [81447]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Wurmbea tubulosa Long-flowered Nancy [12739]	Endangered	Species or species habitat may occur within area	In buffer area only
REPTILE			
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Egernia stokesii badia Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
SHARK			
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
SPIDER			
Idiosoma nigrum Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat known to occur within area	In feature area

Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
Hydroprogne caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Marine Species			
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area	In buffer area only
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area	In buffer area only
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area	In buffer area only
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Terrestrial Species			
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Larus pacificus Pacific Gull [811]		Foraging, feeding or related behaviour known to occur within area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In buffer area only
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Puffinus assimilis			
Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area	In buffer area only
Rostratula australis as Rostratula benghalensis (sensu lato)			
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Stercorarius antarcticus as Catharacta skua			
Brown Skua [85039]		Species or species habitat may occur within area	In buffer area only
Sternula albifrons as Sterna albifrons			
Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
Thalassarche carteri			
Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta			
Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida			
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris			
Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi			
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Fish			
Acentronura australe			
Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area	In buffer area only
Campichthys galei			
Gale's Pipefish [66191]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area	In buffer area only
Festucalex scalaris Ladder Pipefish [66216]		Species or species habitat may occur within area	In buffer area only
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In buffer area only
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area	In buffer area only
Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area	In buffer area only
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area	In buffer area only
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area	In buffer area only
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area	In buffer area only
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In buffer area only
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area	In buffer area only
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area	In buffer area only
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In buffer area only
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area	In buffer area only
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area	In buffer area only
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area	In buffer area only
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In buffer area only
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area	In buffer area only
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area	In buffer area only
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In buffer area only
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In buffer area only
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In buffer area only
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In buffer area only
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In buffer area only
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In buffer area only
Mammal			
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area	In buffer area only
Reptile			
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Aipysurus pooleorum Shark Bay Sea Snake [66061]		Species or species habitat may occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area	In buffer area only
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In buffer area only
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In buffer area only
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Current Scientific Name	Status	Type of Presence	Buffer Status
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In buffer area only
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area	In buffer area only
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In buffer area only
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In buffer area only
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In buffer area only

Australian Marine Parks [Resource Information]

Park Name	Zone & IUCN Categories	Buffer Status
Abrolhos	Multiple Use Zone (IUCN VI)	In buffer area only

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Eurardy	Conservation Reserve	WA	In buffer area only
Kalbarri	National Park	WA	In buffer area only
Kalbarri Blue Holes	Fish Habitat Protection Area	WA	In buffer area only
Nerren Nerren	NRS Addition - Gazettal in Progress	WA	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Part Murchison house	NRS Addition - Gazettal in Progress	WA	In buffer area only
Tamala Pastoral Lease (Part)	NRS Addition - Gazettal in Progress	WA	In buffer area only
Zuytdorp	Nature Reserve	WA	In buffer area only

Nationally Important Wetlands [Resource Information]

Wetland Name	State	Buffer Status
Murchison River (Lower Reaches)	WA	In buffer area only

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Midwest Offshore Wind Farm	2022/09264		Assessment	In buffer area only
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region	Buffer Status
Western rock lobster	South-west	In buffer area only

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence	Buffer Status
Seabirds			
Ardenna pacifica Wedge-tailed Shearwater [84292]	Breeding	Known to occur	In buffer area only
Ardenna pacifica Wedge-tailed Shearwater [84292]	Foraging (in high numbers)	Known to occur	In buffer area only
Hydroprogne caspia Caspian Tern [808]	Foraging (provisioning young)	Known to occur	In buffer area only
Larus pacificus Pacific Gull [811]	Foraging (in high numbers)	Known to occur	In buffer area only

Scientific Name	Behaviour	Presence	Buffer Status
Onychoprion anaethetus			
Bridled Tern [82845]	Foraging (in high numbers)	Known to occur	In buffer area only
Puffinus assimilis tunneyi			
Little Shearwater [59363]	Foraging (in high numbers)	Known to occur	In buffer area only
Whales			
Balaenoptera musculus brevicauda			
Pygmy Blue Whale [81317]	Distribution	Known to occur	In buffer area only
Megaptera novaeangliae			
Humpback Whale [38]	Migration	Known to occur	In buffer area only
Megaptera novaeangliae			
Humpback Whale [38]	Migration (north)	Known to occur	In buffer area only
Megaptera novaeangliae			
Humpback Whale [38]	Migration (north and south)	Known to occur	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

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

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Please feel free to provide feedback via the Contact us page.

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Appendix D

NatureMap Search Results

Accepted name	Conservation code
Amphibia	
Arenophryne xiphorhyncha Doughty & Edwards, 2008	
Heleioporus albopunctatus Gray, 1841	
Heleioporus psammophilus (Lee & Main, 1954)	
Limnodynastes dorsalis (Gray, 1841)	
Litoria moorei (Copland, 1957)	
Myobatrachus gouldii (Gray, 1841)	
Neobatrachus kunapalari Mahony & Roberts, 1986	
Neobatrachus pelobatoides (Werner, 1914)	
Neobatrachus wilsmorei (Parker, 1940)	
Pseudophryne	
Pseudophryne guentheri Boulenger, 1882	
Birds	
Acanthagenys rufogularis Gould, 1838	
Accipiter cirrocephalus cirrocephalus (Vieillot, 1817)	
Amytornis textilis textilis (Dumont, 1824)	P4
Cacomantis flabelliformis flabelliformis (Latham, 1802)	
Calidris ruficollis (Pallas, 1776)	MI
Chalcites basalis (Horsfield, 1821)	
Charadrius leschenaultii leschenaultii Lesson, 1826	Subsp. of VU
Chroicocephalus novaehollandiae novaehollandiae Stephens, 1826	
Drymodes brunneopygia Gould, 1841	
Egretta novaehollandiae (Latham, 1790)	
Eolophus roseicapilla roseicapilla (Vieillot, 1817)	
Epthianura tricolor Gould, 1841	
Falco peregrinus Tunstall, 1771	OS
Geopelia striata placida Gould, 1844	
Hieraaetus morphnoides (Gould, 1841)	
Leipoa ocellata Gould, 1840	VU
Lichmera indistincta indistincta (Vigors & Horsfield, 1827)	
Malurus assimilis assimilis North, 1901	
Malurus lamberti Vigors & Horsfield, 1827	Parent of conservation listed taxa
Malurus leucopterus leuconotus Gould, 1865	
Malurus leucopterus leucopterus Dumont, 1824	VU
Malurus pulcherrimus Gould, 1844	
Manorina flavigula (Gould, 1840)	
Pachycephala fuliginosa occidentalis Ramsay, 1878	
Pachyptila belcheri (Mathews, 1912)	
Phalacrocorax varius (Gmelin, 1789)	

Accepted name	Conservation code
Pyrrholaemus brunneus Gould, 1841	
Rhipidura albiscapa preissi Cabanis, 1850	
Sericornis maculatus balstoni Ogilvie-Grant, 1909	
Sericornis maculatus maculatus (Gray, 1847)	
Zanda latirostris Carnaby, 1948	EN
Invertebrates	
Acroaspis Karsch, 1878	
Adoxotoma Simon, 1909	
Allodessus bistrigatus (Clark, 1862)	
Amblyomma triguttatum triguttatum Koch, 1844	
Aname L. Koch, 1873	
Anamidae Simon, 1889	
Anaminae	
Anisops gratus Hale, 1923	
Antichiropus Attems, 1911	
Araneae Clerck, 1757	
Araneinae Clerck, 1758	
Araneus eburneiventris (Simon, 1908)	
Argiope protensa L. Koch, 1872	
Argiope trifasciata (ForsskÃ¥l, 1775)	
Ariadna Audouin, 1826	
Asadipus banjiwarn Platnick, 2000	
Asadipus phaleratus (Simon, 1909)	
Astraeus (Astraeus) occidentalis Barker, 1989	
Austracantha minax (Thorell, 1859)	
Australutica JocquÃ©, 1995	
Austrohorus Beier, 1966	
Backobourkia collina (Keyserling, 1886)	
Backobourkia heroine (L. Koch, 1871)	
Baetidae	
Barychelidae Simon, 1892	
Battalus zuytdorp Raven, 2015	
Beierolpium Heurtault, 1976	
Bezzia Kieffer, 1899	
Bigenditia zuytdorp Platnick, 2000	
Boolathana mainae Platnick, 2002	
Bothriembryon	
Bungulla burbidgei Rix, Raven & Harvey, 2018	
Bungulla keirani Rix, Raven & Harvey, 2018	
Bungulla mckenziei Rix, Raven & Harvey, 2018	
Bungulla sampeyae Rix, Raven & Harvey, 2018	

Accepted name	Conservation code
Bungulla westi Rix, Raven & Harvey, 2018	
Buthidae C.L. Koch, 1837	
Caeculidae Berlese, 1883	
Caenidae	
Carepalxis L. Koch, 1872	
Ceratopogonidae Newman, 1834	
Cercophonius granulosus Kraepelin, 1908	
Cercophonius Peters, 1861	
Ceryerda Simon, 1909	
Cethegus Thorell, 1881	
Chironominae	
Chironomus Meigen, 1803	
Cladotanytarsus Kieffer, 1921	
Cloeon Leach, 1815	
Coelopynia pruinosa Freeman, 1961	
Coenagrionidae	
Corduliidae	
Corixidae	
Cormocephalus aurantiipes (Newport, 1844)	
Cormocephalus turneri Pocock, 1901	
Creontiades dilutus (StÃ¥l, 1859)	
Cryptochironomus griseidorsum (Kieffer, 1917)	
Cryptoerithus halli Platnick & Baehr, 2006	
Cryptoerithus quobba Platnick & Baehr, 2006	
Cryptophlebia ombrodelta (Lower, 1898)	
Culicidae Meigen, 1818	
Culicoides Latreille, 1809	
Cypretta baylyi McKenzie, 1966	
Cypricercus Sars, 1895	
Cyrioctea Simon, 1889	
Delena Walckenaer, 1833	
Dicrotendipes jobetus Epler, 1988	
Dingosa murata Framenau & Baehr, 2007	
Dingosa Roewer, 1955	
Dingosa serrata (L. Koch, 1877)	
Dolophones Walckenaer, 1837	
Dytiscidae	
Encoptarthria echemophthalma (Simon, 1908)	
Eriophora Simon, 1864	
Ethmostigmus rubripes (Brandt, 1840)	
Euasteron carnarvon Baehr, 2003	

Accepted name	Conservation code
Eucyrtops Pocock, 1897	
Euoplos kalbarri Rix, Wilson & Harvey, 2019	
Euoplos Rainbow, 1914	
Euryopis Menge, 1868	
Forsterina Lehtinen, 1895	
Gaius villosus Rainbow, 1914	
Galleria mellonella (Linnaeus, 1758)	
Gamasomorpha Karsch, 1881	
Gamasomorphinae	
Gerridae	
Gmogala Keyserling, 1890	
Grymeus Harvey, 1987	
Habronestes L. Koch, 1872	
Hahniidae Bertkau, 1878	
Hemicordulia tau (Selys, 1871)	
Hemisaga denticulata (White, 1841)	
Hoggicosa alfi Langlands & Framenau, 2010	
Hoggicosa Roewer, 1960	
Hogna crispipes (L. Koch, 1877)	
Hogna Simon, 1885	
Hortophora biapicata (L. Koch, 1871)	
Hydraenidae	
Hydrochus laeteviridis Blackburn, 1896	
Hydrophilidae Latreille, 1802	
Hyphydrus elegans (Montrouzier, 1860)	
Idiommata Ausserer, 1871	
Idiosoma arenaceum Rix & Harvey, 2018	P3
Idiosoma Ausserer, 1871	
Idiosoma incomptum Rix & Harvey, 2018	P3
Ilyocypris australiensis Sars, 1889	
Indolpium Hoff, 1945	
Ischnura heterosticta heterosticta (Burmeister, 1839)	
Isoetes drummondii A.Braun	
Isometroides Keyserling, 1885	
Isopedella saundersi (Hogg, 1903)	
Iulomorphidae Verhoeff, 1924	
Kawanaphila nartee Rentz, 1993	
Kawanaphila pillara Rentz, 1993	
Kwonkan Main, 1983	
Laccophilus sharpi RÃ©gimbart, 1889	
Lampona cylindrata (L. Koch, 1866)	

Accepted name	Conservation code
Lampona Thorell, 1869	
Lamponina scutata (Strand, 1913)	
Latrodectus hasselti Thorell, 1870	
Leioproctus (Colletopsis) contrarius Michener, 1965	P3
Leptoceridae	
Libellulidae	
Limnogonus StÃ¥l, 1868	
Longrita zuytdorp Platnick, 2002	
Lychas C.L. Koch, 1845	
Lycosa Latreille, 1804	
Lycosidae	
Macrogyrus angustatus RÃ©gimbart, 1883	
Mainosa longipes (L. Koch, 1878)	
Maratus constellatus Schubert, 2020	
Masasteron Baehr, 2004	
Masasteron sampeyae Baehr, 2004	
Meedo harveyi Platnick, 2002	
Menemerus bivittatus (Dufour, 1831)	
Mesoveliidae	
Missulena granulosa (O. P.-Cambridge, 1869)	
Missulena Walckenaer, 1805	
Mituliodon tarantulinus (L. Koch, 1873)	
Miturgidae Simon, 1889	
Molycria vokes Platnick & Baehr, 2006	
Myandra bicincta Simon, 1908	
Naididae Ehrenberg, 1828	
Necterosoma regulare Sharp, 1882	
Neosparassus Hogg, 1903	
Neostorena Rainbow, 1914	
Nesidovelia peramoena (Hale, 1925)	
Nicodamus mainae Harvey, 1995	
Nitocra Boeck, 1865	
Notalina spira St Clair, 1991	
Notonectidae	
Oecetis McLachlan, 1877	
Oecobius navus Blackwall, 1859	
Olpiidae Banks, 1895	
Ophioglossum lusitanicum L.	
Opopaea Simon, 1892	
Orthocladiinae	
Oxyopes Latreille, 1804	

Accepted name	Conservation code
Oxyopidae	
Paracladopelma Hamish, 1923	
Parastenocarididae	
Pelicinus Simon, 1892	
Pholcitrichocyclus Ceccolini & Cianferoni, 2022	
Pholcitrichocyclus nigropunctatus (Simon, 1908)	
Phryganoporus candidus (L. Koch, 1872)	
Pisauridae Simon, 1890	
Plocamium preissianum Sond.	
Polypedilum leei Freeman, 1961	
Polypedilum watsoni Freeman, 1961	
Polyxenida Verhoeff, 1934	
Polyzoniida Cook, 1895	
Procladius paludicola Skuse, 1889	
Prodidomidae Simon, 1884	
Prodidomus woodleigh Platnick & Baehr, 2006	
Pseudolampona boree Platnick, 2000	
Psilotum nudum (L.) P.Beauv.	
Rhantus suturalis (W. S. Macleay, 1825)	
Salticidae Blackwall, 1841	
Scirtidae Fleming, 1821	
Scolopendra laeta Haase, 1887	
Scolopendra morsitans Linnaeus, 1758	
Scrobipalpa aptatella (Walker, 1864)	
Scytodes Blackwall, 1864	
Segestriidae Simon, 1893	
Selaginella gracillima (Kunze) Salomon	
Serpulidae Rafinesque, 1815	
Simuliidae Newman, 1834	
Singa C. L. Koch, 1836	
Sitona discoideus Gyllenhal, 1834	
Socca senicaudata (Simon, 1908)	
Spinasteron westi Baehr, 2003	
Staphylinidae	
Stenochironomus Kieffer, 1919	
Stephanopis O. Pickard-Cambridge, 1869	
Storena formosa Thorell, 1870	
Storosa JocquÃ©, 1991	
Subasteron Baehr & JocquÃ©, 2001	
Synemon gratiosa Westwood, 1877	P4
Synsphyronus Chamberlin, 1930	

Accepted name	Conservation code
Synsphyronus tenuis Harvey, 2022	
Tabanidae	
Tanypodinae	
Tanytarsus van der Wulp, 1874	
Tasmanicosa godeffroyi (L. Koch, 1865)	
Tasmanicosa leuckarti (Thorell, 1870)	
Tasmanocoenis tillyardi (Lestage, 1938)	
Tetragnatha nitens (Audouin, 1826)	
Teyl luculentus Main, 1975	
Teyl Main, 1975	
Thiaridae	
Tipulidae Latreille, 1802	
Triaenodes McLachlan, 1865	
Trichocyclus nigropunctatus Simon, 1908	
Trichonephila Dahl, 1911	
Trichonephila edulis (LabillardiÃ¨re, 1799)	
Triplectides australis NavÃ¡s, 1934	
Trombidioidea	
Urodacus hartmeyeri Kraepelin, 1908	
Urodacus mckenziei Volschenk, Smith & Harvey, 2000	
Urodacus megamastigus L. E. Koch, 1977	
Urodacus Peters, 1861	
Venator Hogg, 1833	
Venatrix arenaris (Hogg, 1905)	
Zodariidae Thorell, 1881	
Zonaria turneriana J.Agardh	
Plants	
Acacia aciphylla Benth.	
Acacia acuaria W.Fitzg.	
Acacia acuminata Benth.	
Acacia andrewsii W.Fitzg.	
Acacia ashbyae Maslin	
Acacia bidentata Benth.	
Acacia blakelyi Maiden	
Acacia cavealis R.S.Cowan & Maslin	
Acacia chartacea Maslin	
Acacia cochlearis (Labill.) H.L.Wendl.	
Acacia congesta Benth. subsp. congesta	
Acacia coolgardiensis Maiden	
Acacia daphnifolia Meisn.	
Acacia ericifolia Benth.	

