



State Groundwater Investigation Program - Collie Project

NVCP Application Supporting Document

Department of Water and Environmental Regulation

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→ The Power of Commitment



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Executive summary

The Collie Groundwater Investigation Project (the Project) is funded through the State Groundwater Investigation Program (SGIP Collie) and is an investigation program aimed at improving the conceptual understanding of groundwater and surface water interactions at representative sites within the Collie Basin (the Basin) (Figure 1). An improved conceptual understanding will support the management of groundwater resources in the Basin, particularly under changed land use, specifically, as coal mining approaches end of life.

The Project has been developed to improve the conceptual understanding of the groundwater and surface water interactions and address existing data gaps at identified investigation areas (transects) within the Basin.

The Project objectives are to:

- Update conceptualisation of key hydrogeological features at select sites using the available information and new data collected from this project
- Utilise the results of the aerial electromagnetics (AEM) survey to inform any improved hydrogeological characterisations and, if achievable, map the saline water bodies (plumes) and identify potential acid and metalliferous drainage (AMD) zones (sulfate-salinity) in the groundwater system
- Identify potential at-risk zones in terms of AMD discharge and saltwater intrusion through monitoring and hydrochemical analysis
- Produce local hydrogeological conceptual models to improve understanding of groundwater interactions with geological faults, rivers, and altered mining landforms
- Produce assets that contribute to the continuous surface water and groundwater monitoring networks
- Develop and implement a monitoring program that captures physical and chemical changes to surface and groundwater conditions.

To achieve the project objectives, clearing of 1.26 ha of native vegetation is required for the construction of drill pads for the installation of groundwater monitoring wells. This document has been prepared to support an application to clear native vegetation under s51 of the *Environmental Protection Act 1986*. This native vegetation clearing permit (NVCP) supporting document describes the existing environment, the vegetation proposed to be cleared and provides an assessment against the ten clearing principles, to determine the potential impacts that may result from the proposed clearing. This supporting document also outlines broad management measures to avoid and minimise potential impacts which will be provided in the Environmental Management Plan (EMP) being prepared.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1.2 and the assumptions and qualifications contained throughout this report.

Glossary and List of Acronyms

Table 1 *Glossary*

Term	Definition
Acid and metalliferous drainage (AMD)	The process and zones where water affected by mining becomes acidic and carries dissolved metals.
Clearing activities	Works required involving the removal of vegetation for project purposes.
Collie Groundwater Investigation Project	A groundwater investigation program within the Collie Basin, aimed at understanding groundwater and surface water interactions.
Collie Basin	The geographic region under study for groundwater and surface water interactions, particularly affected by coal mining activities.
Conservation Codes	CR – Critically Endangered EN – Endangered VU – Vulnerable P2, P3, P4 – Priority species (Western Australia) CD – Conservation Dependent CRBL – Critically Endangered, subspecies or population (EPBC) OSP – Other Specially Protected (WA)
Groundwater conceptual model	A representation of the groundwater system, incorporating hydrogeological features, water interactions, and impacts from altered land use.
Surface water monitoring network	A system of continuous observation points recording surface water data for management and analysis.
Saline water bodies / plumes	Zones within the groundwater system with elevated salinity, often mapped using survey techniques.
Study Area	Study Area is a 10 km buffer of the DE, which has been used in the desktop assessment of publicly available databases to assess the potential impacts.
Ten Clearing Principles	A set of principles from Schedule 5 of the EP Act designed to guide and assess vegetation clearing proposals.
The Proposal	Collie Groundwater Investigation Project

Table 2 *List of Abbreviations*

Abbreviation	Definition
AEM	Aerial Electromagnetics
AH Act	<i>Aboriginal Heritage Act 1972</i>
AMD	Acid and Metalliferous Drainage
BoM	Bureau of Meteorology
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DE	Development Envelope
DF	Disturbance Footprint
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i>
EPA	Environmental Protection Authority
EPBC Act	<i>Environmental Protection, Biodiversity and Conservation Act 1999</i>

Abbreviation	Definition
ESA	Environmentally Sensitive Area
GDE	Groundwater Dependent Ecosystem
GDV	Groundwater Dependent Vegetation
GHD	GHD Pty Ltd
IBRA	Interim Biogeographic Regionalisation for Australia
MNES	Matters of National Environmental Significance
NVCP	Native Vegetation Clearing Permit
PEC	Priority Ecological Community
PMST	Protected Matters Search Tool
PD Act	<i>Planning and Development Act 2005</i>
RiWI Act	<i>Rights in Water and Irrigation Act 1914</i>
SGIP	State Groundwater Investigation Program

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1. Introduction

1.1 Background

The Department of Water and Environmental Regulation (DWER) engaged GHD Pty Ltd (GHD) to implement the Collie Groundwater Investigation Project funded through the State Groundwater Investigation Program (SGIP Collie). The SGIP Collie project (the Project) is a groundwater investigation program aimed at improving the conceptual understanding of groundwater and surface water interactions at representative sites within the Collie Basin (the Basin) (Figure 1). An improved conceptual understanding will support the management of groundwater resources in the Basin, particularly under changed land use, i.e., as coal mining approaches end of life.

The Project has been developed to improve the conceptual understanding of the groundwater and surface water interactions and address existing data gaps at identified investigation areas (transects) within the Basin.

The Project objectives are to:

- Update conceptualisation of key hydrogeological features at select sites using the available information and new data collected from this project
- Utilise the results of the aerial electromagnetics (AEM) survey to inform any improved hydrogeological characterisations and, if achievable, map the saline water bodies (plumes) and identify potential acid and metalliferous drainage (AMD) zones (sulfate-salinity) in the groundwater system
- Identify potential at-risk zones in terms of AMD discharge and saltwater intrusion through monitoring and hydrochemical analysis
- Produce local hydrogeological conceptual models to improve understanding of groundwater interactions with geological faults, rivers, and altered mining landforms
- Produce assets that contribute to the continuous surface water and groundwater monitoring networks
- Develop and implement a monitoring program that captures physical and chemical changes to surface and groundwater conditions.