Accepted name	Conservation code
Acacia erinacea Benth.	
Acacia gelasina Maslin	P2
Acacia hopperiana Maslin	
Acacia idiomorpha Benth.	
Acacia isoneura subsp. nimia Maslin & A.R.Chapm.	P3
Acacia lasiocarpa Benth.	
Acacia lasiocarpa Benth. var. lasiocarpa	
Acacia lasiocarpa var. lasiocarpa Cockleshell Gully variant (E.A. Griffin 2039)	P2
Acacia latipes Benth.	
Acacia latipes Benth. subsp. latipes	
Acacia leptospermoides Benth.	
Acacia leptospermoides Benth. subsp. leptospermoides	
Acacia leptospermoides subsp. obovata Maslin	P2
Acacia ligulata Benth.	
Acacia ligustrina Meisn.	
Acacia lineolata Benth. subsp. lineolata	
Acacia longispinea Morrison	
Acacia microcalyx Maslin	
Acacia Mill.	
Acacia murrayana Benth.	
Acacia neurophylla subsp. erugata R.S.Cowan & Maslin	
Acacia oldfieldii F.Muell.	
Acacia oxyclada Benth.	
Acacia plautella Maslin	P3
Acacia puncticulata Maslin	
Acacia quadrisulcata F.Muell.	
Acacia ramulosa W.Fitzg. var. ramulosa	
Acacia restiacea Benth.	
Acacia rhodophloia Maslin	
Acacia rostellifera Benth.	
Acacia roycei Maslin	
Acacia saligna (Labill.) H.L.Wendl.	
Acacia saligna subsp. Wheatbelt (B.R. Maslin 8602)	
Acacia scirpifolia Meisn.	
Acacia sclerosperma F.Muell. subsp. sclerosperma	
Acacia sclerosperma subsp. glaucescens A.R.Chapm. & Maslin	P3
Acacia sibina Maslin	
Acacia signata F.Muell.	
Acacia sp. Murchison River (B.R. Maslin 7789)	
Acacia spathulifolia Maslin	
Acacia sphenophylla Maslin	

Accepted name	Conservation code
Acacia stereophylla Meisn. var. stereophylla	
Acacia stereophylla var. cylindrata R.S.Cowan & Maslin	P2
Acacia tetragonophylla F.Muell.	
Acacia ulicina Meisn.	
Acacia xanthina Benth.	
Acanthocarpus Lehm.	
Acanthocarpus parviflorus A.S.George	P3
Acanthocarpus preissii Lehm.	
Acanthocarpus robustus A.S.George	
Acanthocarpus sp. Ajana (C.A. Gardner 8596)	
Acanthocarpus sp. Cooloomia (S.D. Hopper 3301)	
Actinobole condensatum (A.Gray) P.S.Short	
Actinobole uliginosum (A.Gray) H.Eichler	
Adenanthos acanthophyllus A.S.George	P2
Adriana quadripartita (Labill.) MÃ¼ll.Arg.	
Adriana tomentosa Gaudich. var. tomentosa	
Alectryon oleifolius (Desf.) S.T.Reynolds subsp. oleifolius	
Allocasuarina acutivalvis (F.Muell.) L.A.S.Johnson	
Allocasuarina acutivalvis (F.Muell.) L.A.S.Johnson subsp. acutivalvis	
Allocasuarina campestris (Diels) L.A.S.Johnson	
Allocasuarina dielsiana (C.A.Gardner) L.A.S.Johnson	
Allocasuarina huegeliana (Miq.) L.A.S.Johnson	
Allocasuarina humilis (Otto & A.Dietr.) L.A.S.Johnson	
Alternanthera denticulata R.Br. var. denticulata	
Althenia australis (Harv.) F.Muell.	
Alyogyne cuneiformis (DC.) Lewton	
Alyogyne hakeifolia (Giord.) Alef.	
Alyogyne huegelii (Endl.) Fryxell	
Alyogyne pinoniana (Gaudich.) Fryxell	
Alyogyne sp. Geraldton (R. Davis 3487)	
Alyogyne sp. Hutt River (B.J. Lepschi & T.R. Lally 2310)	
Alyogyne sp. Kalbarri (P.G. Wilson 6720)	
Alyogyne sp. Southern Coast (A.S. George 289)	
Alyxia buxifolia R.Br.	
Ammothryon grandiflorum (Lehm.) R.L.Barrett, K.L.Wilson & J.J.Bruhl	
Amphibolis antarctica (Labill.) Asch.	
Amphipogon caricinus F.Muell. var. caricinus	
Amphipogon R.Br.	
Amphipogon turbinatus R.Br.	
Amyema linophylla (Fenzl) Tiegh. subsp. linophylla	
Amyema melaleucae (Miq.) Tiegh.	

Accepted name	Conservation code
Amyema miraculosa (Miq.) Tiegh.	
Amyema miraculosa (Miq.) Tiegh. subsp. miraculosa	
Androcalva bivillosa C.F.Wilkins	CR
Androcalva gaudichaudii (J.Gay) C.F.Wilkins & Whitlock	
Androcalva microphylla (Benth.) C.F.Wilkins & Whitlock	P2
Angianthus cunninghamii (DC.) Benth.	
Angianthus microcephalus (F.Muell.) Benth.	P2
Angianthus tomentosus J.C.Wendl.	
Anigozanthos humilis Lindl.	
Anigozanthos humilis Lindl. subsp. humilis	
Anigozanthos humilis subsp. humilis Lindl.	
Anigozanthos kalbarriensis Hopper	
Anigozanthos manglesii subsp. quadrans Hopper	
Anogramma leptophylla (L.) Link	
Anthobolus foveolatus F.Muell.	
Anthocercis anisantha Endl. subsp. anisantha	
Anthocercis genistoides Miers	
Anthocercis ilicifolia Hook.	
Anthocercis ilicifolia subsp. caldariola Haegi	
Anthocercis intricata F.Muell.	P3
Anthocercis littorea Labill.	
Anthotroche myoporoides C.A.Gardner	P3
Anthotroche walcottii F.Muell.	
Aotus phylicoides (F.Muell.) Benth.	
Aphanopetalum clematideum (Harv.) Domin	
Aphelia nutans Benth.	
Apium annuum P.S.Short	
Apium prostratum Vent.	
Apium prostratum Vent. subsp. prostratum	
Arctotheca calendula (L.) K.Lewin	
Aristida holathera Domin var. holathera	
Arnocrinum drummondii Endl.	P3
Arthropodium dyeri (Domin) Brittan	
Asphodelus fistulosus L.	
Asplenium subglandulosum (Hook. & Grev.) Salvo, Prada & T.E.DÃaz	
Atriplex amnicola Paul G.Wilson	
Atriplex semilunaris Aellen	
Austrostipa crinita (Gaudich.) S.W.L.Jacobs & J.Everett	
Austrostipa elegantissima (Labill.) S.W.L.Jacobs & J.Everett	
Austrostipa exilis (Vickery) S.W.L.Jacobs & J.Everett	
Austrostipa macalpinei (Reader) S.W.L.Jacobs & J.Everett	

Accepted name	Conservation code
Austrostipa nitida (Summerh. & C.E.Hubb.) S.W.L.Jacobs & J.Everett	
Austrostipa scabra (Lindl.) S.W.L.Jacobs & J.Everett	
Babingtonia grandiflora (Benth.) Rye	
Baeckea pentagonantha F.Muell.	
Baeckea robusta F.Muell.	
Baeckea sp. East Nabawa (M.E. Trudgen MET 21623)	
Baeckea sp. Eurardy Station (Wildflower Society of W.A. EURA 15)	
Baeckea sp. Murchison River (M.E. Trudgen 12009)	
Baeckea sp. Nanga (A.S. George 11346)	
Baeckea subcuneata F.Muell.	P2
Banksia ashbyi Baker f.	
Banksia ashbyi Baker f. subsp. ashbyi	
Banksia attenuata R.Br.	
Banksia borealis (A.S.George) A.R.Mast & K.R.Thiele subsp. borealis	
Banksia fraseri (R.Br.) A.R.Mast & K.R.Thiele	
Banksia fraseri var. ashbyi (B.L.Burtt) A.R.Mast & K.R.Thiele	
Banksia L.f.	
Banksia leptophylla var. melletica A.S.George	
Banksia lindleyana Meisn.	
Banksia menziesii R.Br.	
Banksia prionotes Lindl.	
Banksia sceptrum Meisn.	
Banksia sessilis var. flabellifolia (A.S.George) A.R.Mast & K.R.Thiele	
Banksia victoriae Meisn.	
Beaufortia aestiva K.J.Brooks	
Beaufortia elegans Schauer	
Beaufortia squarrosa Schauer	
Beyeria cinerea (MÃ¼ll.Arg.) Benth. subsp. cinerea	P3
Beyeria cinerea subsp. borealis Halford & R.J.F.Hend.	
Beyeria gardneri Airy Shaw	P3
Beyeria lepidopetala F.Muell.	VU
Bidens bipinnata L.	
Blennospora drummondii A.Gray	
Bonamia rosea (F.Muell.) Hallier f.	
Boronia cymosa Endl.	
Boronia purdieana Diels	
Boronia purdieana Diels subsp. purdieana	
Boronia purdieana subsp. calcicola Paul G.Wilson	
Borya sphaerocephala R.Br.	
Bossiaea calcicola J.H.Ross	P3
Bossiaea eriocarpa Benth.	

Accepted name	Conservation code
Bossiaea inundata J.H.Ross	P2
Brachychiton gregorii F.Muell.	
Brachyloma djerral Cranfield & Hislop	P3
Brachyscome iberidifolia Benth.	
Brachyscome perpusilla (Steetz) J.M.Black	
Brassica tournefortii Gouan	
Briza maxima L.	
Bromus madritensis L.	
Bromus madritensis L.	
Brunonia australis R.Br.	
Bulbine semibarbata (R.Br.) Haw.	
Bulbostylis barbata (Rottb.) C.B.Clarke	
Burchardia congesta Lindl.	
Burchardia rosea Keighery	
Bursaria occidentalis E.M.Benn.	
Caesia sp. Wongan (K.F. Kenneally 8820)	
Caladenia barbarella Hopper & A.P.Br.	EN
Caladenia bicalliata R.S.Rogers	
Caladenia bicalliata R.S.Rogers subsp. bicalliata	
Caladenia bryceana subsp. cracens Hopper & A.P.Br.	EN
Caladenia denticulata Lindl.	
Caladenia discoidea Lindl.	
Caladenia drummondii Benth.	
Caladenia elegans Hopper & A.P.Br.	CR
Caladenia filamentosa R.Br.	
Caladenia flava R.Br.	
Caladenia flava R.Br. subsp. flava	
Caladenia flava subsp. maculata Hopper & A.P.Br.	
Caladenia hirta subsp. rosea Hopper & A.P.Br.	
Caladenia incensum Hopper & A.P.Br.	
Caladenia integra E.Coleman	P4
Caladenia latifolia R.Br.	
Caladenia longicauda subsp. borealis Hopper & A.P.Br.	
Caladenia longicauda subsp. minima A.P.Br. & G.Brockman	P2
Caladenia nobilis Hopper & A.P.Br.	
Caladenia pachychila Hopper & A.P.Br.	
Caladenia pendens subsp. pendens Hopper & A.P.Br.	
Caladenia R.Br.	
Caladenia reptans subsp. impensa Hopper & A.P.Br.	
Caladenia varians Hopper & A.P.Br.	
Caladenia wanosa A.S.George	EN

Accepted name	Conservation code
Caladenia x spectabilis Hopper & A.P.Br.	
Calectasia browneana Keighery, K.W.Dixon & R.L.Barrett	P2
Callistachys lanceolata Vent.	
Callistemon phoeniceus Lindl.	
Callitris arenaria (C.A.Gardner) J.E.Piggin & J.J.Bruhl	
Callitris canescens (Parl.) S.T.Blake	
Callitris Vent.	
Calocephalus francisii (F.Muell.) Benth.	
Calocephalus multiflorus (Turcz.) Benth.	
Calothamnus blepharospermus F.Muell.	
Calothamnus borealis Hawkeswood	
Calothamnus chrysanthereus F.Muell.	
Calothamnus cupularis A.S.George	P2
Calothamnus formosus Hawkeswood	
Calothamnus glaber (Benth.) A.S.George	
Calothamnus oldfieldii F.Muell.	
Calothamnus phellosus A.S.George	
Calothamnus quadrifidus R.Br.	
Calothamnus quadrifidus subsp. homalophyllus (F.Muell.) A.S.George & N.Gibson	
Calothamnus quadrifidus subsp. obtusus (Benth.) A.S.George & N.Gibson	
Calothamnus sanguineus Labill.	
Calothamnus villosus R.Br.	
Calotis hispidula (F.Muell.) F.Muell.	
Calotis multicaulis (Turcz.) Druce	
Calytrix brevifolia (Meisn.) Benth.	
Calytrix breviseta Lindl.	
Calytrix depressa (Turcz.) Benth.	
Calytrix ecalycata Craven	Parent of conservation listed taxa
Calytrix formosa Craven	P3
Calytrix fraseri A.Cunn.	
Calytrix harvestiana (F.Muell.) Craven	P2
Calytrix oldfieldii Benth.	
Calytrix paucicostata Craven	P2
Calytrix pimeleoides Keighery	P3
Calytrix purpurea (F.Muell.) Craven	P2
Calytrix sapphirina Lindl.	
Calytrix sp. Paynes Find (F. & J. Hort 1188)	
Calytrix strigosa A.Cunn.	
Capparis spinosa L.	
Carpobrotus sp. Thevenard Island (M. White 050)	P3
Cartonema philydroides F.Muell.	

Accepted name	Conservation code
Cassytha aurea J.Z.Weber	
Cassytha aurea J.Z.Weber var. aurea	
Cassytha aurea var. aurea J.Z.Weber	
Cassytha aurea var. hirta J.Z.Weber	
Cassytha flava Nees	
Cassytha nodiflora Meisn.	
Cassytha Osbeck	
Cassytha pomiformis Nees	
Cassytha racemosa forma racemosa Nees	
Cassytha racemosa Nees	
Cassytha racemosa Nees forma racemosa	
Casuarina obesa Miq.	
Caustis dioica R.Br.	
Cenchrus ciliaris L.	
Cenchrus echinatus L.	
Cenchrus setaceus (Forssk.) Morrone	
Centaurea melitensis L.	
Centaurea melitensis L.	
Centaurium tenuiflorum (Hoffmanns. & Link) Fritsch	
Centrolepis cephaloformis subsp. murrayi (J.M.Black) D.A.Cooke	P3
Centrolepis drummondiana (Nees) Walp.	
Centrolepis humillima Benth.	
Cephalipterum drummondii A.Gray	
Chaetanthus aristatus (R.Br.) B.G.Briggs & L.A.S.Johnson	
Chamaescilla corymbosa (R.Br.) Benth. var. corymbosa	
Chamelaucium gracile F.Muell.	
Chamelaucium marchantii Strid	P3
Chamelaucium sp. Coolcalalaya (A.H. Burbidge 4233)	P1
Chamelaucium sp. Wongan Hills (B.H. Smith 1140)	P3
Chamelaucium uncinatum Schauer	
Cheilanthes austrotenuifolia H.M.Quirk & T.C.Chambers	
Cheilanthes sieberi Kunze subsp. sieberi	
Cheiranthera simplicifolia (E.M.Benn.) L.Cayzer & Crisp	
Chenopodium gaudichaudianum (Moq.) Paul G.Wilson	
Chloris gayana Kunth	
Chloris pumilio R.Br.	
Chloris virgata Sw.	
Choretrum pritzelii Diels	
Chorizema racemosum (Meisn.) J.M.Taylor & Crisp	
Chrysitrix distigmatosa Diels & E.Pritz.	
Chthonocephalus muellerianus P.S.Short	P2

Accepted name	Conservation code
Chthonocephalus pseudevax Steetz	
Chthonocephalus tomentellus (F.Muell.) Benth.	P2
Clematicissus angustissima (F.Muell.) Planch.	
Clematis linearifolia Steud.	
Codonocarpus cotinifolius (Desf.) F.Muell.	
Comesperma calymega Labill.	
Comesperma integerrimum Endl.	
Comesperma scoparium J.Drumm.	
Commersonia borealis (E.Pritz.) C.F.Wilkins & Whitlock	
Commersonia craurophylla (F.Muell.) F.Muell.	
Commersonia densiflora (Turcz.) F.Muell.	
Commicarpus australis Meikle	
Conospermum acerosum Lindl.	
Conospermum acerosum subsp. acerosum Lindl.	
Conospermum acerosum subsp. hirsutum E.M.Benn.	
Conospermum boreale E.M.Benn.	
Conospermum boreale E.M.Benn. subsp. boreale	
Conospermum canaliculatum Meisn.	
Conospermum distichum R.Br.	
Conospermum microflorum E.M.Benn.	
Conospermum Sm.	
Conospermum stoechadis Endl.	
Conospermum stoechadis Endl. subsp. stoechadis	
Conospermum stoechadis subsp. stoechadis Endl.	
Conospermum triplinervium R.Br.	
Conostephium laeve Hislop	
Conostephium preissii Sond.	
Conostylis aculeata R.Br.	
Conostylis aculeata R.Br. subsp. aculeata	
Conostylis aculeata subsp. echinissima Hopper	
Conostylis aculeata subsp. preissii (Endl.) J.W.Green	
Conostylis aculeata subsp. septentrionora Hopper	
Conostylis androstemma F.Muell.	
Conostylis aurea Lindl.	
Conostylis candicans Endl.	
Conostylis candicans subsp. calcicola Hopper	
Conostylis candicans subsp. flavifolia Hopper	
Conostylis prolifera Benth.	
Conostylis R.Br.	
Conostylis resinosa Hopper	
Conostylis robusta Diels	

Accepted name	Conservation code
Conostylis stylidioides F.Muell.	
Conothamnus trinervis Lindl.	
Convolvulus remotus R.Br.	
Corrigiola litoralis L.	
Corynotheca acanthoclada (F.Muell.) Benth.	P1
Corynotheca dichotoma (F.Muell.) Benth.	
Cotula bipinnata Thunb.	
Cotula cotuloides (Steetz) Druce	
Crassula colorata (Nees) Ostenf.	
Crassula colorata var. acuminata (Reader) Toelken	
Crassula natans var. minor (Eckl. & Zeyh.) G.D.Rowley	
Cristonia biloba (Benth.) J.H.Ross	
Cristonia stenophylla (Meisn.) I.Thomps.	
Cryptandra apetala Ewart & Jean White var. apetala	
Cryptandra arbutiflora var. borealis Rye	
Cryptandra glabriflora Benth.	P2
Cryptandra multispina Rye	
Cryptandra mutila Reissek	
Cryptandra myriantha Diels	
Cryptandra pungens Steud.	
Cryptandra spyridioides F.Muell.	
Cullen leucanthum (F.Muell.) J.W.Grimes	
Cuscuta epithymum (L.) L.	
Cyanicula amplexans (A.S.George) Hopper & A.P.Br.	
Cyanicula gemmata (Lindl.) Hopper & A.P.Br.	
Cyanothamnus coerulescens (F.Muell.) Duretto & Heslewood	
Cyanothamnus coerulescens subsp. spicatus (Paul G.Wilson) Duretto & Heslewood	
Cyanothamnus coerulescens subsp. spinescens (Benth.) Duretto & Heslewood	
Cyanothamnus ramosus Lindl.	
Cyanothamnus ramosus subsp. anethifolius (Bartl.) Duretto & Heslewood	
Cyclosorus interruptus (Willd.) H.Ito	
Cymbopogon ambiguus (Hack.) A.Camus	
Cynanchum viminale (L.) Bassi	
Cynanchum viminale subsp. australe (R.Br.) Meve & Liede	
Cynodon dactylon (L.) Pers.	
Cyperus gymnocaulos Steud.	
Cyperus vaginatus R.Br.	
Cyphanthera racemosa (F.Muell.) Haegi	
Dampiera altissima Benth.	
Dampiera incana R.Br.	
Dampiera incana R.Br. var. incana	

Accepted name	Conservation code
Dampiera incana var. fuscescens Benth.	
Dampiera lindleyi de Vriese	
Dampiera oligophylla Benth.	
Dampiera spicigera Benth.	
Darwinia capitellata Rye	
Darwinia diosmoides (DC.) Benth.	
Darwinia oldfieldii Benth.	
Darwinia pauciflora Benth.	
Darwinia purpurea (Endl.) Benth.	
Darwinia virescens (Meisn.) Benth.	
Dasymalla glutinosa (Munir) B.J.Conn & Henwood	P3
Daucus glochidiatus (Labill.) Fisch., C.A.Mey. & Ave-Lall.	
Daviesia benthamii Meisn.	
Daviesia grahamii Ewart & Jean White	
Daviesia hakeoides Meisn.	
Daviesia hakeoides Meisn. subsp. hakeoides	
Daviesia hakeoides subsp. subnuda (Benth.) Crisp	
Daviesia intricata Crisp	
Daviesia nudiflora Meisn. subsp. nudiflora	
Daviesia podophylla Crisp	
Daviesia quadrilatera Lindl.	
Daviesia ramosissima Crisp	
Dendrophyllanthus erwinii (J.T.Hunter & J.J.Bruhl) R.W.Bouman	
Desmocladus asper (Nees) B.G.Briggs & L.A.S.Johnson	
Desmocladus ferruginipes (Meney & Pate) B.G.Briggs	P1
Desmocladus parthenicus B.G.Briggs & L.A.S.Johnson	
Dianella revoluta R.Br.	
Dianella revoluta var. divaricata (R.Br.) R.J.F.Hend.	
Dichopogon tyleri Brittan	
Dicrastylis fulva Harv.	
Dicrastylis linearifolia Munir	P3
Dicrastylis micrantha Munir	P3
Dicrastylis soliparma Rye & Trudgen	
Didymanthus roei Endl.	
Digitaria brownii (Roem. & Schult.) Hughes	
Dioscorea hastifolia Nees	
Diplolaena grandiflora Desf.	
Diplolaena microcephala Bartl.	
Diplolaena mollis Paul G.Wilson	
Diplolaena R.Br.	
Diplopeltis huegelii subsp. subintegra (A.S.George) Keighery	

Accepted name	Conservation code
Diplopeltis intermedia A.S.George	
Diplopeltis intermedia A.S.George var. intermedia	
Diplopeltis intermedia var. incana A.S.George	
Diplopeltis petiolaris Benth.	
Dischisma capitatum Choisy	
Diuris carectum D.L.Jones & C.J.French	
Diuris oraria D.L.Jones & C.J.French	
Diuris Sm.	
Diuris tinkeri D.L.Jones & C.J.French	
Dodonaea aptera Miq.	
Dodonaea caespitosa Diels	
Dodonaea inaequifolia Turcz.	
Dodonaea petiolaris F.Muell.	
Dodonaea pinifolia Miq.	
Dodonaea viscosa subsp. angustissima (DC.) J.G.West	
Dodonaea viscosa subsp. mucronata J.G.West	
Dodonaea viscosa subsp. spatulata (Sm.) J.G.West	
Drakaea concolor Hopper & A.P.Br.	EN
Drosera glanduligera Lehm.	
Drosera humilis Planch.	
Drosera L.	
Drosera menziesii DC.	
Drosera neesii Lehm.	
Drosera prostrata (N.G.Marchant & Lowrie) Lowrie	
Drosera radicans N.G.Marchant	P3
Drosera ramellosa Lehm.	
Drosera rechingeri Strid	P3
Drosera stolonifera Endl.	
Drosera thysanosepala Diels	
Duboisia hopwoodii (F.Muell.) F.Muell.	
Duma florulenta (Meisn.) T.M.Schust.	
Duperreya sericea Gaudich.	
Dysphania plantaginella F.Muell.	
Dysphania rhadinostachya (F.Muell.) A.J.Scott	
Ecdeiocolea monostachya F.Muell.	
Ecdeiocolea rigens B.G.Briggs	
Ehrharta brevifolia var. cuspidata Nees	
Ehrharta longiflora Sm.	
Emblingia calceoliflora F.Muell.	
Enchylaena tomentosa R.Br.	
Enchylaena tomentosa R.Br. var. tomentosa	

Accepted name	Conservation code
Enekbatus cristatus Trudgen & Rye	P2
Eragrostis barrelieri Daveau	
Eragrostis curvula (Schrad.) Nees	
Eragrostis dielsii Pilg.	
Eragrostis pergracilis S.T.Blake	
Eragrostis tenuifolia (A.Rich.) Steud.	
Eremaea acutifolia F.Muell.	P3
Eremaea dendroidea Hnatiuk	
Eremaea ebracteata F.Muell.	
Eremaea ebracteata F.Muell. var. ebracteata	
Eremaea ebracteata var. ebracteata F.Muell.	
Eremaea Lindl.	
Eremophila clarkei A.F.Oldfield & F.Muell.	
Eremophila crenulata Chinnock	
Eremophila decipiens Ostenf.	
Eremophila decipiens Ostenf. subsp. decipiens	
Eremophila deserti (Benth.) Chinnock	
Eremophila forrestii subsp. forrestii F.Muell.	
Eremophila glabra (R.Br.) Ostenf.	
Eremophila glabra subsp. albicans (Bartl.) Chinnock	
Eremophila glabra subsp. psammophora Chinnock	
Eremophila glabra subsp. tomentosa Chinnock	
Eremophila glutinosa Chinnock	
Eremophila latrobei F.Muell.	
Eremophila latrobei subsp. latrobei F.Muell.	
Eremophila longifolia (R.Br.) F.Muell.	
Eremophila mackinlayi subsp. spathulata Chinnock	
Eremophila maitlandii Benth.	
Eremophila microtheca (Benth.) F.Muell.	P4
Eremophila oldfieldii F.Muell. subsp. oldfieldii	
Eremophila oldfieldii subsp. oldfieldii F.Muell.	
Eremophila R.Br.	
Eremophila serrulata (A.DC.) Druce	
Eremophila youngii F.Muell.	
Eriachne aristidea F.Muell.	
Eriachne pulchella Domin	
Eriachne R.Br.	
Eriochilus dilatatus Lindl. subsp. dilatatus	
Eriochloa pseudoacrotricha (Thell.) J.M.Black	
Erodium aureum Carolin	
Erodium cicutarium (L.) L'Her.	

Accepted name	Conservation code
Erodium cygnorum Nees	
Eucalyptus arachnaea Brooker & Hopper subsp. arachnaea	
Eucalyptus baudiniana D.J.Carr & S.G.M.Carr	
Eucalyptus beardiana Brooker & Blaxell	EN
Eucalyptus camaldulensis Dehnh.	
Eucalyptus camaldulensis subsp. arida Brooker & M.W.McDonald	
Eucalyptus camaldulensis subsp. obtusa (Blakely) Brooker & M.W.McDonald	
Eucalyptus diminuta Brooker & Hopper	
Eucalyptus dolichocera L.A.S.Johnson & K.D.Hill	
Eucalyptus erythrocorys F.Muell.	
Eucalyptus eudesmioides F.Muell.	
Eucalyptus fruticosa Brooker	
Eucalyptus gittinsii Brooker & Blaxell	
Eucalyptus gittinsii Brooker & Blaxell subsp. gittinsii	
Eucalyptus horistes L.A.S.Johnson & K.D.Hill	
Eucalyptus jucunda C.A.Gardner	
Eucalyptus kochii subsp. borealis (C.A.Gardner) D.Nicolle	
Eucalyptus leptopoda Benth.	
Eucalyptus leptopoda subsp. arctata L.A.S.Johnson & K.D.Hill	
Eucalyptus L'Her.	
Eucalyptus loxophleba Benth. subsp. loxophleba	
Eucalyptus loxophleba subsp. supralaevis L.A.S.Johnson & K.D.Hill	
Eucalyptus mannensis subsp. vespertina L.A.S.Johnson & K.D.Hill	
Eucalyptus obtusiflora DC.	
Eucalyptus obtusiflora DC. subsp. obtusiflora	
Eucalyptus oldfieldii F.Muell.	
Eucalyptus oraria L.A.S.Johnson	
Eucalyptus pallida L.A.S.Johnson & K.D.Hill	
Eucalyptus pyriformis Turcz.	
Eucalyptus rigidula Maiden	
Eucalyptus rigidula Maiden subsp. rigidula	
Eucalyptus roycei S.G.M.Carr, D.J.Carr & A.S.George	
Eucalyptus selachiana L.A.S.Johnson & K.D.Hill	
Eucalyptus subangusta (Blakely) Brooker & Hopper	
Eucalyptus subangusta (Blakely) Brooker & Hopper subsp. subangusta	
Eucalyptus subangusta subsp. pusilla Brooker & Hopper	
Eucalyptus transcontinentalis Maiden	
Eucalyptus victrix L.A.S.Johnson & K.D.Hill	
Eucalyptus zopherophloia Brooker & Hopper	P4
Euphorbia australis Boiss.	
Euphorbia boophthona C.A.Gardner	

Accepted name	Conservation code
Euphorbia drummondii Boiss.	
Euphorbia L.	
Euphorbia porcata Halford & W.K.Harris	
Euphorbia tannensis subsp. eremophila (A.Cunn.) Hassall	
Exocarpos aphyllus R.Br.	
Exocarpos sparteus R.Br.	
Ficinia marginata (Thunb.) Fourc.	
Ficinia nodosa (Rottb.) Goetgh., Muasya & D.A.Simpson	
Fimbristylis ferruginea Vahl	
Frankenia confusa Summerh.	P4
Frankenia pauciflora DC.	
Frankenia setosa W.Fitzg.	
Gahnia trifida Labill.	
Gastrolobium ebracteolatum G.Chandler & Crisp	
Gastrolobium nervosum G.Chandler & Crisp	
Gastrolobium oxylobioides Benth.	
Geleznowia amabilis K.A.Sheph. & A.D.Crawford	P2
Geleznowia calycina (Harv.) Benth.	
Geleznowia narcissoides K.A.Sheph. & A.D.Crawford	P3
Geleznowia uberiflora K.A.Sheph. & A.D.Crawford	
Geleznowia verrucosa Turcz.	
Gilberta tenuifolia Turcz.	
Gilruthia osbornei Ewart & Jean White	
Glischrocaryon angustifolium (Nees) M.L.Moody & Les	
Glischrocaryon aureum (Lindl.) Orchard	
Glischrocaryon flavescens (Hook.) Orchard	
Glycine canescens F.J.Herm.	
Gnephosis Cass.	
Gnephosis gynotricha Diels	
Gnephosis tenuissima Cass.	
Gompholobium glutinosum Chappill	
Gompholobium tomentosum Labill.	
Gonocarpus confertifolius (F.Muell.) Orchard	
Gonocarpus confertifolius var. helmsii Orchard	
Gonocarpus nodulosus Nees	
Goodenia berardiana (Gaudich.) Carolin	
Goodenia careyi (F.Muell.) K.A.Sheph.	
Goodenia coerulea R.Br.	
Goodenia discophora (F.Muell.) K.A.Sheph.	
Goodenia drummondii Carolin subsp. drummondii	
Goodenia hassallii F.Muell.	

Accepted name	Conservation code
Goodenia micrantha Carolin	
Goodenia occidentalis Carolin	
Goodenia pulchella Benth.	
Goodenia reinwardtii (de Vriese) K.A.Sheph.	
Goodenia sericostachya C.A.Gardner	P3
Grevillea annulifera F.Muell.	
Grevillea argyrophylla Meisn.	
Grevillea biformis Meisn. subsp. biformis	
Grevillea biformis subsp. biformis Meisn.	
Grevillea brachystachya Meisn.	
Grevillea candelabroides C.A.Gardner	
Grevillea candicans C.A.Gardner	P3
Grevillea commutata F.Muell.	
Grevillea commutata F.Muell. subsp. commutata	
Grevillea commutata subsp. commutata F.Muell.	
Grevillea commutata subsp. pinnatisecta (F.Muell.) Makinson	
Grevillea costata A.S.George	P3
Grevillea didymobotrya Meisn. subsp. didymobotrya	
Grevillea didymobotrya subsp. didymobotrya Meisn.	
Grevillea dielsiana C.A.Gardner	
Grevillea eriostachya Lindl.	
Grevillea excelsior Diels	
Grevillea gordoniana C.A.Gardner	
Grevillea hakeoides subsp. stenophylla (W.Fitzg.) McGill.	
Grevillea intricata Meisn.	
Grevillea Knight	
Grevillea leptopoda McGill.	P3
Grevillea leucoclada McGill.	P3
Grevillea leucopteris Meisn.	
Grevillea obliquistigma C.A.Gardner subsp. obliquistigma	
Grevillea petrophiloides Meisn.	
Grevillea petrophiloides Meisn. subsp. petrophiloides	
Grevillea pinaster Meisn.	
Grevillea preissii Meisn.	
Grevillea rogersoniana C.A.Gardner	P3
Grevillea stenobotrya F.Muell.	
Grevillea stenomera F.Muell.	P2
Grevillea thelemanniana Endl.	CR
Grevillea trachytheca F.Muell.	
Grevillea vestita subsp. isopogoides McGill.	
Guichenotia basiviridis C.F.Wilkins	

Accepted name	Conservation code
Guichenotia impudica C.F.Wilkins	P3
Guichenotia intermedia C.F.Wilkins	
Guichenotia ledifolia Gay	
Guichenotia macrantha Turcz.	
Guichenotia micrantha (Steetz) Benth.	
Gyrostemon racemiger H.Walter	
Gyrostemon ramulosus Desf.	
Gyrostemon subnudus (Nees) Baill.	
Haemodorum discolor T.Macfarlane	
Haemodorum simulans F.Muell.	
Hakea auriculata Meisn.	
Hakea bucculenta C.A.Gardner	
Hakea candolleana Meisn.	
Hakea circumalata Meisn.	
Hakea costata Meisn.	
Hakea incrassata R.Br.	
Hakea lissocarpha R.Br.	
Hakea orthorrhyncha F.Muell.	
Hakea orthorrhyncha var. filiformis Benth.	
Hakea orthorrhyncha var. orthorrhyncha F.Muell.	
Hakea pycnoneura Meisn.	
Hakea recurva Meisn.	
Hakea recurva subsp. recurva Meisn.	
Hakea stenophylla R.Br.	
Hakea stenophylla subsp. notialis R.M.Barker	
Hakea trifurcata (Sm.) R.Br.	
Halgania anagalloides Endl.	
Halgania argyrophylla Diels	
Halgania bebrana Oldfield & F.Muell.	
Halgania gustafsenii var. Mid West (G. Perry 370)	
Halgania littoralis Gaudich.	
Halgania sericiflora Benth.	
Halgania sp. Wongan Hills (K.F. Kenneally 2393)	
Haloragis trigonocarpa F.Muell.	
Hannafordia quadrivalvis F.Muell. subsp. quadrivalvis	
Harnieria kempeana (F.Muell.) R.M.Barker	
Heliotropium ammophilum Craven	
Heliotropium curassavicum L.	
Helipterum craspedioides W.Fitzg.	
Hemiandra leiantha Benth.	
Hemiandra pungens R.Br.	