To undertake the above listed work, clearing of 1.26 ha of native vegetation is required for the construction of drill pads (Pads) for the drilling and installation of groundwater wells.

1.2 Purpose of this report

The purpose of this document is to support an application to clear native vegetation under s51 of the *Environmental Protection Act 1986*. This document includes an assessment against the ten clearing principles and assesses potential impacts that may result from the proposed clearing, together with broad management measures to avoid and minimise potential impacts.

This document has been prepared in support of an application for a NVCP (purpose) under Section 51E of Part V of the *Environmental Protection Act 1986* (WA) (EP Act).

This document includes:

- An overview of works required and description of clearing activities to be undertaken (Section 2)
- An overview of existing environment (Section 3)
- An assessment of potential impacts identified (Section 4)
- An assessment against the Ten Clearing Principles, as defined in Schedule 5 of the EP Act (Section 5)
- Environmental management measures to be implemented to minimise clearing impacts (Section 6)
- Identification of other environmental and heritage approvals applicable to the proposed works (Section 7)
- Offsets applicable to the proposed works (Section 8)

The purpose of this report is to provide additional supporting information to a Native Vegetation Clearing Permit (NVCP) application to DWER for the installation of drill pads and groundwater monitoring wells as part of the SGIP Collie project. The NVCP application seeks approval to clear a Disturbance Footprint (DF) of up to 1.26 ha of native vegetation within a Development Envelope (DE) of 2.10 ha. Cleared vegetation will naturally regenerate around the monitoring bores once the drill pads are vacated.

1.3 Proponent

The proponent is the DWER. All compliance and regulatory requirements regarding this assessment document should be forwarded by email, post, or courier to the address in Table 3.

Table 3 Proponent Details

Proponent	
Address	
Contact	
Position	
Phone number	
Email address	

1.4 Scope and limitations

This report: has been prepared by GHD for the Department of Water and Environmental Regulation and may only be used and relied on by the Department of Water and Environmental Regulation for the purpose agreed between GHD and the Department of Water and Environmental Regulation as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Department of Water and Environmental Regulation 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.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.5 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

1.5 Assumptions

- Vegetation types described in Section 3.7.3 are based on an assessment by a qualified Ecologist using recent photographs of all drill pads which are proposed to be cleared.
- Desktop assessment of vegetation and fauna habitat does not replicate a site vegetation or fauna survey and may result in vegetation or fauna habitat being cleared which has not been sufficiently described, or clearing of flora species which have not been identified.

2. Description of clearing activities

The proposed drilling and installation locations are shown in Figure 2. Pad locations (and access tracks) were informed by the requirements of geotechnical and desktop groundwater assessments, together with the environmental constraints identified through the desktop and field assessments. Positioning of the pad locations (and access tracks) followed application of DWER's clearance principles. The investigation will avoid and minimise impacts to significant flora, fauna and watercourses where possible, through:

- Applying the native vegetation disturbance hierarchy throughout the siting process, to avoid and minimise disturbance
- Avoiding placements of pads (and access tracks) within 40 m of defined waterways where practicable
- Locating the pad locations adjacent to, or near, existing tracks where practicable
- Minimising clearing within areas listed as
- Avoiding disturbance to known Aboriginal sites (where possible).

Where a drilled borehole will not be developed into a monitoring well (e.g. no water was located), the borehole, pad and access track (if new) will be rehabilitated. An alternative groundwater borehole location may need to be identified to replace it, and an amendment to this NVCP application would be prepared.

Proposed clearing for the Project will be in three discrete areas across the Basin as outlined in Table 4 and shown in Figure 2, including:

- Cardiff Town Pool (0.36 ha)
- Chicken Creek (0.41 ha)
- Chicken Creek Lord Fault (0.49 ha)

Table 4 Collie Clearing Locations and area

Area	Site ID	Maximum Clearing (ha)
Cardiff Town Pool	S4_GHD	0.13
	S6_GHD	0.10
	S7_GHD	0.13
Cardiff Town Pool		0.36
Chicken Creek	S1_GHD	0.17
	S2_GHD	0.18
	S3_GHD	0.05
Chicken Creek		0.41
Chicken Creek Lord Fault	S12_GHD	0.12
	S12.5_GHD	0.15
	S13_GHD	0.21
Chicken Creek Lord Fault		0.49
Total DF		≤1.26
Total DE		1.26

2.1 Cardiff Town Pool

Land details for each drill pad to be established in the Cardiff Town Pool area are shown in Table 5.

Table 5 Land Description - Cardiff Town Pool Pads

Land description	Pad ID: S4_GHD	Pad ID: S6_GHD	Pad ID: S7_GHD
Address	Bowers Street, Cardiff, 6225, Western Australia, Australia	N/A	Collie State Forest
Volume and folio number	LR3024/528	LR3079/537	N/A
Lot number	414	2994	N/A
Crown lease or reserve number	N/A	R 15074	N/A
Mining tenement ID	AM 7000262	AM 7000262	AM 7000262
Zoning	Rural	Strategic infrastructure	State Forest

2.2 Chicken Creek

Land details for each drill pad to be established in the Chicken Creek area are shown in Table 6.