Accepted name	Conservation code
Hemiandra R.Br.	
Hemiandra sp. Kalbarri (D. Bellairs 1505)	P2
Hemigenia diplanthera F.Muell.	
Hemigenia macrantha F.Muell.	
Hemigenia pimeleifolia F.Muell.	P2
Hemigenia saligna Diels	P3
Hemigenia scabra Benth.	
Hemigenia teretiuscula F.Muell.	
Hibbertia acerosa (DC.) Benth.	
Hibbertia argentea Steud.	P3
Hibbertia conspicua (Harv.) Gilg	
Hibbertia desmophylla (Benth.) F.Muell.	
Hibbertia exasperata (Steud.) Briq.	
Hibbertia glabrisepala J.R.Wheeler	
Hibbertia gracilipes Benth.	
Hibbertia hypericoides (DC.) Benth.	
Hibbertia potentilliflora Benth.	
Hibbertia pungens Benth.	
Hibbertia racemosa (Endl.) Gilg	
Hibbertia spicata F.Muell.	
Hibbertia stenophylla J.R.Wheeler	
Hibbertia subvaginata (Steud.) F.Muell.	
Hibiscus drummondii Turcz.	
Hibiscus L.	
Homalocalyx aureus (C.A.Gardner) Craven	
Homalocalyx F.Muell.	
Homalocalyx thryptomenoides (F.Muell.) Craven	
Hordeum hystrix Roth	
Hordeum leporinum Link	
Hyalochlamys globifera A.Gray	
Hyalosperma cotula (Benth.) Paul G.Wilson	
Hyalosperma glutinosum Steetz	
Hydrocotyle diantha DC.	
Hydrocotyle hispidula Bunge	
Hydrocotyle intertexta A.Rich.	
Hydrocotyle scutellifera Benth.	
Hypocalymma longifolium F.Muell.	VU
Hypochaeris glabra L.	
Hypochaeris glabra L.	
Hypoestes floribunda R.Br.	
Indigofera australis subsp. hesperia Peter G.Wilson & Rowe	

Accepted name	Conservation code
Indigofera australis Willd.	
Indigofera chamaeclada subsp. pubens Peter G.Wilson & Rowe	
Isolepis congrua Nees	
Isolepis R.Br.	
Isolepis stellata (C.B.Clarke) K.L.Wilson	
Isopogon divergens R.Br.	
Isopogon scabriusculus Meisn.	
Isotoma hypocrateriformis (R.Br.) Druce	
Isotropis Benth.	
Isotropis cuneifolia (Sm.) Heynh.	
Isotropis sp. Shark Bay (M.E. Trudgen 7170)	
Jacksonia angulata Benth.	
Jacksonia arenicola Chappill	
Jacksonia condensata Crisp & J.R.Wheeler	
Jacksonia cupulifera Meisn.	
Jacksonia dendrospinosa Chappill	P4
Jacksonia hakeoides Meisn.	
Jacksonia rigida Chappill	
Jacksonia velutina Benth.	P4
Jasminum calcareum F.Muell.	
Juncus bufonius L.	
Juncus caespiticius E.Mey.	
Juncus kraussii subsp. australiensis (Buchenau) Snogerup	
Juncus pallidus R.Br.	
Juncus planifolius R.Br.	
Labichea cassioides DC.	
Labichea lanceolata Benth.	
Labichea lanceolata Benth. subsp. lanceolata	
Labichea lanceolata subsp. brevifolia (Meisn.) J.H.Ross	
Labichea teretifolia C.A.Gardner subsp. teretifolia	
Labichea teretifolia subsp. grandistipulata J.H.Ross	
Labichea teretifolia subsp. teretifolia C.A.Gardner	
Lachnagrostis filiformis (G.Forst.) Trin.	
Lachnostachys eriobotrya (F.Muell.) Druce	
Lachnostachys ferruginea Hook.	
Lamarchea hakeifolia var. brevifolia A.S.George	
Lamarckia aurea (L.) Moench	
Lapeirousia anceps (L.f.) Ker Gawl.	
Lasiopetalum angustifolium W.Fitzg.	
Lasiopetalum discolor Hook.	
Lasiopetalum ogilvieanum F.Muell.	P1

Accepted name	Conservation code
Lasiopetalum oldfieldii F.Muell.	P3
Lasiopetalum oppositifolium F.Muell.	P3
Lawrencella davenportii (F.Muell.) Paul G.Wilson	
Lawrencella Lindl.	
Lawrencella rosea Lindl.	
Laxmannia omnifertilis Keighery	
Laxmannia sessiliflora Decne.	
Laxmannia sessiliflora Decne. subsp. sessiliflora	
Lechenaultia chlorantha F.Muell.	EN
Lechenaultia hirsuta F.Muell.	
Lechenaultia linarioides DC.	
Lechenaultia macrantha K.Krause	
Lepidium biplicatum Hewson	P3
Lepidium linifolium (Desv.) Steud.	
Lepidium phlebopetalum (F.Muell.) F.Muell.	
Lepidium puberulum Bunge	P4
Lepidobolus chaetocephalus Benth.	
Lepidobolus densus B.G.Briggs & L.A.S.Johnson	P4
Lepidobolus eurardyensis K.W.Dixon & B.G.Briggs	P1
Lepidobolus preissianus Nees	
Lepidobolus preissianus Nees subsp. preissianus	
Lepidosperma angustatum R.Br.	
Lepidosperma costale Nees	
Lepidosperma Labill.	
Lepidosperma rupestre Benth.	P4
Lepidosperma scabrum Nees	
Lepidosperma sp. Zuytdorp (G.J. Keighery & N. Gibson 1710)	
Lepidosperma tenue Benth.	
Leporella fimbriata (Lindl.) A.S.George	
Leptomeria preissiana (Miq.) A.DC.	
Leptosema aphyllum (Hook.) Crisp	
Leptosema daviesioides (Turcz.) Crisp	
Leptosema macrocarpum (Benth.) Crisp	
Leptosema tomentosum (Benth.) Crisp	
Leptospermopsis oligandra (Turcz.) Peter G.Wilson	
Leptospermum J.R.Forst. & G.Forst.	
Leucopogon cucullatus R.Br.	
Leucopogon R.Br.	
Levenhookia leptantha Benth.	
Levenhookia octomaculata F.L.Erickson & J.H.Willis	
Liparophyllum congestiflorum (F.Muell.) Tippery & Les	P4

Accepted name	Conservation code
Lobelia anceps L.f.	
Lobelia fissiflora N.G.Walsh	
Lobelia heterophylla Labill.	
Lobelia L.	
Lobelia rhytidosperma Benth.	
Logania litoralis B.J.Conn	
Lolium L.	
Lomandra hastilis (R.Br.) Ewart	
Lomandra maritima T.S.Choo	
Lotus australis Andrews	
Lyginia imberbis R.Br.	
Lysiandra calycina (Labill.) R.W.Bouman	
Lysimachia arvensis (L.) U.Manns & Anderb.	
Lysimachia arvensis (L.) U.Manns & Anderb.	
Lysinema ciliatum R.Br.	
Lysinema pentapetalum R.Br.	
Machaerina articulata (R.Br.) T.Koyama	
Machaerina juncea (R.Br.) T.Koyama	
Maireana carnosa (Moq.) Paul G.Wilson	
Maireana glomerifolia (F.Muell. & Tate) Paul G.Wilson	
Malleostemon costatus Rye & Trudgen	P2
Malleostemon hursthousei (W.Fitzg.) J.W.Green	
Malleostemon microphyllus Rye & Trudgen	P2
Malleostemon minilyaensis J.W.Green	
Malleostemon nerrenensis Rye & Trudgen	P1
Malleostemon peltiger (S.Moore) J.W.Green	
Malleostemon pentagonus Rye & Trudgen	P3
Malleostemon pustulatus Rye	P2
Malleostemon roseus (E.Pritz.) J.W.Green	
Malleostemon sp. Moonyoonooka (R.J. Cranfield 2947)	P2
Malleostemon uniflorus Rye	
Marianthus bicolor (Putt.) F.Muell.	
Marianthus erubescens Putt.	
Marianthus ringens (Harv.) F.Muell.	
Marsilea hirsuta R.Br.	
Medicago polymorpha L.	
Melaleuca acutifolia (Benth.) Craven & Lepschi	
Melaleuca adnata Turcz.	
Melaleuca beardii Craven	
Melaleuca bisulcata F.Muell.	
Melaleuca boeophylla Craven	P2

Accepted name	Conservation code
Melaleuca calothamnoides F.Muell.	
Melaleuca campanae Craven	
Melaleuca cardiophylla F.Muell.	
Melaleuca ciliosa Turcz.	
Melaleuca concreta F.Muell.	
Melaleuca conothamnoides C.A.Gardner	
Melaleuca cordata Turcz.	
Melaleuca delta Craven	
Melaleuca eleuterostachya F.Muell.	
Melaleuca eulobata Craven	
Melaleuca filifolia F.Muell.	
Melaleuca fulgens subsp. steedmanii (C.A.Gardner) K.J.Cowley	
Melaleuca hollidayi Craven	
Melaleuca huttensis Craven	P3
Melaleuca idana Craven	
Melaleuca keigheryi Craven	
Melaleuca L.	
Melaleuca laetifica Craven	
Melaleuca lara Craven	
Melaleuca lateritia A.Dietr.	
Melaleuca leiopyxis Benth.	
Melaleuca leuropoma Craven	
Melaleuca longistaminea (F.Muell.) Craven	
Melaleuca megacephala F.Muell.	
Melaleuca nematophylla Craven	
Melaleuca oldfieldii Benth.	P2
Melaleuca psammophila Diels	
Melaleuca radula Lindl.	
Melaleuca rhaphiophylla Schauer	
Melaleuca scabra R.Br.	
Melaleuca sclerophylla Diels	P3
Melaleuca systena Craven	
Melaleuca trichophylla Lindl.	
Melaleuca uncinata R.Br.	
Melaleuca urceolaris Benth.	
Melaleuca venusta Craven	
Melaleuca viminea Lindl.	
Melaleuca viminea Lindl. subsp. viminea	
Melilotus indicus (L.) All.	
Melilotus indicus (L.) All.	
Mesomelaena preissii Nees	

Accepted name	Conservation code
Mesomelaena pseudostygia (KÃ¼k.) K.L.Wilson	
Mesomelaena stygia (R.Br.) Nees	
Micromyrtus collina Rye	P1
Micromyrtus greeniana Rye	P1
Micromyrtus racemosa Benth.	Parent of conservation listed taxa
Microtis brownii Rchb.f.	
Millotia depauperata Stapf	P1
Millotia jacksonii P.S.Short	P2
Millotia myosotidifolia (Benth.) Steetz	
Mirbelia balsiformis R.Butcher	
Mirbelia corallina R.Butcher	P3
Mirbelia depressa E.Pritz.	
Mirbelia ramulosa (Benth.) C.A.Gardner	
Mirbelia Sm.	
Mirbelia sp. Zuytdorp (G.J. Keighery & N. Gibson 1688)	P1
Mirbelia spinosa Benth.	
Mirbelia trichocalyx Domin	
Monachather paradoxus Steud.	
Monopsis debilis var. depressa (L.f.) Phillipson	
Monotaxis bracteata Nees	
Morelotia microcarpa (S.T.Blake) R.L.Barrett & K.L.Wilson	
Muehlenbeckia adpressa (Labill.) Meisn.	
Myoporum caprarioides Benth.	
Myriocephalus appendiculatus Benth.	
Myriocephalus gueriniae F.Muell.	
Myriocephalus oldfieldii (F.Muell.) Paul G.Wilson	
Nellica maderaspatensis (L.) Raf.	
Neurachne alopecuroidea R.Br.	
Nicotiana L.	
Nicotiana occidentalis H.-M.Wheeler	
Nicotiana rotundifolia Lindl.	
Nuytsia floribunda (Labill.) G.Don	
Olax aurantia A.S.George	
Olearia axillaris (DC.) Benth.	
Olearia homolepis (F.Muell.) Benth.	
Olearia Moench	
Olearia revoluta Benth.	
Olearia sp. Kennedy Range (G. Byrne 66)	
Opercularia spermacocea Juss.	
Opercularia vaginata Juss.	
Orianthera biloba (B.J.Conn) C.S.P.Foster & B.J.Conn	

Accepted name	Conservation code
Orianthera flaviflora (F.Muell.) C.S.P.Foster & B.J.Conn	
Orianthera spermacocea (F.Muell.) C.S.P.Foster & B.J.Conn	
Orthrosanthus laxus (Endl.) Benth. var. laxus	
Oxalis perennans Haw.	
Oxalis pes-caprae L.	
Panaetia lessonii Cass.	
Paracaleana lyonsii Hopper & A.P.Br.	
Paracaleana nigrita (Lindl.) Blaxell	
Paracaleana terminalis Hopper & A.P.Br.	
Paractaenum novae-hollandiae P.Beauv.	
Paractaenum novae-hollandiae P.Beauv. subsp. novae-hollandiae	
Parapholis incurva (L.) C.E.Hubb.	
Parietaria cardiostegia Greuter	
Parietaria debilis G.Forst.	
Paspalidium clementii (Domin) C.E.Hubb.	
Paspalum distichum L.	
Patersonia drummondii Benth.	
Patersonia drummondii subsp. Northern (R.D. Royce UWA 777)	
Patersonia graminea Benth.	
Patersonia occidentalis R.Br.	
Patersonia occidentalis R.Br. var. occidentalis	
Patersonia occidentalis var. latifolia Benth.	
Pauridia occidentalis (Benth.) Snijman & Kocyan var. occidentalis	
Pelargonium littorale Huegel	
Pembertonia latisquamea (F.Muell.) P.S.Short	
Pentameris airoides Nees	
Persoonia acicularis F.Muell.	
Persoonia biglandulosa P.H.Weston	
Persoonia brachystylis F.Muell.	P2
Persoonia falcata R.Br.	
Persoonia hexagona P.H.Weston	
Persoonia saundersiana Meisn.	
Persoonia stricta P.H.Weston	
Petrophile brevifolia Lindl.	
Petrophile conifera Meisn.	
Petrophile conifera Meisn. subsp. conifera	
Petrophile ericifolia R.Br.	
Petrophile foremanii Rye & Hislop	
Petrophile macrostachya R.Br.	
Petrophile pilostyla Rye & Hislop subsp. pilostyla	
Petrophile recurva Foreman	

Accepted name	Conservation code
Petrophile scabriuscula Meisn.	
Petrophile semifurcata Benth.	
Petrophile shuttleworthiana Meisn.	
Phalaris minor Retz.	
Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem.	
Philotheca brucei (F.Muell.) Paul G.Wilson subsp. brucei	
Philotheca sericea (Paul G.Wilson) Paul G.Wilson	
Phlegmatospermum drummondii (Benth.) O.E.Schulz	
Phyla nodiflora (L.) Greene var. nodiflora	
Phymatocarpus porphyrocephalus F.Muell.	
Physopsis chrysophylla (C.A.Gardner) Rye	P3
Pigea calycina DC.	
Pigea floribunda Lindl.	
Pileanthus aurantiacus Keighery	P1
Pileanthus bellus Keighery	P3
Pileanthus filifolius Meisn.	
Pileanthus peduncularis Endl.	
Pileanthus peduncularis Endl. subsp. peduncularis	
Pileanthus peduncularis subsp. pilifer Keighery	
Pileanthus vernicosus F.Muell.	
Pimelea angustifolia R.Br.	
Pimelea argentea R.Br.	
Pimelea gilgiana E.Pritz.	
Pimelea imbricata var. piligera (Benth.) Diels	
Pimelea leucantha Diels	
Pimelea microcephala R.Br.	
Pimelea microcephala R.Br. subsp. microcephala	
Pimelea microcephala subsp. microcephala R.Br.	
Pimelea sessilis Rye	
Pittosporum phillyreoides DC.	
Pityrodia hemigenioides (F.Muell.) Benth.	
Pityrodia viscida W.Fitzg.	P4
Plantago coronopus subsp. commutata (Guss.) Pilger	
Platysace sp. Kalbarri (D. & B. Bellairs 1383)	P2
Platysace teres (Bunge) C.Norman	
Platysace xerophila (E.Pritz.) L.A.S.Johnson	
Podolepis aristata Benth. subsp. aristata	
Podolepis aristata subsp. aristata Benth.	
Podotheca angustifolia (Labill.) Less.	
Podotheca gnaphalioides Graham	
Pogonolepis muelleriana (Sond.) P.S.Short	

Accepted name	Conservation code
Pogonolepis Steetz	
Pogonolepis stricta Steetz	
Polycarpon tetraphyllum (L.) L.	
Polycarpon tetraphyllum (L.) L.	
Polypogon monspeliensis (L.) Desf.	
Polypogon monspeliensis (L.) Desf.	
Poranthera drummondii Klotzsch	
Poranthera microphylla Brongn.	
Poranthera Rudge	
Prasophyllum calcicola R.J.Bates	
Prasophyllum elatum R.Br.	
Prostanthera scutata C.A.Gardner	P2
Psammomoya choretroides (F.Muell.) Diels & Loes.	
Pseudognaphalium luteoalbum (L.) Hilliard & B.L.Burtt	
Pseudognaphalium luteoalbum (L.) Hilliard & B.L.Burtt	
Pterochaeta paniculata Steetz	
Pterostylis argillacea G.Brockman & C.J.French	P2
Pterostylis exserta (D.L.Jones) D.L.Jones	
Pterostylis microglossa D.L.Jones & C.J.French	
Pterostylis pyramidalis Lindl.	
Pterostylis R.Br.	
Pterostylis rufa R.Br.	
Pterostylis sargentii C.R.P.Andrews	
Pterostylis scabra Lindl.	
Pterostylis setulosa (D.L.Jones & C.J.French) D.L.Jones & C.J.French	
Ptilotus chamaecladus Diels	
Ptilotus divaricatus (Gaudich.) F.Muell.	
Ptilotus drummondii var. minor (Nees) Benl	
Ptilotus eremita (S.Moore) T.Hammer & R.W.Davis	
Ptilotus exaltatus Nees	
Ptilotus gaudichaudii (Steud.) J.M.Black	
Ptilotus grandiflorus F.Muell.	
Ptilotus humilis (Nees) F.Muell.	
Ptilotus macrocephalus (R.Br.) Poir.	
Ptilotus manglesii (Lindl.) F.Muell.	
Ptilotus nobilis (Lindl.) F.Muell.	
Ptilotus obovatus (Gaudich.) F.Muell.	
Ptilotus polystachyus (Gaudich.) F.Muell.	
Ptilotus R.Br.	
Ptilotus stirlingii (Lindl.) F.Muell. subsp. stirlingii	
Ptilotus villosiflorus F.Muell.	

Accepted name	Conservation code
Pyrorchis nigricans (R.Br.) D.L.Jones & M.A.Clem.	
Quoya atriplicina (F.Muell.) B.J.Conn & Henwood	
Quoya cuneata Gaudich.	
Quoya loxocarpa (F.Muell.) B.J.Conn & Henwood	
Quoya oldfieldii (F.Muell.) B.J.Conn & Henwood	
Quoya verbascina (F.Muell.) B.J.Conn & Henwood	
Ranunculus sessiliflorus DC. var. sessiliflorus	
Reichardia picroides (L.) Roth	
Rhagodia drummondii Moq.	
Rhagodia latifolia (Benth.) Paul G.Wilson	
Rhagodia preissii Moq.	
Rhagodia preissii Moq. subsp. preissii	
Rhagodia preissii subsp. obovata (Moq.) Paul G.Wilson	
Rhodanthe battii (F.Muell.) Paul G.Wilson	
Rhodanthe chlorocephala subsp. rosea (Hook.) Paul G.Wilson	
Rhodanthe citrina (Benth.) Paul G.Wilson	
Rhodanthe condensata (F.Muell.) Paul G.Wilson	
Rhodanthe Lindl.	
Rhodanthe manglesii Lindl.	
Rhodanthe oppositifolia (S.Moore) Paul G.Wilson	
Rhodanthe oppositifolia (S.Moore) Paul G.Wilson subsp. oppositifolia	
Rhodanthe polycephala (A.Gray) Paul G.Wilson	
Rhodanthe spicata (Steetz) Paul G.Wilson	
Rhodanthe stricta (Lindl.) Paul G.Wilson	
Ricinocarpos Desf.	
Ricinocarpos muricatus MÃ¼ll.Arg.	
Roebuckiella cheilocarpa (F.Muell.) P.S.Short	
Roebuckiella cheilocarpa var. integra (P.S.Short) P.S.Short	
Roebuckiella ciliocarpa (W.Fitzg.) P.S.Short	
Roepera ammophila (F.Muell.) Beier & Thulin	
Roepera apiculata (F.Muell.) Beier & Thulin	
Roepera fruticulosa (DC.) G.Don	
Roepera lobulata (Benth.) Beier & Thulin	
Roepera similis (H.Eichler) Beier & Thulin	
Rostraria pumila (Desf.) Tzvelev	
Rumex hypogaeus T.M.Schust. & Reveal	
Rumex vesicarius L.	
Ruppia L.	
Rytidosperma caespitosum (Gaudich.) Connor & Edgar	
Rytidosperma Steud.	
Sagina apetala Ard.	

Accepted name	Conservation code
Salicornia quinqueflora Ung.-Sternb.	
Salsola australis R.Br.	
Samolus junceus R.Br.	
Samolus repens (J.R.Forst. & G.Forst.) Pers.	
Santalum acuminatum (R.Br.) A.DC.	
Santalum L.	
Santalum spicatum (R.Br.) A.DC.	
Scaevola anchusifolia Benth.	
Scaevola canescens Benth.	
Scaevola chrysopogon Carolin	P2
Scaevola crassifolia Labill.	
Scaevola kallophylla G.J.Howell	P4
Scaevola lanceolata Benth.	
Scaevola nitida R.Br.	
Scaevola oldfieldii F.Muell.	P3
Scaevola phlebopetala F.Muell.	
Scaevola porocarya F.Muell.	
Scaevola sericophylla Benth.	
Scaevola sp. Golden hairs (D. & B. Bellairs 1450 A)	P1
Scaevola spinescens R.Br.	
Scaevola thesioides Benth. subsp. thesioides	
Scaevola tomentosa Gaudich.	
Schinus terebinthifolia Raddi	
Schoenia cassiniana (Gaudich.) Steetz	
Schoenoplectus subulatus (Vahl) Lye	
Schoenus andrewsii W.Fitzg.	
Schoenus armeria Boeckeler	
Schoenus asperocarpus F.Muell.	
Schoenus clandestinus S.T.Blake	
Schoenus griffinianus K.L.Wilson	P4
Schoenus humilis Benth.	
Schoenus latitans S.T.Blake	
Schoenus nanus (Nees) Benth.	
Schoenus pleiostemoneus F.Muell.	
Schoenus sp. G Broad Sheath (K.L. Wilson 2633)	
Schoenus sp. Kalbarri (K.R. Newbey 9352)	P2
Schoenus sp. Murchison (K.L. Wilson 2647)	
Schoenus unispiculatus Benth.	
Schoenus variicellae Rye	
Scholtzia bellairsiorum Rye	P3
Scholtzia capitata Benth.	

Accepted name	Conservation code
Scholtzia corrugata Rye	P2
Scholtzia kalbarri U.B.Deshmukh	P2
Scholtzia longipedata Rye	
Scholtzia longipedata Rye subsp. longipedata	
Scholtzia obovata (DC.) Schauer	
Scholtzia oleosa Rye	P3
Scholtzia oligandra Benth.	
Scholtzia Schauer	
Scholtzia sp. Folly Hill (M.E. Trudgen 12097)	P2
Scholtzia sp. Murchison (M.E. Trudgen 1685)	
Scholtzia spatulata (Turcz.) Benth.	
Scholtzia tenuissima Rye	P2
Scholtzia truncata Rye	P2
Scholtzia uberiflora F.Muell.	
Scholtzia umbellifera F.Muell.	
Sclerolaena diacantha (Nees) Benth.	
Sclerolaena R.Br.	
Sclerolaena recurvicuspis (W.Fitzg.) Domin	
Sclerolaena uniflora R.Br.	
Senecio pinnatifolius A.Rich. var. pinnatifolius	
Senecio pinnatifolius var. latilobus (Steetz) I.Thomps.	
Senna charlesiana (Symon) Randell	
Senna glutinosa subsp. chatelainiana (Gaudich.) Randell	
Senna pleurocarpa (F.Muell.) Randell var. pleurocarpa	
Senna pleurocarpa var. angustifolia (Symon) Randell	
Seringia hermanniifolia (J.Gay) F.Muell.	
Seringia saxatilis C.F.Wilkins	P2
Seringia velutina (Steetz) F.Muell.	
Setaria dielsii R.A.W.Herrm.	
Sida calyxhymenia DC.	
Siemssenia capillaris Steetz	
Silene gallica L.	
Silene gallica L.	
Silene nocturna L.	
Siloxerus multiflorus Nees	
Sisymbrium irio L.	
Solanum americanum Mill.	
Solanum hesperium Symon	
Solanum lasiophyllum Poir.	
Solanum nigrum L.	
Solanum nummularium S.Moore	

Accepted name	Conservation code
Solanum oldfieldii F.Muell.	
Solanum orbiculatum Poir.	
Solanum orbiculatum Poir. subsp. orbiculatum	
Solanum symonii H.Eichler	
Sonchus oleraceus L.	
Sonchus oleraceus L.	
Sowerbaea laxiflora Lindl.	
Spergula arvensis L.	
Sphaerolobium gracile Benth.	
Spiculaea ciliata Lindl.	
Spinifex L.	
Spinifex longifolius R.Br.	
Sporobolus virginicus (L.) Kunth	
Spyridium Fenzl	
Stachystemon axillaris A.S.George	
Stachystemon nematophorus (F.Muell.) Halford & R.J.F.Hend.	P4
Stackhousia dielsii Pamp.	
Stackhousia muricata Lindl.	
Stackhousia muricata subsp. annual (W.R. Barker 2172)	
Stackhousia Sm.	
Stackhousia sp. Mid west coastal (D. & B. Bellairs 6561)	
Stellaria media (L.) Vill.	
Stemodia florulenta W.R.Barker	
Stemodia viscosa Roxb.	
Stenanthemum complicatum (F.Muell.) Rye	
Stenanthemum divaricatum (Benth.) Rye	P3
Stenanthemum intricatum Rye	
Stenanthemum notiale Rye subsp. notiale	
Stenanthemum notiale subsp. notiale Rye	
Stenanthemum pomaderroides (Reissek) Reissek	
Stenopetalum filifolium Benth.	
Stenopetalum gracile Bunge	
Stenopetalum pedicellare Benth.	
Stylidium burbidgeanum Lowrie & Kenneally	
Stylidium dispermum F.Muell.	
Stylidium elongatum Benth.	
Stylidium kalbarriense Lowrie & Kenneally	
Stylidium ponticulus Lowrie & Kenneally	
Stylidium purpureum Wege	
Stylidium repens R.Br.	
Stylidium rigidulum Sond.	

Accepted name	Conservation code
Stylidium udusicola Lowrie & Kenneally	
Stylobasium australe (Hook.) Prance	
Stylobasium spathulatum Desf.	
Stypandra glauca R.Br.	
Styphelia brachygyna Hislop	P2
Styphelia cernua Hislop & Puente-Lel.	P2
Styphelia compacta (R.Br.) Spreng.	
Styphelia cordifolia (Lindl.) F.Muell.	
Styphelia hispida (E.Pritz.) Sleumer	
Styphelia kalbarriensis Hislop & E.A.Br.	
Styphelia planifolia (Sond.) Sleumer	
Styphelia serratifolia (DC.) Hislop, Crayn & Puente-Lel.	
Styphelia strongylophylla (F.Muell.) F.Muell.	
Styphelia tortifolia Hislop, Crayn & Puente-Lel.	
Swainsona affinis (A.T.Lee) Joy Thomps.	
Swainsona canescens (Lindl.) F.Muell.	
Swainsona gracilis Benth.	
Synaphea recurva A.S.George	
Synaphea spinulosa (Burm.f.) Merr. subsp. spinulosa	
Synaphea spinulosa subsp. borealis A.S.George	
Synostemon crassifolius (MÃ¼ll.Arg.) I.Telford & Pruesapan	
Templetonia retusa (Vent.) R.Br.	
Tersonia cyathiflora (Fenzl) J.W.Green	
Tetragonia diptera F.Muell.	
Tetragonia implexicoma (Miq.) Hook.f.	
Thelymitra antennifera (Lindl.) Hook.f.	
Thelymitra campanulata Lindl.	
Thelymitra petrophila Jeanes	
Thelymitra sargentii R.S.Rogers	
Thelymitra sp. Murchison (A.S. George 9542)	
Themeda triandra Forssk.	
Thomasia cognata Steud.	
Threlkeldia diffusa R.Br.	
Thryptomene baeckeacea F.Muell.	
Thryptomene caduca Rye & Trudgen	P3
Thryptomene calcicola Rye	P2
Thryptomene denticulata (F.Muell.) Benth.	
Thryptomene Endl.	
Thryptomene globifera Rye	
Thryptomene johnsonii F.Muell.	P2
Thryptomene mucronulata Turcz.	

Accepted name	Conservation code
Thryptomene pinifolia Rye & Trudgen	P2
Thryptomene sp. Carrarang (M.E. Trudgen 7420)	P1
Thryptomene sp. Eagle Gorge (A.G. Gunness 2360)	P2
Thryptomene sp. Mt Clara (R.J. Cranfield 11702)	P1
Thryptomene striata Rye & Trudgen	P2
Thryptomene strongylophylla Benth.	
Thyridia repens (R.Br.) W.R.Barker & Beardsley	
Thyridolepis S.T.Blake	
Thysanotus dichotomus (Labill.) R.Br.	
Thysanotus exfimbriatus Sirisena, Conran & T.Macfarlane	
Thysanotus fragrans (Brittan) Sirisena, Conran & T.Macfarlane	P2
Thysanotus kalbarriensis T.Macfarlane, C.J.French & Conran	P2
Thysanotus manglesianus Kunth	
Thysanotus patersonii R.Br.	
Thysanotus R.Br.	
Thysanotus ramulosus Brittan	
Thysanotus sparteus R.Br.	
Thysanotus speckii Brittan	
Thysanotus teretifolius Brittan	
Thysanotus thyrsoideus Baker	
Trachymene ceratocarpa (W.Fitzg.) Keighery & Rye	
Trachymene coerulea Graham	
Trachymene coerulea subsp. leucopetala (Benth.) Rye	
Trachymene cyanopetala (F.Muell.) Benth.	
Trachymene elachocarpa (F.Muell.) B.L.Burtt	
Trachymene ornata (Endl.) Druce	
Trachymene pilosa Sm.	
Trichanthodium exilis (W.Fitzg.) P.S.Short	
Trichodesma zeylanicum (Burm.f.) R.Br.	
Tricoryne elatior R.Br.	
Tricoryne R.Br.	
Tricoryne sp. Mullewa (G.J. Keighery 12080)	
Tricoryne sp. Wongan Hills (B.H. Smith 794)	P2
Trifolium campestre Schreb.	
Trifolium hirtum All.	
Triglochin calcitrapa Hook.	
Triglochin isingiana (J.M.Black) Aston	
Triglochin longicarpa (Ostenf.) Aston	
Triglochin nana F.Muell.	
Triglochin sp. A Flora of Australia (G.J. Keighery 2477)	
Triodia bromoides (F.Muell.) Lazarides	P4

Accepted name	Conservation code
Triodia danthonioides (F.Muell.) Lazarides	
Triodia dielsii (C.E.Hubb.) Lazarides	P3
Triodia longipalea Lazarides	
Tripogonella loliiformis (F.Muell.) P.M.Peterson & Romasch.	
Tripterococcus brunonis Endl.	
Urospermum picroides (L.) F.W.Schmidt	
Urospermum picroides (L.) F.W.Schmidt	
Ursinia anthemoides (L.) Poir. subsp. anthemoides	
Utricularia oppositiflora R.Br.	P3
Utricularia tenella R.Br.	
Vachellia farnesiana (L.) Wight & Arn. var. farnesiana	
Vellereophyton dealbatum (Thunb.) Hilliard & B.L.Burtt	
Verticordia capillaris A.S.George	P4
Verticordia chrysantha Endl.	
Verticordia chrysostachys Meisn.	
Verticordia chrysostachys Meisn. var. chrysostachys	
Verticordia cooloomia A.S.George	P3
Verticordia dasystylis subsp. kalbarriensis A.S.George	P2
Verticordia DC.	
Verticordia densiflora Lindl.	
Verticordia densiflora Lindl. var. densiflora	
Verticordia densiflora var. cespitosa (Turcz.) A.S.George	
Verticordia densiflora var. roseostella A.S.George	P3
Verticordia densiflora var. stelluligera (Meisn.) A.S.George	
Verticordia dichroma A.S.George	Parent of conservation listed taxa
Verticordia dichroma A.S.George var. dichroma	P3
Verticordia dichroma var. syntoma A.S.George	P3
Verticordia etheliana C.A.Gardner	
Verticordia etheliana C.A.Gardner var. etheliana	
Verticordia etheliana var. formosa A.S.George	
Verticordia galeata A.S.George	P2
Verticordia grandiflora Endl.	
Verticordia lepidophylla F.Muell.	
Verticordia lepidophylla F.Muell. var. lepidophylla	
Verticordia lepidophylla var. quantula A.S.George	P1
Verticordia monadelpha Turcz.	
Verticordia monadelpha var. callitricha (Meisn.) A.S.George	
Verticordia nobilis Meisn.	
Verticordia oculata Meisn.	
Verticordia penicillaris F.Muell.	P4
Verticordia pennigera Endl.	