Table 6 Land Description - Chicken Creek Pads

Land description	Pad ID: S1_GHD	Pad ID: S2_GHD	Pad ID: S3_GHD
Address	N/A	N/A	N/A
Volume and folio number	2639/269	2639/269	2639/269
Lot number	1	1	1
Crown lease or reserve number	N/A	N/A	N/A
Mining tenement ID	CML1200452	CML1200452	CML1200515
Zoning	Rural	Rural	Rural

2.3 Chicken Creek – Lord Fault

Table 7 provides the land details for each drill pad to be being established in the Chicken Creek – Lord Fault area.

Table 7 Land Description - Chicken Creek – Lord Fault Pads

Land description	Pad ID: S12_GHD	Pad ID: S12.5_GHD	Pad ID: S13_GHD
Address	Centaur Road, Muja, 6225, Western Australia, Australia	Muja State Forest	Muja State Forest
Volume and folio number	N/A	LR3140/314	N/A
Lot number	N/A	302	N/A
Crown lease or reserve number	N/A	R 26231	N/A
Mining tenement ID	CML1200455	CML1200455	CML1200455
Zoning	State Forest	State Forest, Local road	State Forest

3. Existing Environment

3.1 Climate

The Collie climate is typical Mediterranean with hot, dry summers and cool, wet winters. The temperatures usually range from below zero in winter and can reach up to 40°C during the summer months. Approximately 75% of rainfall occurs between late autumn and early spring (May to September). Summer rainfall is occasionally experienced in the form of localised thunderstorms.

The long-term annual rainfall average is 930 mm (1889 to 2015) while the shorter-term average rainfall is 715 mm (1970 to 2015). Much of the decrease in rainfall occurred since 1970 (PSM, 2020). The average annual potential evaporation at Collie is 1650 mm (Moncrieff, 1996). The shorter-term average rainfall approximates half the pan evaporation. Factoring vegetation transpiration further increases a deficit of rainfall recharge.

3.2 Regional setting

The Basin is in the proclaimed Collie Groundwater Area with groundwater largely contained within the Permian coal measures (PSM, 2023). The Upper Collie Water Allocation Plan defines the management of groundwater and frames the State's expectations for ongoing management in this area.

The Basin includes several sub-basins, each with a number of associated catchment divides as summarised in PSM (2023). For the Premier sub-basin these are: Chicken Creek, Collie River East Branch (CREB), Ewington Creek upper reaches, and Boronia Gully. For the Cardiff sub-basin these are: Ewington Creek lower reaches, Powerhouse Creek, Collie River South Branch (CRSB), and Lower Cardiff.

Within these catchment divides, there are several key surface water assets, as discussed in PSM (2022) including:

- CRSB and its associated pools and surface water features
 - Long Pool, Cox Pool, Walker Pool, Cardiff Town Pool, Graham Pool, Piavinini Pool, Chinamans Pool
 - Minninup Pool
 - Lake Kepwari
 - Ewington Creek
 - Collie Town Site
- CREB and its associated pools and surface water features
 - Duderling Pool and Buckingham Bridge Pool
 - Chicken Creek

Mining activities and the associated groundwater abstraction heavily influence the current groundwater environment. The Premier sub-basin is subject to active dewatering bore fields to accommodate open-pit mining, while in the Cardiff sub-basin, dewatering and underground mining ceased in the mid-1990s (PSM, 2020).

3.3 Geology

The Basin comprises approximately 1200 m of generally south-westerly dipping Permian aged siliciclastic sediments, within Archean aged granitic basement. The Basin sediments and underlying basement are subject to post-depositional pull-apart faulting (Le Blank Smith, 1993).

A generalised fold architecture is of a half-graben in each sub-basin divided by the Stockton Ridge. The half-grabens are structurally complex, striking north-west with broad plunging synclinal structures. The fold axes plunge at shallow dips towards the southwest and each limb dips at ~6° towards the centre of the sub-basin (PSM, 2020).

The stratigraphy consists of the surficial thin, laterally distributed, sedimentary sequences of the Tertiary Nakina Formation. The Nakina Formation is absent or thin on valley floor settings and expected to be thickest where onlapping the Stockton Ridge and other granitic terrains (PSM, 2020).

Beneath the Nakina Formation, the Permian interbedded sequences of coal seams, sandstone, mudstone and siltstone in the Collie Group. The Collie Group is underlain by the glacial tills and argillaceous clays of the Stockton

Group, which is underlain by Archean crystalline (granite) basement (PSM, 2020) as outlined in Table 8. Figure 3 maps the geology of the Basin.

Table 8 Generalised stratigraphy of the Basin (PSM, 2020).

Age	Group	Formation	Maximum Thickness (m)	
			Cardiff sub-basin	Premier sub-basin
Recent/Tertiary	-	Superficial/Nakina	20	15
Permian	Collie	Muja Coal Measures	450	250
		Premier Coal Measures	600	400
		Ewington Coal Measures	400	300
		Westralia Sandstone	75	75
	Stockton	Moorhead	79	66
		Shotts	370	50
Archean	Yilgarn Sheild – Crystalline Bedrocks		Undefined	

3.4 Topography and Soil

The topography of the Basin ranges from 250 metres Australian Height Datum (mAHD) along its south-western and south-eastern margins to 160 mAHD in the northwest of the Basin. The Basin is gently undulating with wide, flat valleys and ridges. There are also some lateritic capped escarpments, wetlands, swamps, creeks and streams are generally found within the lower lying reaches (Moncrieff, 1996).

Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales, ranging from 1:20,000 to 1:250,000. The Collie Basin is located in the Coalfields System which is described as gently undulating plain over coal basins, in the south of the Western Darling Range. Sandy gravel, deep sand and non-saline wet soils. Jarrah-Marri-paperbark woodland (DPIRD, 2022). The Collie Basin is also located in the Darling Plateau System which is described as lateritic plateau. Duplex sandy gravels, loamy gravels and wet soils. Jarrah-Marri-wandoo forest and woodland (DPIRD, 2022). Figure 4 maps soil systems of the basin.