Accepted name	Conservation code
Verticordia pholidophylla F.Muell.	
Verticordia picta Endl.	
Verticordia polytricha Benth.	P4
Verticordia spicata F.Muell.	
Verticordia spicata F.Muell. subsp. spicata	
Verticordia x eurardyensis Eliz.George & A.S.George	P1
Viminaria juncea (Schrad. & J.C.Wendl.) Hoffmanns.	
Vincetoxicum lineare (Decne.) Meve & Liede	
Vittadinia humerata N.T.Burb.	
Vulpia myuros (L.) C.C.Gmel.	
Vulpia myuros (L.) C.C.Gmel. forma myuros	
Wahlenbergia capensis (L.) A.DC.	
Wahlenbergia preissii de Vriese	
Waitzia acuminata Steetz	
Waitzia acuminata Steetz var. acuminata	
Waitzia acuminata var. albicans Paul G.Wilson	
Waitzia corymbosa J.C.Wendl.	
Waitzia nitida (Lindl.) Paul G.Wilson	
Waitzia podolepis (Gaudich.) Benth.	
Waitzia suaveolens (Benth.) Druce	
Westringia dampieri R.Br.	
Westringia rigida R.Br.	
Westringia Sm.	
Wilsonia humilis R.Br.	
Wurmbea dilatata T.Macfarlane	
Wurmbea inframediana T.Macfarlane	
Wurmbea monantha (Endl.) T.Macfarlane	
Wurmbea murchisoniana T.Macfarlane	P4
Wurmbea pygmaea (Endl.) Benth.	
Wurmbea Thunb.	
Xanthorrhoea drummondii Harv.	
Xylomelum angustifolium Meisn.	
Mammals	
Austronomus australis Gray, 1838	
Capra aegagrus hircus Linnaeus, 1758	
Dasyurus geoffroii fortis Thomas, 1906	Subsp. of VU
Dasyurus geoffroii Gould, 1841	VU
Macropus	
Macropus fuliginosus melanops Gould, 1842	
Megaptera novaeangliae Borowski, 1781	CD & MI
Mus musculus Linnaeus, 1758	

Accepted name	Conservation code
Notamacropus eugenii derbianus J.E. Gray, 1837	P4
Notamacropus irma (Jourdan, 1837)	P4
Notomys alexis Thomas, 1922	
Nyctophilus geoffroyi Leach, 1821	
Petrogale lateralis lateralis Gould, 1842	EN
Pseudomys albocinereus (Gould, 1845)	
Pseudomys hermannsburgensis (Waite, 1896)	
Pteropus scapulatus Peters, 1862	
Sminthopsis dolichura Kitchener, Stoddart & Henry, 1984	
Sminthopsis granulipes Troughton, 1932	
Sminthopsis hirtipes Thomas, 1898	
Sus scrofa Linnaeus, 1758	
Tarsipes rostratus Gervais & Verraux, 1842	
Vespadelus finlaysoni (Kitchener, Jones & Caputi, 1987)	
Vulpes vulpes Linnaeus, 1758	
Reptiles	
Amphibolurus longirostris (Boulenger, 1883)	
Anilios leptosoma (Robb, 1972)	
Antaresia childreni (Gray, 1842)	
Aprasia	
Aprasia smithi Storr, 1970	
Brachyurophis semifasciatus (GÃ¼nther, 1863)	
Crenadactylus occidentalis Doughty, Ellis & Oliver, 2016	
Crenadactylus ocellatus (Gray, 1845)	
Cryptoblepharus buchananii (Gray, 1838)	
Cryptoblepharus plagiocephalus (Cocteau, 1836)	
Ctenophorus adelaidensis (Gray, 1841)	
Ctenophorus maculatus (Gray, 1831)	
Ctenophorus nuchalis (De Vis, 1884)	
Ctenophorus reticulatus (Gray, 1845)	
Ctenophorus scutulatus (Stirling & Zietz, 1893)	
Ctenotus australis (Gray, 1838)	
Ctenotus fallens Storr, 1974	
Ctenotus pantherinus (Peters, 1866)	
Ctenotus schomburgkii (Peters, 1863)	
Cyclodomorphus celatus Shea & Miller, 1995	
Delma australis Kluge, 1974	
Delma concinna concinna (Kluge, 1974)	
Delma fraseri Gray, 1831	
Delma tincta De Vis, 1888	
Demansia reticulata (Gray, 1842)	

Accepted name	Conservation code
Diplodactylus	
Diplodactylus ornatus Gray, 1845	
Diplodactylus pulcher Steindachner, 1870	
Gehyra variegata (DumÃ©ril & Bibron, 1836)	
Gowidon longirostris (Boulenger, 1883)	
Heteronotia binoei (Gray, 1845)	
Hydrophis elegans (Gray, 1842)	
Hydrophis major (Shaw, 1802)	
Lerista Bell, 1833	
Lerista connivens Storr, 1972	
Lerista elegans (Gray, 1845)	
Lerista humphriesi Storr, 1972	P3
Lerista kendricki Storr, 1991	
Lerista lineopunctulata (Dumeril & Bibron, 1839)	
Lerista macropisthopus fusciceps Storr, 1991	
Lerista micra Smith & Adams, 2007	
Lerista miopus (GÃ¼nther, 1867)	
Lerista planiventralis decora Storr, 1978	
Lerista praepedita (Boulenger, 1987)	
Lerista varia Storr, 1986	
Lerista yuna Storr, 1991	P3
Lialis burtonis Gray, 1835	
Lucasium alboguttatum (Werner, 1910)	
Menetia greyii Gray, 1845	
Menetia surda cresswelli Aplin & Adams, 1998	
Menetia surda Storr, 1976	
Moloch horridus Gray, 1841	
Morethia	
Morethia lineoocellata (Dumeril & Bibron, 1839)	
Morethia obscura (Storr, 1973)	
Narophis bimaculatus (A.M.C. DumÃ©ril, Bibron & A. DumÃ©ril, 1854)	
Nephrurus levis DeVis, 1886	
Nephrurus levis occidentalis Storr, 1963	
Pletholax gracilis Cope, 1864	
Pogona minor (Sternfeld, 1919)	
Pogona minor minor (Sternfeld, 1919)	
Pseudechis australis (Gray, 1842)	
Pseudonaja mengdeni Wells & Wellington, 1985	
Pseudonaja modesta (GÃ¼nther, 1872)	
Pygopus lepidopodus (LacÃ©pÃ¨de, 1804)	
Pygopus nigriceps (Fischer, 1882)	

Accepted name	Conservation code
Simoselaps bertholdi (Jan, 1859)	
Simoselaps littoralis Storr, 1968	
Strophurus michaelseni (Werner, 1910)	
Strophurus spinigerus spinigerus (Gray, 1842)	
Strophurus strophurus DumÃ©ril & Bibron, 1836	
Tiliqua occipitalis (Peters, 1863)	
Tiliqua rugosa rugosa (Gray, 1825)	
Underwoodisaurus milii Bory de Saint-Vincent, 1825	
Varanus eremius Lucas & Frost, 1895	
Varanus gouldii (Gray, 1838)	
Varanus tristis (Schlegel, 1839)	

Appendix E

Likelihood of Occurrence Tables

Table 15 Fauna likelihood of occurrence assessment guidelines

Assessment outcome	Description
Known	Species recorded during the field survey or from recent, reliable records from within or proximity to the survey area.
Likely	Species are likely to occur in the survey area where there is suitable habitat within the survey area and there are recent records of occurrence of the species in close proximity to the survey area. OR Species known distribution overlaps with the survey area and there is suitable habitat within the survey area.
Unlikely	Species assessed as unlikely include those species previously recorded within 10 km of the survey area however: There is limited (i.e. the type, quality and quantity of the habitat is generally poor or restricted) habitat in the survey area. The suitable habitat within the survey area is isolated from other areas of suitable habitat and the species has no capacity to migrate into the survey area. OR Those species that have a known distribution overlapping with the survey area however: There is limited habitat in the survey area (i.e., the type, quality and quantity of the habitat is generally poor or restricted). The suitable habitat within the survey area is isolated from other areas of suitable habitat and the species has no capacity to migrate into the survey area.
Highly unlikely	Species that are considered highly unlikely to occur in the survey area include: Those species that have no suitable habitat within the survey area. Those species that have become locally extinct or are not known to have ever been present in the region of the survey area.

Term	Description
Study area	A 40 km buffer around the survey area
Survey area	The development envelope for the Project
Locality	The area within an approximate 40 km radius of the survey area
CR	Critically endangered
EN	Endangered
VU	Vulnerable
IA	International agreement
INT	Introduced species
MI, MA	Migratory, Marine
CD	Conservation dependent
OS	Other specially protected fauna
P1 – P4	Priority 1 – Priority 4. Threatened and Priority fauna rankings
Pr	Probable record of species via bat detection or via calls that overlap with another species. Record could be for either or both species
SP	Special Protection under BC Act
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
DBCA	Department of Biodiversity and Conservation Attractions
BC Act	*Biodiversity Conservation Act 2016*

Table 16 Fauna Post-survey likelihood of occurrence assessment within the DE

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Birds						
Actitis hypoleucos	Common Sandpiper	MI	MI	Habitat for the Common Sandpiper is varied: coastal and interior wetlands – narrow muddy edges of billabongs, river pools, mangroves, among rocks and snags, reefs, or rocky beaches. Avoids wide open mudflats. This species is widespread and scattered, common on the north and west coasts and uncommon in the south-east and interior (Morcombe 2004).	**Known**. The species was recorded along the Murchison River and on the coast in the survey area.	DBCA
Anous stolidus	Common Noddy	MI	MI	The Common Noddy usually occurs on or near islands, on rocky islets and stacks with precipitous cliffs, or on shoals or cays of coral or sand. When not at the nest, individuals will remain close to the nest, foraging in the surrounding waters. Birds may nest in bushes, saltbush, or other low vegetation. They may also nest on the ground in Pigface (Carpobrotus spp.) or grass, on bare rock, on top of rocks protruding above vegetation, on shingle beaches, among coral rubble or in sand close to grassy areas. The species has also been recorded nesting in the forks of tall trees, in holes in dead timber and on tree-stumps. It occurs off the north-west and central Western Australia coast and the closest breeding population occurs in the Abrolhos Islands (DotEE 2019).	**Highly Unlikely**. Coastal habitat is present however species is known to utilise offshore islands and atolls.	PMST
Anous tenuirostris melanops	Australian Lesser Noddy	VU	VU	The Australian Lesser Noddy is usually found only around its breeding islands in the Houtman Abrolhos Islands. It usually occupies coral limestone islands that are densely fringed with White Mangrove (Avicennia marina). It occasionally occurs on shingle or sandy beaches. The bird roosts mainly in mangroves, especially at night, but may sometimes rest on a beach (DotEE 2019).	**Highly Unlikely**. Coastal habitat is present however species is known to utilise offshore islands and atolls.	PMST
Amytornis textilis subsp. *textilis*	Western Grasswren	P4		The Western Grasswren occurs in semi-arid shrubland of the Shark Bay region generally consisting of open saltbush and bluebush shrublands or Acacia shrublands on coastal dunes, coastal plains, and red sandplains. Other areas include fire-affected shrublands dominated by Ptilotus obovatus and Solanum orbiculatum, which have replaced burnt-out Horse Mulga shrublands for at least 40 years following uncontrolled fires or low (< 1.5 m high) shrublands on calcareous sandplains, dominated by Umbrella Bush and other shrubs mixed with hummocks of spinifex. The species is currently only known from the Shark Bay region (TSSC 2006) south to Cockburn.	**Likely**. The species was thought to be observed by GHD (2021) in the coastal dune shrublands habitat type of the survey area. However, could not be verified during additional surveys.	NatureMap