3.5 Hydrology

Groundwater levels were much higher pre-mining than they are now. Groundwater intersected with surface water features resulting in groundwater fed streams and pools known as gaining systems. With the introduction of mining activities and long-term abstraction and dewatering throughout the Basin, groundwater levels lowered and disconnected from surface waters, switching much of the system to a losing environment. Figure 5 maps Hydrology of the Basin.

Given the understanding of surface water and groundwater connectivity in the Basin, groundwater has been recognised as discharging and supporting rivers/tributaries flows and vice versa - surface water inflows into the Basin are recognised as infiltrating into the sub-surface recharging the groundwater (Varma, 2002).

Dewatering for mining purposes is inferred to intercept surface water flows. To mitigate this, abstracted groundwater from open-pit mining has been used to supplement flows and maintain water levels at selected pools along the CRSB to 2007 and CREB i.e. Duderling and Buckingham Bridge Pools to current. The aquatic fauna asset value of Duderling and Buckingham Bridge pools have been ranked as moderate by PSM (2020) and high by SKM (2010).

3.6 Hydrogeology

Groundwater resources in the Basin are largely contained within the coal measures and sandstone sequences of the Permian Collie Group. Groundwater can be divided into three sub-areas (GCM, 2025):

- Premier (Premier sub-basin)

- Cardiff (Cardiff sub-basin)
- Collie (Archaean basement)

There are eight separate aquifers recognised within the Premier and the Cardiff sub-basins which are classified into four resource groups / aquifer systems, as presented in Table 9 (GCM, 2025).

Table 9 Aquifer systems of the Premier and Cardiff sub-areas (GCM, 2025)

Aquifer Zones	Aquifer System – Resource Group	
Superficial Sediments	Nakina	
Naina		
Muja Coal Measures	Muja	
Premier Coal Measures	Lower Collie	Ewington II Mine
Allanson Sandstone		Ewington I Mine
Ewington Coal Measures		
Westralia Sandstone		
Moorhead	Stockton	
Shotts		

The understanding of aquifer distribution and inter-aquifer connectivity is complex due to both the complex geology (e.g. faulting/offsets), as well as the widespread effects of mining related groundwater abstraction (Le Blanc Smith, 1993).

The mechanisms of groundwater discharge under natural conditions (historically) within the Basin are recognised as groundwater discharge to the Collie River and its tributaries, and by evapotranspiration. Groundwater discharge to the surrounding and underlying granitic terrain is considered relatively insignificant.

With respect to the current day, groundwater levels within the Cardiff sub-basin are returning close to natural conditions, following cessation of coal mining and careful management of groundwater abstraction, and groundwater is reverting to discharging to rivers (e.g. Collie River South Branch).

Within the Premier sub-basin, abstracted groundwater is utilised by the coal mining and power generation industry, where the groundwater may be lost to the system (mine process water and power generation supply, and pool supplementation) (Moncrieff, 1996).

Water quality is discussed by GHD (2010), and the assessment indicated the following key groundwater conditions:

- The salinity of the Basin predominantly ranges from 100 to 700 mg/L. Near the Collie River East Branch, shallow groundwater total dissolved solids (TDS) concentrations have been measured up to 4,200 mg/L.
- The pH ranges from 3.5 to 6.5
- The groundwater chemistry is mainly of sodium-chloride

3.7 Vegetation and flora

3.7.1 Pre-European Vegetation Representation

Broad scale (1:250,000) pre-European vegetation mapping of the area has been completed by Beard (1979) at an association level. The mapping indicates that two vegetation associations intersect the DF (Figure 6):

- Vegetation Association 3: Medium forest; Jarrah-Marri
- Vegetation Association 1114: Shrublands tree-heath; paperbark over tea tree thickets

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, most recently updated in March 2019 (GoWA, 2019). The extent remaining of association 3 at the State

and IBRA level are greater than 67%, greater than 59% at the and Sub-region level, while the LGA level has greater than 89% remaining (Table 10). The extent remaining of Association 3 at the State and IBRA level are greater than 60%, less than 43% at the and Sub-region level, while the LGA level has greater than 80% remaining (Table 10).

Table 10 Extent of pre-European vegetation associations mapped within the DE

Pre-European Vegetation Association	Scale	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of Current Extent)
Vegetation Association No. 3	State: Western Australia	2,661,404.62	1,803,437.48	67.76	81.50
	IBRA Bioregion: Jarrah Forrest	2,390,591.54	1,604,101.56	67.10	81.00
	IBRA Sub-region: Southern Jarrah Forest	1,482,491.85	880,655.65	59.40	78.50
	LGA: Shire of Collie	158,906.02	130,832.25	82.33	89.33
Vegetation Association No. 1114	State: Western Australia	19,836.15	12,047.29	60.73	79.03
	IBRA Bioregion: Jarrah Forrest	19,836.15	12,047.29	60.73	79.03
	IBRA Sub-region: Southern Jarrah Forest	10,001.10	4,279.07	42.79	57.44
	LGA: Shire of Collie	8,686.92	7,020.71	80.82	92.64

3.7.2 Regional Vegetation Complexes

Regional vegetation complexes have been mapped by Matiske and Havel (1998) with updates from Webb et al. (2016). The mapping indicates two complexes intersect the DF (Figure 7):

- Cardiff Complex (49): Open woodland of *Allocasuarina fraseriana*-*Banksia* spp.-*Xylomelum occidentale*-*Nuytsia floribunda* on sandy soils on valley slopes in the subhumid zone.
- Muja Complex (187): Open woodland of *Melaleuca preissiana*-*Banksia littoralis*-*Banksia ilicifolia* with some *Eucalyptus patens* on moister sites, *Banksia* spp. on drier sites of valley floors in the subhumid zone.