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Apus pacificus	Fork-tailed Swift	MI	MI	The Fork-tailed Swift is a migratory species that follows large storm fronts and are almost exclusively areal species. In Western Australia, there are sparsely scattered records of the Fork-tailed Swift along the south coast, ranging from near the Eyre Bird Observatory and west to Denmark, in coastal and subcoastal areas between Augusta and Carnarvon, including some on nearshore and offshore islands. Scattered records are present in the Midwest region. Records are scattered throughout WA including the Pilbara, Kimberley, Wheatbelt, Gascoyne and deserts (Higgins 1999).	**Known**. This species was recorded in the survey area in March 2022. A group of approximately 30 individuals was recorded daily for three days in the central and south coastal strip of the survey area.	DBCA
Ardenna carneipes	Flesh-footed Shearwater	MI	MI	The Flesh-footed Shearwater is a trans-equatorial migrant. The species is widely distributed across the southern Indian and south-western Pacific Oceans during the breeding season with colonies located on Saint Paul Island (France) in the southern Indian Ocean (Jouventin, 1994; Roux, 1985), on 41 islands off the coast of south-western Western Australia (Burbidge & Fuller, 1996), on Smith Island off the coast of Eyre Peninsula in South Australia (Robinson et al., 1986), on Lord Howe Island (Priddel et. al 2006) and on approximately 20 islands around the eastern and western coasts of the North Island of New Zealand to Cook Strait (Brooke, 2004; Marchant & Higgins, 1990; Taylor, 2000). The Flesh-footed Shearwater nests in colonies in burrows under trees or shrubs. On Lord Howe Island it favours the flatter areas in the central lowlands (Priddel et al. 2006). Most feeding is undertaken offshore over continental shelves where it feeds on fish and squid, mostly caught by pursuit-plunging (Marchant & Higgins, 1990). The Flesh-footed Shearwater readily takes baits from longlines (Baker & Wise, 2005).	**Unlikely**. There is coastal habitat present however species is known to utilise offshore islands.	PMST
Ardenna pacifica	Wedge-tailed Shearwater	MI	MI	The Wedge-tailed Shearwater nests in burrows on offshore islands during November-April. Research has indicated more than one million shearwaters migrate to the Pilbara islands each year to nest (DBCA, 2017).	**Known**. This species was recorded along the coast in March 2022.	DBCA
Arenaria interpres	Ruddy Turnstone	MI	MI	The Ruddy Turnstone is found in most coastal regions with exposed rock coastlines or coral reefs, and also near platforms and shelves, often with shallow tidal pools and rocky, shingle or gravel beaches. It can be found on sand, coral or shell beaches, shoals, cays and dry ridges of sand or coral, and in occasionally near riverbeds, and on inland lakes and adjacent farmland. It strongly prefers rocky shores or beaches with large deposits of rotting seaweed. It has occasionally been sighted in estuaries, harbours, bays, and coastal lagoons, among low saltmarsh or	**Likely**. There is suitable habitat within the survey area and previous records 2 km east of the survey area.	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				on exposed beds of seagrass, around sewage ponds and on mudflats (DotE 2016). It is also common on all the larger islands south to Penguin Island (Nevill 2013).		
Calidris acuminata	Sharp-tailed Sandpiper	MI	MI	In Australasia, the Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh, or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans, and hypersaline salt lakes inland. They also occur in saltworks and sewage farms. They use flooded paddocks, sedgelands and other ephemeral wetlands, but leave when they dry. They use intertidal mudflats in sheltered bays, inlets, estuaries, or seashores, and also swamps and creeks lined with mangroves. Sometimes they occur on rocky shores. They are widespread from Cape Arid to south-west and east Kimberley. Inland records indicate the species is widespread and scattered from the Pilbara, mid-west, and goldfields (DotEE 2019).	**Likely**. There is some rocky shoreline habitat for this species within the survey area and the nearest record is 16 km east of the survey area. Typically, this species occurs on inland water systems, therefore use may be opportunistic.	DBCA
Calidris alba	Sanderling	MI	MI	In Australia, the Sanderling is almost always found on the coast, mostly on open sandy beaches exposed to open sea-swell, and also on exposed sandbars and spits, and shingle banks, where they forage in the wavewash zone and amongst rotting seaweed. Sanderlings also occur on beaches that may contain wave-washed rocky outcrops. They are more often recorded on the south and southwest coasts, north to around southern Shark Bay, with more sparsely scattered records further north in Gascoyne and Pilbara Regions and the Kimberley Division (DotEE 2019).	**Known**. This species was recorded on a beach in the northwest portion of the survey area.	DBCA
Calidris canutus	Red Knot	MI	EN	In Australasia the Red Knot mainly inhabits intertidal mudflats, sandflats, and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs. They are occasionally seen on terrestrial saline wetlands near the coast, such as lakes, lagoons, pools, and pans, and recorded on sewage ponds and saltworks, but rarely use freshwater swamps. In WA there are scattered records in the south, and it is occasionally seen around Peron Peninsula to Carnarvon. It is widespread on the coast from Ningaloo and Barrow Island to the southwest Kimberley Division (DotE 2016).	**Likely**. There is suitable habitat within the survey area.	PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Calidris ferruginea	Curlew Sandpiper	CR	CR	Curlew Sandpipers mainly occur in areas with soft mud conditions, including intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are found inland less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. In WA, they are widespread around coastal and subcoastal plains from Cape Arid to southwest Kimberley (DotEE 2019).	**Likely**. The nearest record is at Chinaman's Rock Lookout 10 km south-of the survey area.	DBCA, NatureMap & PMST
Calidris ruficollis	Red-necked stint	MI	MI	The Red-necked Stint can be found in fresh and saline water, but primarily in coastal regions (Nevill 2013). It is mostly found in areas including sheltered inlets, bays, lagoons, and estuaries with intertidal mudflats, often near spits, islets, and banks and, sometimes, on protected sandy or coralline shores. Occasionally they have been recorded on exposed or ocean beaches, and on stony or rocky shores, reefs, or shoals. They also occur in saltworks and sewage farms; saltmarsh; ephemeral or permanent shallow wetlands near the coast or inland, including lagoons, lakes, swamps, riverbanks, waterholes, bore drains, dams, soaks, and pools in saltflats (DotEE 2019).	**Known**. This species was recorded on a beach in the northwest portion of the survey area.	DBCA
Zanda latirostris	Carnaby's cockatoo	EN	EN	Carnaby's Cockatoo occurs in uncleared or remnant native eucalypt woodlands, especially those that contain salmon gum, wandoo, marri, jarrah, and karri, and in shrubland or kwongan heathland dominated by Hakea, Dryandra, Banksia, and Grevillea species. Breeding activity is restricted to eucalypt woodlands mainly in the semiarid and subhumid interior, from Kalbarri in the north, Three Springs District south to the Stirling Range, west to Cockleshell Gully and east to Manmanning. The species has expanded its breeding range westward and south into the jarrah-marri forests of the Darling Scarp and into the tuart forests of the Swan Coastal Plain, including the Yanchep area, Lake Clifton and near Bunbury. It nests in trees older than 120-150 years (DotEE 2019).	**Known**. There is suitable habitat within the survey area and foraging evidence on the southern edge of the survey area. One pair was heard calling in the central eastern portion of the survey area.	DBCA, NatureMap & PMST
Charadrius leschenaultii	Greater Sand Plover	VU	MI	In Australasia the Greater Sand Plover is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly, or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons, and inshore reefs, rock platforms, small rocky islands, or sand cays on coral reefs. They are occasionally recorded on near coastal	**Known**. This species was recorded at several locations on beaches in the survey area.	DBCA, NatureMap & PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				saltworks and saltlakes, including marginal saltmarsh, and on brackish swamps. They seldom occur at shallow freshwater wetlands (DotE 2016). Some come down the coast from Geraldton as far as Busselton, but numbers decrease from north to south (Nevill 2013).		
Charadrius mongolus	Lesser Sand Plover	EN	EN	In non-breeding grounds in Australia, the Lesser Sand Plover usually occurs in coastal littoral and estuarine environments. It inhabits large intertidal sandflats or mudflats in sheltered bays, harbours and estuaries, and occasionally sandy ocean beaches, coral reefs, wave-cut rock platforms and rocky outcrops. It also sometimes occurs in short saltmarsh or among mangroves, in saltworks and near-coastal saltpans, brackish swamps and sandy or silt islands in riverbeds. The species is seldom recorded away from the coast, at margins of lakes, soaks and swamps associated with artesian bores (DotE 2016). The Lesser Sand Plover mainly occurs in northern regions, is scarcer in the south (Nevill 2013)	**Likely**. There are known records of the species at Chinaman's Rock Lookout approximately 10km south of the survey area.	DBCA, NatureMap
Diomedea amsterdamensis	Amsterdam Albatross		EN	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Diomedea epomophora	Southern Royal Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Diomedea exulans	Wandering Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				where most species spend the majority of their foraging time (DoTE, 2019).		
Falco peregrinus	Peregrine Falcon	MI	VU	The Peregrine Falcon is found on and near cliffs, gorges, timbered watercourses, riverine environments, wetlands, plains, open woodlands, and pylons and spires of buildings, though less frequently in desert regions (Morcombe 2014; Pizzey & Knight 2012). They are not common but can be found almost anywhere throughout WA and in the southwest, including particularly at Fitzgerald River, Stirling Range, Porongurup National Parks, Kondinin, and Peak Charles, with many more locations north of Perth (Nevill 2013).	**Likely**. The species is known from the region (records within 4 km east of the survey area), however use would be opportunistic and utilised for foraging purposes only. No breeding habitat was present.	PMST
Falco hypoleucos	Grey Falcon	VU	VU	The Grey Falcon inhabits lightly timbered country, especially stony, inland plains and Acacia scrub, gibber deserts, sand ridges, pastoral lands, and timbered watercourses, but seldom in driest deserts. Its distribution is centred on inland drainage systems. It also hunts in treeless areas and frequents tussock grassland and open woodland, especially in winter (Morcombe 2004; Pizzey & Knight 2012). It can mostly be seen on the northwest coast from Shark Bay to east Kimberley, and in the Pilbara and desert regions (Nevill 2013; Pizzey & Knight 2012).	**Unlikely**. There are no nearby records of the species. Its distribution is Shark Bay, Pilbara, and desert regions.	PMST
Fregata ariel	Lesser Frigatebird	MI	MI	The Lesser Frigatebird breeds on small, remote tropical and sub-tropical islands, in mangroves or bushes, and even on bare ground. Major breeding populations of the Lesser Frigatebird are found in tropical waters of the Indian and Pacific Ocean (excluding the east Pacific), as well as one population in the South Atlantic. Outside the breeding season it is sedentary, with immature and non-breeding individuals dispersing throughout tropical seas, especially off the Indian and Pacific Ocean (IUCN Redlist 2016).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Gelochelidon nilotica	Gull-billed tern	MI	MI	The Gull-billed Tern is a nomadic/ migratory species in Australia. Gull-billed Terns are found in freshwater swamps, brackish and salt lakes, beaches and estuarine mudflats, floodwaters, sewage farms, irrigated croplands, and grasslands, where resources are favourable. They are rarely found over open ocean. Although essentially an inland species, outside breeding season it shows a distinct preference for saltmarshes and lagoons near the coast. Movements are not fully understood but it is common and widespread in Australia (Morcombe 2014).	**Known**. This species was recorded along the beach in the northwest portion of the survey area in March 2022.	DBCA
Hydroprogne caspia	Caspian Tern	MI	MI	The Caspian Tern is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries, and	**Known**. This species was recorded flying along the coast	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				river deltas) and those with sandy or muddy margins are preferred. They also occur on near coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers, and creeks. They also use artificial wetlands, including reservoirs, sewage ponds and saltworks. In offshore areas the species prefers sheltered situations, particularly near islands, and is rarely seen beyond reefs. In WA, the Caspian Tern is widespread in coastal regions, from the Great Australian Bight to the Dampier Peninsula (DotEE 2019).	in the survey area. Additional records were from the Murchison River is several locations with birds both flying and loafing.	
Leipoa ocellata	Malleefowl	VU	VU	The Malleefowl generally occurs in semi-arid areas of WA, in shrublands and low woodlands that are dominated by mallee vegetation, as well as native pine Callitris woodlands, Acacia shrublands, paperbark, sheoak, Broom bush (Melaleuca uncinate) vegetation, eucalypt woodlands, or coastal heathlands. Mostly they are found where there are sandy or gravel soils. The nest is a large mound of sand or soil and organic matter (Jones & Goth 2008; Morcombe 2004; Nevill 2013). In WA they are found from the southwest Nullarbor to Albany, north, and then west from Moore River up to Shark Bay, past Cue, across to Wiluna and east to the northern Victoria Desert south of the Blackstone Ranges (Nevill 2013; Pizzey & Knight 2012).	**Known**. Numerous individuals were recorded active and captured on remote cameras. Evidence of the species (mounds, scat, scratching and prints) were sighted across the survey area.	PMST, NatureMap, DBCA, GHD
Limosa lapponica	Bar-tailed Godwit	MI	MI	The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons, and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (DotE 2016). They are uncommon in the southwest, but can be sighted from Geraldton to Bunbury, at Alfred Cove, and then at a few estuaries on the south coast including Kalgan River Mouth and Oyster Harbour (Nevill 2013).	**Known**. This species was recorded on a beach in survey area.	DBCA, PMST
Macronectes giganteus	Southern Giant-Petrel	MI	EN	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Macronectes halli	Northern Giant Petrel	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Numenius madagascariensis	Eastern Curlew	CR	CR	The Eastern Curlew is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets, and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often recorded among saltmarsh and on mudflats fringed by mangroves, sometimes within the mangroves, and in coastal saltworks and sewage farms (Marchant & Higgins 1993). They are found commonly along the north coast of WA, but rarely south of Shark Bay (Morcombe 2004). They are uncommon further south of Geraldton (Nevill 2013).	**Likely**. There is suitable habitat within the survey area on the coastal strip and the closest known record is 17 km east of the survey area.	DBCA, NatureMap
Numenius phaeopus	Whimbrel	MI	MI	The Whimbrel is often found on the intertidal mudflats of sheltered coasts. It is also found in harbours, lagoons, estuaries, and river deltas, often those with mangroves, but also open, unvegetated mudflats. It is occasionally found on sandy or rocky beaches, on coral or rocky islets, or on intertidal reefs and platforms. It has been infrequently recorded using saline or brackish lakes near coastal areas. It also used saltflats with saltmarsh, or saline grasslands with standing water left after high springtides, and in similar habitats in sewage farms and salt fields. There are a small number of inland records from saline lakes and canegrass swamps. The Whimbrel is common and widespread from Carnarvon to the north-east Kimberley Division. It is occasionally seen on the south coast of WA and has occasionally been recorded in the south-west and further north to Shark Bay (DotEE 2019).	**Likely**. There is suitable habitat within the survey area on the coastal strip and the closest known record is 17 km east of the survey area.	DBCA
Oceanites oceanicus	Wilson's Storm-Petrel	MI	MI	Wilson's storm petrel is a small seabird that is dark brown in all plumages, except for the white rump and flanks. The species has a diffuse pale band along the upper wing coverts and lacks the distinctive white underwing lining. The webbing between the toes is yellow with black spots in pre-breeding age individuals. The species is one of the most abundant bird species in the	**Known**. This species was recorded during the migratory bird assessments.	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				world and has a circumpolar distribution mainly in the seas of the southern hemisphere but extending northwards during the summer of the northern hemisphere. The species rarely visit mainland areas however can breed on mainland Antarctica and associated islands. The species will come into coastal waters to feed.		
Onychoprion anaethetus	Bridled Tern	MI	MI	Bridled Terns occupy tropical and subtropical seas, breeding on islands, including vegetated coral cays, rocky continental islands, and rock stacks. They are only rarely found in inshore continental waters and along mainland coastlines, though the species is reported to breed on the mainland of far southern WA. In WA, breeding is widespread from islands off Cape Leeuwin (extending round the southern coast to Seal Rocks) north to Shark Bay and in Pilbara region and Kimberley Division. At sea, distribution extends from Cape Leeuwin north to Dirk Hartog Island, with isolated mainland coastal records at Point Maud and Ningaloo, and from Barrow Island to the Dampier Archipelago, and at sea off the Kimberley coast from waters west of the Dampier Peninsula to Ashmore Reef and Joseph Bonaparte Gulf (DotEE 2019).	**Unlikely**. Coastal habitat is present however species is known to utilise offshore islands and atolls.	PMST
Pandion cristatus	Eastern Osprey	MI	MI	Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They require extensive areas of open fresh, brackish, or saline water for foraging. They frequent a variety of wetland habitats including inshore waters, reefs, bays, coastal cliffs, beaches, estuaries, mangrove swamps, broad rivers, reservoirs and large lakes and waterholes. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range but may also occur on low sandy, muddy, or rocky shores and over coral cays. The distribution of the species around the northern coast (south-western WA to south-eastern NSW) appears continuous except for a possible gap at Eighty Mile Beach (DotEE 2019).	Known. This species was recorded at numerous locations of the survey area.	DBCA
Pluvialis fulva	Pacific Golden Plover	MI	MI	In Australia the Pacific Golden Plover usually inhabits coastal habitats, on beaches, mudflats, and sandflats (sometimes in vegetation such as mangroves, low saltmarsh such as Sarcocornia spp., or beds of seagrass) in sheltered areas including harbours, estuaries, and lagoons, and also in saltworks. It is sometimes recorded on islands, sand and coral cays and exposed reefs and rocks. They are less often recorded	**Likely**. There is suitable habitat within the Survey Area on the coastal strip and the closest known record is 17 km east of the survey area.	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				in terrestrial habitats but can be seen in habitats with short grass in paddocks, crops, or airstrips, or ploughed or recently burnt areas. In WA, the species is seldom recorded along the southern or south-western coasts (DotEE 2019).		
Pluvialis squatarola	Grey Plover	MI	MI	Grey Plovers occur almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts with wave-cut platforms or reef-flats, or on reefs within muddy lagoons. They also occur around terrestrial wetlands such as near-coastal lakes and swamps, or salt-lakes. The species is also very occasionally recorded further inland, where they occur around wetlands or salt-lakes (DotEE 2019).	**Likely**. There is suitable habitat within the Survey Area on the coastal strip and the closest known record is 10 km east of the survey area.	DBCA
Pterodroma mollis	Soft-plumaged Petrel	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered waters south of 25 degrees where most spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but may occur within inland waters during extreme weather events.	PMST
Rostratula australis	Australian Painted Snipe	EN	EN	The Australian Painted Snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum, canegrass, or sometimes tea-tree. It sometimes uses areas that are lined with trees, scattered fallen or washed-up timber (DotEE 2019). In the southwest it can be found around Carnarvon and wetlands north of Perth, particularly those west of Moora and Gingin (Nevill 2013).	**Unlikely**. There are no known records within or nearby the survey area. Claypan and dam habitat is present however these areas are impacted by goat grazing and lack fringing vegetation.	PMST
Sterna dougallii	Roseate Tern	MI	MI	The Roseate Tern occurs in coastal marine areas in subtropical and tropical seas. The species inhabits rocky and sandy beaches, coral reefs, sand cays and offshore islands. Birds rarely occur in inshore waters or near the mainland, usually venturing into these areas only accidentally, when nesting islands are nearby. In WA, the subspecies is regularly recorded north from Mandurah to around Eighty Mile Beach (North Pilbara) (DotEE 2019).	**Likely**. There is suitable habitat within the survey area on the coastal strip and the closest record is 16 km east of the survey area.	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Sternula nereis nereis	Australian Fairy Tern	MI	VU	The Fairy Tern occurs along the coast of WA as far north as the Dampier Archipelago near Karratha, but mostly in the southern part of Australia including most of the coastline in the southwest. It nests on sheltered sandy beaches, coastal inlets, spits, and banks above the high tide line and below vegetation. It has been found in embayment's of a variety of habitats including offshore, estuarine, or lacustrine (lake) islands, wetlands, and mainland coastline (DotEE 2019; Nevill 2013). They can also be seen in salt fields, saline or brackish lakes, and sewage ponds near the coast (Pizzey & Knight 2012).	**Likely**. There is suitable habitat within the survey area on the coastal strip and the species has been identified from database searches as being in the survey area.	PMST
Thalassarche carteri	Indian Yellow-nosed Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Thalassarche cauta	Shy Albatross	MI	EN	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Thalassarche chlororhynchos	Atlantic yellow-nosed Albatross	VU	MI	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	DBCA, NatureMap
Thalassarche impavida	Campbell Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				where most species spend the majority of their foraging time (DotEE 2019).		
Thalassarche melanophris	Black-browed Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Thalassarche steadi	White-capped Albatross	MI	VU	Albatross and giant petrel species exhibit a broad range of diets and foraging behaviours, and hence their at-sea distributions are diverse. Combined with their ability to cover vast oceanic distances, all waters within Australian jurisdiction can be considered foraging habitat, however the most critical foraging habitat is considered to be those waters south of 25 degrees where most species spend the majority of their foraging time (DotEE 2019).	**Unlikely**. It is unlikely that the species occurs within the survey area but opportunistically it may occur within inland waters during extreme weather events.	PMST
Thalasseus bergii	Crested Tern	MI	MI	There are few stretches off the Australian coastline where the Crested Tern cannot be seen — it has been known as both the Bass Straits Tern and the Torres Straits Tern. They breed in colonies on small offshore islands where their nests are so densely packed together that adjacent owners can touch each other's bills. Though the Crested Tern is usually a strictly coastal species, there are occasional records in the arid interior of Australia, where birds were possibly blown by passing tropical cyclones (Birdlife Australia, 2021).	**Known**. Numerous records along the coast and along the Murchison River.	DBCA, GHD (2021 & 2022)
Tringa brevipes	Grey-tailed Tattler	P4	MI	The Grey-tailed Tattler is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral, or stony reefs as well as platforms and islets that are exposed at low tide. It has been found around shores of rock, shingle, gravel, or shells and also on intertidal mudflats in embayments, estuaries and coastal lagoons, especially fringed with mangroves. It is occasionally found around near-coastal wetlands, such as lagoons and lakes and ponds in sewage farms and saltworks. Inland records for the species are rare with sightings on riverbanks and the edges of rock pools. It is found in the south-west between Augusta to Cervantes (DotEE 2019).	**Likely**. Uncommon some suitable habitat within the survey area on the coastal strip and known records of the species 10 km south of the survey area.	DBCA, NatureMap

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Tringa nebularia	Common Greenshank	MI	MI	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves, or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats, and rock platforms. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes, and inundated floodplains, claypans and salt flats. It will also use artificial wetlands, including sewage farms and saltworks dams, inundated rice crops and bores. The edges of the wetlands used are generally of mud or clay, occasionally of sand, and may be bare or with emergent or fringing vegetation, including short sedges and saltmarsh, mangroves, thickets of rushes, and dead or live trees (Higgins & Davies 1996).	**Known**. Numerous records along the Murchison River only.	DBCA
Mammals						
Bettongia penicillate ogilbyi	Woylie		EN	Woylies originally inhabited a wide range of landscapes. In the western deserts, Indigenous people reported that they occupied sand plains and dunes with Triodia spp. (spinifex) hummock grassland. The remnant subpopulations in south-western Australia inhabit woodlands and adjacent heaths with a dense understorey of shrubs, particularly Gastrolobium spp. (poison pea), which contain monofluoroacetic acid (from which the compound present as sodium monofluoroacetate in the vertebrate pesticide '1080' is derived (DotEE 2019). The species is not currently known to persist in the Kalbarri region and now only occurs in several predator managed areas in the southwest such as Dryandra and Perup.	**Highly unlikely**. The species is extinct in this region.	PMST
Dasyurus geoffroii	Chuditch, Western Quoll	VU	VU	The Chuditch inhabits eucalypt forest (especially Jarrah, E. marginata), dry woodland, mallee shrublands, heaths, and desert, particularly in the south coast of WA. They also occur at lower densities in drier woodland and mallee shrubland in the goldfields and wheatbelt, as well as in Kalbarri National Park (translocated). Chuditch require adequate numbers of suitable den and refuge sites (rocky areas, horizontal hollow logs, or earth burrows) to survive (DEC 2012). The species can travel large distances, and for this reason requires habitats that are of a suitable size and not excessively fragmented (DEC 2012). The translocated population at Kalbarri National Park is expanding in	**Likely**. There are known records of approximately 9 km south of the survey area within the Kalbarri gorge system. The species has also been recorded from Eurardy Station to the east and Hamelin Station to the north.	NatureMap, DBCA & PMST

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
				numbers and individuals have been recorded on Eurardy and Hamlin Stations to the east and north of the survey area.		
Notamacropus eugenii derbianus	Tammar wallaby	P4		The Tammar Wallaby inhabits dense, low vegetation for daytime shelter and open grassy areas for feeding. It inhabits coastal scrub, heath, dry sclerophyll (leafy) forest and thickets in mallee and woodland. The tammar wallaby is currently known to inhabit three islands in the Houtman Abrolhos group, Garden Island near Perth, Middle and North Twin Peak Islands in the Archipelago of the Recherche, and numerous managed sites around the southwest (DEC 2012; Van Dyck and Strahan 2008). The species is known from Kalbarri National Park which supports the same heath and shrublands present in the survey area.	**Likely**. There are known records of approximately 9 km south of the survey area near the Kalbarri gorge system.	NatureMap, DBCA
Petrogale lateralis subsp. Lateralis	Black-flanked Rock-wallaby	VU	EN	Known Black-flanked Rock-wallaby populations remain restricted to suitable habitat in the Little Sandy Desert, Cape and Calvert Ranges, with seven populations in the Wheatbelt region, Barrow and Salisbury Islands, and Ningaloo Station. The closest population to the survey area is that within the Kalbarri National Park within the rocky gorges of the Murchison River. Habitat varies between colonies but always involves grassland foraging habitat in close proximity to cliffs, rock-pile, talus, or escarpment refuge habitat. Rock cliffs or other steep substrates with adequate shelter and refuge are essential for breeding (Van Dyck & Strahan 2008).	**Unlikely**. There is no suitable habitat within the survey area. Species is only known from the Murchison River gorge system.	PMST
Reptiles						
Cyclodomorphus branchialis	Gilled Slender Blue-tongue	VU	VU	The Gilled Slender Bluetongue is found in the lower west coastal regions on WA, between the Murchison and Irwin Rivers. It is a ground-dwelling lizard of largely crepuscular and nocturnal habits. The species has little information available but is thought to sheltering by day in porcupine grass, leaf-litter, and under fallen timber (Cogger 2017). However, the author has recorded the species under rocks and in loamy spoil heaps.	**Likely**. The species is known to be from the region, with the closest record approximately 30km southeast of the survey area in the Galena and Warribano areas.	DBCA
Aspidites ramsayi	Woma (SW pop.)	P1		The Woma inhabits woodlands, heaths and shrublands, often with spinifex. It occurs in the sub-humid and arid areas across Australia's interior with a separate sub-population occurring in the Wheatbelt and Goldfields, extending the Shark Bay of WA. The Woma shelters mainly in abandoned monitor and mammal burrows and in soil cracks (Wilson and Swan 2010).	**Likely**. The species is known to be from the region, with the closest record approximately 80km north of the survey area on Coburn Station.	DBCA