The DBCA and DWER have assessed the vegetation complexes against presumed pre-European extents within the South West Forest Region of Western Australia (SW Forest Region) (Table 11) and the Shire of Collie (Table 12) respectively. At both the SW Forest Region and LGA levels, all intersecting complexes have greater than 50% pre-European extent remaining.

Table 11 Extent of vegetation complex in the SW Forest Region mapped within the DE 2018

Vegetation complex	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA managed lands
Cardiff	6,236.58	3,360.93	53.89	44.60
Muja	10,200.51	6,070.51	59.51	43.83

Table 12 Extent of vegetation complex in the Shire of Collie 2018

LGA	Vegetation complex	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Proportion of Complex Class Mapping extent within each LGA
Shire of Collie	Cardiff	6,048.97	3,289.19	54.38	96.99
Shire of Collie	Muja	10,197.69	6,070.51	59.53	99.97

The area of regional Vegetation Complexes across the DE are Cardiff (2.28 ha) and Muja (0.64 ha) as shown in Table 13.

Table 13 Regional vegetation complexes in Study Area

Area	Pad Id	Vegetation complex	Present in DE (ha)	Present in DF (ha)
Cardiff Town Pool	S4_GHD, S6_GHD, S7_GHD	Muja	0.36	0.36
Chicken Creek	S1_GHD, S2_GHD, S3_GHD	Cardiff	0.41	0.41
Chicken Creek Lord Fault	S12_GHD, S12.5_GHD, S13_GHD	Cardiff	0.49	0.49
		Total	1.26	≤1.26

3.7.3 Vegetation types and condition

Vegetation is being cleared across a DF which incorporates Pads in three areas: Cardiff Town Pool, Chicken Creek, and Chicken Creek – Lord Fault. The other Pads within the DE are located in existing cleared areas. These locations each exhibit three distinct vegetation types, illustrating a patchwork of cleared land, shrubland, and regenerating forest. Vegetation condition has been allocated using the Keighery (1994) condition scale. Site photographs have been provided in Appendix E.

Cardiff Town Pool is characterised primarily by previously cleared land, now supporting a mosaic of scattered native vegetation. The area features pockets of *Xanthorrhoea preissii* (grass tree) and *Mesomelaena* species (sedges), interspersed with weeds. Isolated saplings of *Eucalyptus marginata* (Jarrah) are also present, alongside occasional *Xylomelum occidentale* (woody pear). In some patches, taller shrubs such as *Persoonia longifolia* (snottygobble), *Allocasuarina* species, and emergent *Eucalyptus* saplings of Jarrah and Marri create an open, varied canopy over herbland and sedgeland. The overall condition ranges from Completely Degraded in the most disturbed sections to areas exhibiting a mix of Good - Degraded vegetation, reflecting a landscape in various stages of regeneration.

Cardiff Town Pool features three distinct vegetation types. These include previously cleared land with scattered grass tree shrubs, sedges, weeds, and isolated Jarrah saplings. Another type found here is land that has been cleared but retains a mix of scattered shrubs and saplings, such as grass tree, Jarrah or Marri, woody pear, sedges, and weeds. The third type consists of scattered tall shrubs and emergent eucalypts growing over an open herbland and sedges.

Chicken Creek also contains three main vegetation types. The first is predominantly cleared terrain where Jarrah and Marri trees remain amid scattered shrubs and weeds. The second type is a *Melaleuca* closed shrubland with emergent eucalypts, growing over sedgeland and forming riparian vegetation. The third comprises land that has been mostly cleared but still supports a patch of low shrubs over weeds, with Jarrah and Marri in the surrounding area.

Chicken Creek – Lord Fault is characterised by three key vegetation types as well. Here, open tall shrubland of *Melaleuca* species with emergent eucalypts rises above a low shrubland and open sedgeland. Another variety is an open tall shrubland of *Melaleuca* over mid to low shrubland and sedgeland. The third type includes scattered young Jarrah, Marri, and occasional *Nuytsia* (Australian Christmas tree) over an open low shrubland and weeds.

3.7.4 Flora

The Dandjoo search identified 724 vascular flora species previously recorded within the Study Area (Figure 8). These families and genera recorded, are typical of species lists from the region.

The desktop assessment identified 55 significant flora species within 10 km of the DE that are known to occur from historical records of the DCCEE Threatened and Priority Flora database and searches of Dandjoo database (DCCEE, 2025; DBCA, 2025).

- The PMST search identified the potential presence of 5 flora species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) (one CR, three EN, one VU).

- The Dandjoo database search identified historical records of 54 significant flora species under the BC Act. (four CR, four EN, three P1, six P2, 22 P3, 13 P4 and two VU) by the DBCA.

The only flora species of interest known to occur on the Pads is the *Nuytsia floribunda* (Australian Christmas tree) which has been identified from photographs of the DF.

3.8 Fauna

3.8.1 Fauna

The desktop assessment identified 29 significant fauna species within the Study Area (Figure 8) that are known to occur from historical records of the DCCEEW Threatened and Priority Fauna database and searches of Dandjoo database (DCCEEW, 2025; DBCA, 2025). The list of conservation significant fauna species is included in Table 14.

- The PMST search identified the potential presence of 16 fauna species listed under the EPBC Act (two CR, five EN, nine VU).
- The Dandjoo database search identified historical records of 22 significant fauna species under the BC Act. (one CD, three CR, three EN, six VU, one OSP, one P2, one P3 and six P4).

Table 14 Conservation Significant fauna species

Fauna species	Conservation status	
	EPBC	BC Act
Australasian Bittern	EN	
Bilby	VU	
Baudin's Black-Cockatoo	EN	
Carnaby's Black Cockatoo	EN	
Curlew Sandpiper	CR	
Darling Range Heath Ctenotus, "Dell's skink"		P4
Forest Red-tailed Black-Cockatoo, Karrak	VU	
Malleefowl	VU	
Sharp-tailed Sandpiper	VU	
Southern Whiteface	VU	
Balston's Pygmy Perch	VU	
Chuditch, Western Quoll	VU	
Numbat	EN	
Peregrine Falcon		OS
Quokka	VU	
South-western Brush-tailed Phascogale		CD
Red-tailed Phascogale	VU	
Tammar Wallaby		P4
Water-rat		P4
Western Ringtail Possum	CR	
Western brush wallaby		P4
Black bittern		P2
Margaret River hairy marron	CR	
Western false pipistrelle, Western falsistrelle		P4

Fauna species	Conservation status	
	EPBC	BC Act
Pouched lamprey		P3
Quenda		P4
Woylie	EN	CR
Carter's Freshwater Mussel	VU	

Key to status codes:

- CR – Critically Endangered
- EN – Endangered
- VU – Vulnerable
- P2, P3, P4 – Priority species (Western Australia)
- CD – Conservation Dependent
- CRBL – Critically Endangered, subspecies or population (EPBC)
- OSP – Other Specially Protected (WA)

3.8.2 Fauna Habitat

Cardiff Town Pool Pads contains areas comprised of cleared land with some scattered shrubs. The vegetation present on Pad S7_GHD (0.13 ha) consists of open shrubland fauna habitat, featuring tall shrubs such as *Persoonia longifolia* (snottygobble), *Xanthorrhoea preissii*, and *Allocasuarina* sp. and is considered to be in Good to Degraded condition. The remaining fauna habitat totalling 0.25 ha is classified as Completely Degraded, with limited structural complexity.

Pads within the area of Chicken Creek includes fauna habitat made up of Melaleuca shrubland, seasonal dampland, and wetland environments. Habitat in Pad S2_GHD is in Good to Very Good condition offering some shelter and resources for fauna. The remaining areas are in Degraded or Completely Degraded condition, with minimal habitat provided for fauna.

Chicken Creek – Lord Fault Pads include fauna habitat which consists of Melaleuca shrubland interspersed with scattered Jarrah and Marri, as well as seasonal dampland and wetland habitats. Vegetation in this location ranges from Good – Degraded to Very Good condition. The areas of native vegetation which were assessed as potentially providing fauna habitat across the Study Area are shown in Table 15.

Table 15 Clearing Pads, Vegetation Type, Condition and Fauna Habitat

Area	Site ID	Maximum Clearing (ha)	Vegetation Type	Condition	Fauna Habitat
Cardiff Town Pool	S4_GHD	0.13	Previously cleared with scattered shrubs of <i>Xanthorrhoea preissii</i> (grass tree) and sedges (<i>Mesomelaena</i> sp.) over weeds. Isolated <i>Eucalyptus marginata</i> (Jarrah) saplings.	Completely Degraded	Cleared with scattered shrubs
	S6_GHD	0.10	Previously cleared with scattered <i>Xanthorrhoea preissii</i> (grass tree) shrubs, <i>Eucalyptus</i> (likely Jarrah and/or Marri) and <i>Xylomelum occidentale</i> (woody pear) saplings over scattered sedges and weeds.	Completely Degraded	Cleared / Scattered shrubs
	S7_GHD	0.13	Scattered tall shrubs of <i>Persoonia longifolia</i> (snottygobble), <i>Xanthorrhoea preissii</i> and <i>Allocasuarina</i> sp. with emergent <i>Eucalyptus</i> sp. (Jarrah and/or Marri) over an open herbland and sedges.	Good to Degraded	Open shrubland
Total Cardiff Town Pool					0.36

Area	Site ID	Maximum Clearing (ha)	Vegetation Type	Condition	Fauna Habitat
Chicken Creek	S1_GHD	0.17	Predominantly cleared. Jarrah and Marri trees over scattered shrubs of <i>Xanthorrhoea pressii</i> and <i>Acacia</i> over weeds.	Completely Degraded	
	S2_GHD	0.18	<i>Melaleuca ?viminea</i> closed shrubland with emergent <i>Eucalyptus ?rudis</i> over a sedgeland. Riparian vegetation	Good to Very Good	Melaleuca shrubland / seasonal dampland/wetland
	S3_GHD	0.05	Predominantly cleared with a patch of low shrubs over weeds. Surrounding vegetation comprises of Jarrah and Marri forest.	Degraded	Cleared / low shrubland
Total Chicken Creek					0.41
Chicken Creek Lord Fault	S12_GHD	0.12	Open tall shrubland of <i>Melaleuca</i> species with emergent <i>Eucalyptus rudis</i> over a low shrubland and open sedgeland.	Good	Melaleuca open shrubland / seasonal dampland
	S12.5_GHD	0.15	Open tall shrubland of <i>Melaleuca ?preissiana</i> over a mid to low shrubland and sedgeland.	Very Good	Melaleuca dampland/wetland
	S13_GHD	0.21	Scattered young <i>Eucalyptus marginata</i> (Jarrah) and/or <i>Corymbia calophylla</i> (Marri) and <i>Nuytsia floribunda</i> (Australian Christmas tree) over an open low shrubland and weeds	Good to Degraded	Scattered Jarrah/Marri over low shrubland.
Total Chicken Creek Lord Fault					0.49
Total Area in DF					≤1.26
Total Area in DE					1.26

3.9 Heritage and social setting

A desktop search was undertaken using ACHIS (18 June 2025) and the following Aboriginal Heritage sites were identified in proximity to the proposed DF (Table 16). The desktop search is included in Appendix D.