Taxa	Common Name	Status		Description and habitat requirements	Likelihood of occurrence	Source
		BC Act	EPBC Act			
Egernia stokesii subsp. badia	Western Spiny-tailed Skink	VU	EN	The Western Spiny-tailed Skink is known to occur in a broad semi-arid area in south-west WA, between Shark Bay and Minnivale and east to Cue. Most records of the brown form Western Spiny-tailed Skink are in York Gum (Eucalyptus loxophleba) woodland with some records in Gimlet (E. salubris) and Salmon Gum (E. salmonophloia) woodland. Populations persist in woodland patches as small as one hectare and completely surrounded by wheatfields. Sites with the greatest number of individuals contain numerous fallen logs and were subjected to low intensity grazing by domestic stock. Hollow logs are used as refuge sites in woodland habitat. Preferred refuges consist of piles of several, overlapping, hollow logs providing a combination of basking and shelter sites. An increasing number of skinks are being located in altered habitat under piles of wood, scrap metal or under buildings on private property (DotEE 2019).	**Known**. The species was recorded during GHD surveys in the eastern portion of the survey area.	PMST
Lerista humphriesi	Zuytdorp Worm Slider, Taper-tailed West Coast slider	P3		The Taper-Tailed West-Coast Slider is known only from the Murchison River district. Current records lie in an area between Murchison House station homestead north to Coburn Station including records in Nerren Nerren. The survey area lay within most of this species distribution. It occurs in Acacia-dominated sandplains and other habitats. (Cogger 2014).	**Known**. There are known records from Kalbarri area from 1995 and along the Vermin Proof Fence Zuytdorp section (Maryan & Gaikhorst, 2019). Additionally, the species was recorded within the Northwest portion of the survey area.	NatureMap, Maryan & Gaikhorst (2019)
Pletholax gracilis edelensis	Keeled legless lizard (Shark Bay)	P3		The Keeled Legless Lizard is mostly found in the Shark Bay region of WA and is not known from this region.	**Unlikely**. Only known from the Edel lands, specimen trapped during this survey is the southern sub species.	NatureMap
Fish						
Hypseleotris aurea	Golden Gudgeon	P2		The Golden Gudgeon inhabits rocky pools amongst dense clumps of submerged water weeds and dead branches (Ref. 2906, 44894). Presumably the species has a high tolerance to increased salinity levels and water temperatures, which typically occur in the habitat during drought periods (Allen et. al 2002).	**Highly Unlikely**. There are previous records 4 km southeast of the survey area (Murchison River). As there are no permanent water bodies within the survey area habitat is unsuitable for the species.	DBCA

Table 17 Flora likelihood of occurrence guidelines

Flora likelihood of occurrence	Guideline
Known	Known to occur within the survey area from previous record or recorded during current survey.
Likely	Species previously recorded within the study area within 2 km and large areas of suitable habitat occur in the survey area.
Possible	Species previously recorded within the study area and areas of suitable habitat occur/may occur in the survey area.
Unlikely	Species previously recorded within the study area and areas of suitable habitat occur/may occur however suitable search effort during the preferred season did not record the species.
Highly unlikely	Species not previously recorded within the study area, suitable habitat does not occur in the survey area and/or the survey area is outside the natural distribution of the species or suitable search effort during the preferred season did not record the species.
Other considerations	Intensity of survey, availability of access, growth form type, recorded flowering times, cryptic nature of species.
Source information – desktop searches	PMST – DAWE Protected Matters Search Tool (PMST) to identify flora listed under the EPBC Act potentially occurring within the study area. TPFL and WAHERB – records of threatened flora from TPFL and WAHERB database searches within the study area. NM – DBCA NatureMap (accessed October 2021).

Table 18 Flora Post-survey likelihood of occurrence within the DE

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Androcalva bivillosa	CR	CR	**Unlikely**. Lack of suitable habitat.	NatureMap, PMST, WAHerb, TPFL
Beyeria lepidopetala	EN	VU	**Unlikely**. Lack of suitable habitat.	TPFL, WAHerb, PMST
Caladenia barbarella	EN	EN	**Known**. Recorded during field survey.	TPFL, WAHerb, PMST
Caladenia bryceana subsp. *cracens*	VU	EN	**Known**. Recorded during field survey.	NatureMap, PMST, WAHerb, TPFL
Caladenia elegans	EN	CI	**Unlikely**. Lack of suitable habitat.	PMST, TPFL
Caladenia hoffmanii	EN	EN	**Unlikely**. Lack of suitable habitat.	NatureMap, PMST
Caladenia wanosa	VU	EN	**Unlikely**. Lack of suitable habitat.	PMST, WAHerb, TPFL, NatureMap
Drummondita ericoides	EN	VU	**Unlikely**. Lack of suitable habitat.	PMST
Drakaea concolor	VU	EN	**Possible**. Suitable habitat may occur.	NatureMap, PMST, TPFL, WAHerb
Eucalyptus beardiana	VU	EN	**Possible**. Suitable habitat may occur.	PMST, TPFL, WAHerb
Eucalyptus cuprea	EN	EN	**Unlikely**. Lack of suitable habitat.	PMST
Glyceria drummondii	EN	EN	**Unlikely**. Lack of suitable habitat.	PMST
Hypocalymma longifolium	VU	Vu	**Unlikely**. Lack of suitable habitat.	PMST, NatureMap, WAHerb, TPFL
Lechenaultia chlorantha	VU	EN	**Unlikely**. Lack of suitable habitat.	PMST, NatureMap, WAHerb, TPFL
Wurmbea tubulosa	EN	VU	**Unlikely**. Lack of suitable habitat.	PMST
Chamelaucium sp. Coolcalalaya (A.H. Burbidge 4233)	-	P1	**Known**. Recorded during field survey.	WAHerb, TPFL, NatureMap
Chthonocephalus oldfieldianus	-	P1	**Unlikely**. Lack of suitable habitat.	NatureMap
Corynotheca acanthoclada	-	P1	**Unlikely**. Lack of suitable habitat.	WAHerb
Desmocladus ferruginipes	-	P1	**Known**. Recorded during field survey.	WAHerb, TPFL
Lepidobolus eurardyensis	-	P1	**Known**. Recorded during field survey.	NatureMap
Macarthuria georgeana	-	P1	**Known** from previous record. Current survey did not record.	WAHerb, NatureMap
Malleostemon nerrenensis	-	P1	**Known** from previous record.	TPFL
Micromyrtus greeniana	-	P1	**Unlikely**. Lack of suitable habitat.	NatureMap
Millotia depauperata	-	P1	**Unlikely**. Lack of potential habitat.	NatureMap

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Mirbelia sp. Zuytdorp (G.J. Keighery & N. Gibson 1688)	-	P1	**Known** from previous record. Current survey did not record.	WAHerb
Pileanthus aurantiacus	-	P1	**Known**. Recorded during field survey.	WAHerb, TPFL
Pterostylis macrocalymma	-	P1	**Known**. Recorded during field survey.	-
Scaevola sp. Golden hairs (D. & B. Bellairs 1450 A)	-	P1	**Known**. Recorded during field survey.	NatureMap, WAHerb
Scholtzia peltigera	-	P1	**Unlikely**. Lack of potential habitat.	NatureMap
Thryptomene sp. Carrarang (M.E. Trudgen 7420)	-	P1	**Known**. Recorded during field survey.	WAHerb
Verticordia lepidophylla var. *quantula*	-	P1	**Known**. Recorded during field survey.	WAHerb
Verticordia x eurardyensis	-	P1	**Possible**. Suitable habitat occurs.	NatureMap
Acacia gelasina	-	P2	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Acacia leptospermoides subsp. *obovate*	-	P2	**Likely**. Suitable habitat occurs.	WAHerb, TPFL
Acacia ryaniana	-	P2	**Possible**. Suitable habitat may occur.	NatureMap
Acacia stereophylla var. *cylindrata*	-	P2	**Known**. Recorded during current survey.	NatureMap, WAHerb
Adenanthos acanthophyllus	-	P2	**Possible**. Suitable habitat may occur.	WAHerb
Androcalva microphylla	-	P2	**Unlikely**. Lack of habitat.	NatureMap, WAHerb
Angianthus microcephalus	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Baeckea subcuneata	-	P2	**Unlikely**. Lack of habitat.	NatureMap, WAHerb
Bossiaea inundata	-	P2	**Unlikely**. Lack of habitat.	NatureMap, WAHerb
Brachyloma pirara	-	P2	**Unlikely**. Lack of habitat.	
Caladenia longicauda subsp. *minima*	-	P2	**Unlikely**. Lack of habitat.	NatureMap, WAHerb
Calandrinia vernicosa	-	P2	**Possible**. Suitable habitat may occur.	NatureMap
Calectasia browneana	-	P2	**Unlikely**. No potential habitat present.	NatureMap
Calothamnus cupularis	-	P2	**Possible**. Suitable habitat may occur.	NatureMap
Calytrix harvestiana	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Calytrix paucicostata	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Calytrix purpurea	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Chthonocephalus muellerianus	-	P2	**Possible**. Suitable habitat may occur.	NatureMap

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Chthonocephalus tomentellus	-	P2	**Known**. Recorded during field survey.	NatureMap
Stenanthemum divaricatum	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Cryptandra glabriflora	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Enekbatus cristatus	-	P2	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Geleznowia amabilis	-	P2	**Known**. Recorded during field survey.	WAHerb
Grevillea stenomera	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Hemiandra sp. Kalbarri (D. Bellairs 1505)	-	P2	**Known**. Recorded during field survey.	NatureMap
Hyalosperma stoveae	-	P2	**Unlikely**. No potential habitat present.	NatureMap
Malleostemon costatus	-	P2	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Malleostemon microphyllus	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Malleostemon pustulatus	-	P2	**Unlikely**. No potential habitat present.	NatureMap
Melaleuca boeophylla	-	P2	**Known** from previous record, current survey did not record.	WAHerb
Melaleuca oldfieldii	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Millotia jacksonii	-	P2	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Paracaleana alcockii	-	P2	**Possible**. Suitable habitat may occur	WANOSCG database
Persoonia brachystylis	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Philotheca kalbarriensis	-	P2	**Possible**. Suitable habitat may occur.	NatureMap
Ptilotus alexandri	-	P2	**Known**. Recorded during field survey.	
Platysace sp. Kalbarri (D. & B. Bellairs 1383)	-	P2	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Prostanthera scutate	-	P2	**Unlikely**. No potential habitat present.	NatureMap
Scaevola chrysopogon	-	P2	**Known**. Recorded during field survey.	WAHerb
Schoenus sp. Kalbarri (K.R. Newbey 9352)	-	P2	**Unlikely**. Lack of suitable habitat.	WAHerb
Scholtzia cordata	-	P2	**Possible**. Suitable habitat may occur.	NatureMap
Scholtzia corrugata	-	P2	**Known**. Recorded during field survey.	WAHerb
Scholtzia kalbarri	-	P2	**Unlikely**. Lack of suitable habitat.	NatureMap
Scholtzia sp. Folly Hill (M.E. Trudgen 12097)	-	P2	**Known**. Recorded during field survey.	WAHerb

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Schoenus badius	-	P2	**Known**. Recorded during field survey.	
Scholtzia tenuissima	-	P2	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Scholtzia truncate	-	P2	**Possible**. Suitable habitat occurs.	WAHerb
Seringia saxatilis	-	P2	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Styphelia cernua	-	P2	**Possible**. Suitable habitat occurs.	WAHerb
Thryptomene calcicola	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Thryptomene johnsonii	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Thryptomene pinifolia	-	P2	**Possible**. Suitable habitat occurs.	NatureMap
Thryptomene sp. Eagle Gorge (A.G. Gunness 2360)	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Thryptomene striata	-	P2	**Unlikely**. Lack of suitable habitat.	NatureMap
Thysanotus fragrans	-	P2	**Known**. Recorded during field survey.	NatureMap, WAHerb
Thysanotus kalbarriensis	-	P2	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Verticordia dasystylis subsp. *kalbarriensis*	-	P2	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Verticordia galeata	-	P2	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Acacia isoneura subsp. *nimia*	-	P3	**Possible**. Suitable habitat may occur.	NatureMap
Acacia plautella	-	P3	**Known**. Recorded during field survey.	WAHerb
Acanthocarpus parviflorus	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Anthocercis intricata	-	P3	**Known**. Recorded during field survey.	NatureMap
Anthotroche myoporoides	-	P3	**Known**. Recorded during field survey.	WAHerb, TPFL
Arnocrinum drummondii	-	P3	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Beyeria cinerea subsp. *cinerea*	-	P3	**Unlikely**. Lack of suitable habitat.	TPFL
Beyeria gardneri	-	P3	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Bossiaea calcicola	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Brachyloma djerral	-	P3	**Possible**. Suitable habitat occurs.	NatureMap
Calytrix formosa	-	P3	**Possible**. Suitable habitat occurs.	NatureMap, WAHerb
Calytrix pimeleoides	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap
Carpobrotus sp. Thevenard Island (M. White 050)	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Centrolepis cephaloformis subsp. *murrayi*	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Chamelaucium marchantii	-	P3	**Unlikely**. Lack of suitable habitat.	WAHerb
Chamelaucium sp. Wongan Hills (B.H. Smith 1140)	-	P3	**Possible**. Suitable habitat may occur.	WAHerb
Dasymalla glutinosa	-	P3	**Known**. Recorded during field survey.	WAHerb
Dicrastylis micrantha	-	P3	**Known**. Recorded during field survey.	NatureMap
Drosera radicans	-	P3	**Possible**. Suitable habitat may occur.	WAHerb
Drosera rechingeri	-	P3	**Possible**. Suitable habitat may occur.	WAHerb
Geleznowia sp. Binnu (K.A. Shepherd & J. Wedge KS 1301)	-	P3	**Possible**. Suitable habitat may occur.	NatureMap
Goodenia sericostachya	-	P3	**Possible**. Suitable habitat may occur.	NatureMap
Grevillea candicans	-	P3	**Possible**. Suitable habitat may occur.	NatureMap
Grevillea costata	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Grevillea leptopoda	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap
Grevillea leucoclada	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Grevillea rogersoniana	-	P3	**Known**. Recorded during field survey.	WAHerb
Guichenotia impudica	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, TPFL, WAHerb
Hemigenia saligna	-	P3	**Known**. Recorded during field survey.	WAHerb
Lasiopetalum oldfieldii	-	P3	**Possible**. Suitable habitat occurs.	NatureMap, TPFL, WAHerb
Lasiopetalum oppositifolium	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Lepidium biplicatum	-	P3	**Known**. Recorded during field survey.	WAHerb
Macarthuria intricata	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Malleostemon pentagonus	-	P3	**Possible**. Suitable habitat occurs.	WAHerb
Mirbelia corallina	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Physopsis chrysophylla	-	P3	**Known**. Recorded during field survey.	
Pileanthus bellus	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Scholtzia bellairsiorum	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Scholtzia oleosa	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb

Taxon	Status		Likelihood of Occurrence	Source
	EPBC Act	BC Act /DBCA		
Stenanthemum divaricatum	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Thryptomene caduca	-	P3	**Known**. Recorded during field survey.	WAHerb
Triodia dielsii	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Verticordia cooloomia	-	P3	**Known**. Recorded during field survey.	TPFL, WAHerb
Verticordia densiflora var. *roseostella*	-	P3	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Verticordia dichroma var. *dichroma*	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Verticordia dichroma var. *syntoma*	-	P3	**Known**. Recorded during field survey.	NatureMap, WAHerb
Caladenia integra	-	P4	**Unlikely**. Lack of suitable habitat.	NatureMap, WAHerb
Eremophila microtheca	-	P4	**Known**. Recorded during field survey.	WAHerb
Eucalyptus zopherophloia	-	P4	**Known**. Recorded during field survey.	WAHerb
Frankenia confusa	-	P4	**Unlikely**. Lack of suitable habitat.	NatureMap, TPFL, WAHerb
Jacksonia dendrospinosa	-	P4	**Known**. Recorded during field survey.	
Jacksonia velutina	-	P4	**Known**. Recorded during field survey.	NatureMap, TPFL, WAHerb
Lepidium puberulum	-	P4	**Likely**. Suitable habitat occurs and close record.	WAHerb
Lepidobolus densus	-	P4	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Lepidosperma rupestre	-	P4	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Liparophyllum congestiflorum	-	P4	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Pityrodia viscida	-	P4	**Unlikely**. No potential habitat present.	WAHerb
Scaevola kallophylla	-	P4	**Possible**. Suitable habitat may occur.	NatureMap, WAHerb
Stachystemon nematophorus	-	P4	**Unlikely**. No potential habitat present.	NatureMap, PMST, TPFL, WAHerb
Triodia bromoides	-	P4	**Known**. Recorded during field survey.	NatureMap, TPFL, WAHerb
Verticordia capillaris	-	P4	**Known**. Recorded during field survey.	NatureMap, WAHerb
Verticordia polytricha	-	P4	**Unlikely**. No potential habitat present.	NatureMap, WAHerb
Wurmbea murchisoniana	-	P4	**Unlikely**. No potential habitat present.	NatureMap, WAHerb

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