Table 16 Aboriginal Heritage registered sites

ID	Name	Status	Site type	Culturally Sensitive
4802	SHOTTS 12	Registered	Artefacts / Scatter	N
16713	Collie River Waugal	Registered	Creation / Dreaming Narrative, Landscape / Seascape Feature, Water Source	N
31944	Collie Ochre Deposit	Registered	Ochre	N

Consultation is in progress with the Gnaala Karla Boodja to determine any aboriginal heritage approvals that may be required.

3.9.1 Land use and sensitive receptors

The Project is located within the Southern Jarrah Forest, where grazing of improved pastures and dry land agriculture are the main land uses. Other significant land uses include mining, rural residential, easements for roads and power lines, urban areas and irrigated horticulture. Within this broader region, notable sensitive receptors are conservation areas and reserves. Eight conservation areas/reserves are intersected by the Study Area including three unnamed reserves and four unofficial reserves located within the surrounding landscape (Landgate, 2024). The nearest sensitive receptors are listed in Table 17 and mapped in Figure 9.

Table 17 *Sensitive receptors*

Locality	Distance
Collie State Forest	Intersects Pad S7_GHD within the DE and DF
Mumballup State Forest	2.29 km SW of S4_GHD
Muja State Forest	All Chicken Creek Pads are located within the Collie State Forrest
Harris State Forest	11 km north of S7_GHD
Muja Conservation Park	9.34 km SE of S2_GHD
Westralia Conservation Park	9.62 km NW of S6_GHD
Yallatup Nature Reserve	4.76 km east of S13_GHD
Wyvern Road Nature Reserve	8.83 km NW of S4_GHD

3.9.2 Contaminated Sites

There are no contaminated sites mapped within the Study Area (DWER, 2025).

3.9.3 Acid Sulfate Soils

The National Acid Sulphate Soils [Detailed] dataset (CSIRO, 2024) indicates that majority of the Study Area has an “Extremely Low Probability of Occurrence” with “Very Low Confidence” for Acid Sulfate Soils (ASS). There are areas of “High Probability of Occurrence” with “Very Low Confidence” in areas that intersect waterbodies and watercourses. No areas of “High Probability of Occurrence” intersect the DF. Figure 10 maps the CSIRO (2024) ASS risk dataset.

4. Assessment of impacts

4.1 Potential impacts to vegetation and flora

4.1.1 Vegetation

Potential impacts to vegetation include:

- Direct impact to native vegetation as a result of the mechanical clearing of a maximum of 1.26 ha (within the 2.10 ha DE) to allow for the development of drill pads and bore installation.
- Indirect impact to native vegetation as a result of the potential introduction or spread of weeds during clearing and drilling activities.
- Indirect impact to native vegetation as a result of fugitive dust generated during clearing and drilling activities

Potential impacts to vegetation in the Cardiff Town Pool area are closely tied to the condition and types of existing vegetation. The land, once cleared, now features a patchwork of native species at various stages of regeneration. Activities such as clearing and development may further degrade these areas, particularly where scattered *Xanthorrhoea preissii* (grass tree), *Mesomelaena* (sedges), and isolated *Eucalyptus marginata* (Jarrah) saplings are present. The introduction of weeds, mechanical disturbance, and dust generation could hinder the recovery of more disturbed patches and threaten the integrity of healthier sections where *Persoonia longifolia* (snottygobble), *Allocasuarina* species, and emergent eucalypts provide a sparse canopy.

The three main vegetation types at Cardiff Town Pool each face different levels of risk from proposed activities. Areas dominated by grass tree, sedges, and Jarrah saplings are particularly susceptible to further loss of native cover and increased weed invasion. Where scattered shrubs and saplings mix with woody pear and Marri, clearing may disrupt the balance between regenerating natives and invasive species. Open herblands and sedgelands under tall shrubs and emergent eucalypts could experience increased fragmentation, reducing their overall resilience.

At Chicken Creek, impacts to vegetation are likely where previously cleared terrain supports remnant Jarrah and Marri, as these trees and their associated shrub layers could be compromised by further disturbance. Riparian zones with *Melaleuca* closed shrubland and sedgeland are especially vulnerable to changes in hydrology, erosion, and the spread of invasive plants from nearby cleared areas. Low shrublands edged by Jarrah and Marri forest may lose native diversity if weed invasion accelerates following clearing or soil disruption.

Similarly, in the Chicken Creek – Lord Fault area, open tall shrubland of *Melaleuca* and emergent eucalypts over low shrubland and sedgeland are at risk of further degradation. Ongoing clearing and edge effects could reduce the abundance of native understory plants, while scattered young Jarrah, Marri, and *Nuytsia* (Australian Christmas tree) may be less able to establish and persist if weed competition and mechanical disturbance increase.

Overall, the proposed activities may lead to direct loss of native vegetation, increased fragmentation, reduced regeneration capacity, and greater susceptibility to weed invasion across all identified vegetation types within the impacted areas.

4.1.2 Flora

The only flora species of interest known to occur on the areas proposed to be cleared is the *Nuytsia floribunda* (Australian Christmas tree) which have been identified from photographs of the DF. These will be avoided (if possible) and will be flagged prior to clearing.

4.2 Potential impacts to fauna and fauna habitat

Potential impacts to fauna and fauna habitat include:

- Direct impact to fauna habitat as a result of approximately 1.26 ha of clearing within a DE of 1.26 ha
- Direct impact to potential Conservation Significant fauna habitat from temporary clearing
- Direct impact to potential Conservation Significant fauna species from increased vehicle movements

- Indirect impact to fauna habitat through the potential introduction and/or spread of weeds as a result of clearing, increased vehicle movement and topsoiling during the clearing and bore installation works.

Cardiff Town Pool clearing of vegetation is expected to have minimal impact to fauna habitat primarily due to the predominance of cleared areas or Pads with only scattered shrubs. No clearing of suitable breeding trees will occur. The clearing of 0.36 ha of vegetation at Cardiff Town Pool Pads (S4_GHD, S6_GHD, S7_GHD) will have some impact on fauna and fauna habitat, particularly the clearing of 0.13 ha of vegetation which is representative of open shrubland fauna habitat and includes scattered tall shrubs of *Persoonia longifolia* (snottygobble), *Xanthorrhoea preissii* and *Allocasuarina* sp. in S7_GHD as it is considered to be in Good to Degraded condition. The remaining clearing in this area representing potential fauna habitat is noted to be Completely Degraded condition and of limited complexity, offering minimal shelter and foraging opportunities for fauna. This marginal habitat is expected to support fewer and less diverse fauna, particularly impacting ground-dwelling species and transient visitors who rely on small patches of existing shrubs.

Chicken Creek vegetation includes a mix of Melaleuca shrubland, seasonal dampland, and wetland environments. Clearing of 0.41 ha of vegetation at Chicken Creek (S1_GHD, S2_GHD and S3_GHD) will have some impact on fauna habitat, particularly the clearing of 0.18 ha of Melaleuca shrubland and wetland pockets in Pad S2_GHD as it is considered to be in Good to Very Good condition and is likely to provide shelter, nesting sites, and feeding resources for fauna. No clearing of suitable breeding trees will occur. The remaining areas within Chicken Creek being cleared are in Degraded or Completely Degraded condition and provide limited fauna habitat.

Chicken Creek – Lord Fault vegetation includes a mix of Melaleuca shrubland with scattered Jarrah and Marri, seasonal dampland, and wetland habitats. Clearing of 0.49 ha of vegetation for the installation of Pads at Chicken Creek-Lord Fault (S12_GHD, S12.5_GHD and S13_GHD) will have some impact on fauna habitat, as the vegetation is described as being in Good – Degraded to Very Good condition. The areas of fauna are characterised by open canopies and periodic water resources, which provide essential shelter and food for a variety of species, particularly those adapted to variable moisture conditions. Clearing of Melaleuca shrubland and scattered Jarrah and Marri trees will reduce vertical structure and decrease foraging opportunities for arboreal and terrestrial fauna. No clearing of suitable breeding trees will occur. Additionally, impacts to seasonal wetlands and damplands will be most significant for amphibians and water-dependent birds, potentially leading to declines in species that rely on these habitats for breeding, feeding, or refuge.

The areas of vegetation which have been assessed as potentially providing fauna habitat are shown in Table 18.

Table 18 Clearing Pads, Vegetation Type, Condition and Fauna Habitat

Area	Site ID	Maximum Clearing (ha)	Vegetation Type	Condition	Fauna Habitat
Cardiff Town Pool	S4_GHD	0.13	Previously cleared with scattered shrubs of <i>Xanthorrhoea preissii</i> (grass tree) and sedges (<i>Mesomelaena</i> sp.) over weeds. Isolated <i>Eucalyptus marginata</i> (Jarrah) saplings.	Completely Degraded	Cleared with scattered shrubs
	S6_GHD	0.10	Previously cleared with scattered <i>Xanthorrhoea preissii</i> (grass tree) shrubs, <i>Eucalyptus</i> (likely Jarrah and/or Marri) and <i>Xylomelum occidentale</i> (woody pear) saplings over scattered sedges and weeds.	Completely Degraded	Cleared / Scattered shrubs
	S7_GHD	0.13	Scattered tall shrubs of <i>Persoonia longifolia</i> (snottygobble), <i>Xanthorrhoea preissii</i> and <i>Allocasuarina</i> sp. with emergent <i>Eucalyptus</i> sp. (Jarrah and/or Marri) over an open herbland and sedges.	Good to Degraded	Open shrubland
Total Cardiff Town Pool					0.36

Area	Site ID	Maximum Clearing (ha)	Vegetation Type	Condition	Fauna Habitat
Chicken Creek	S1_GHD	0.17	Predominantly cleared. Jarrah and Marri trees over scattered shrubs of <i>Xanthorrhoea pressii</i> and ? <i>Acacia</i> over weeds.	Completely Degraded	
	S2_GHD	0.18	<i>Melaleuca ?viminea</i> closed shrubland with emergent <i>Eucalyptus ?rudis</i> over a sedgeland. Riparian vegetation	Good to Very Good	Melaleuca shrubland / seasonal dampland/wetland
	S3_GHD	0.05	Predominantly cleared with a patch of low shrubs over weeds. Surrounding vegetation comprises of Jarrah and Marri forest.	Degraded	Cleared / low shrubland
Total Chicken Creek					0.41
Chicken Creek Lord Fault	S12_GHD	0.12	Open tall shrubland of <i>Melaleuca</i> species with emergent ? <i>Eucalyptus rudis</i> over a low shrubland and open sedgeland.	Good	Melaleuca open shrubland / seasonal dampland
	S12.5_GHD	0.15	Open tall shrubland of <i>Melaleuca ?preissiana</i> over a mid to low shrubland and sedgeland.	Very Good	Melaleuca dampland/wetland
	S13_GHD	0.21	Scattered young <i>Eucalyptus marginata</i> (Jarrah) and/or <i>Corymbia calophylla</i> (Marri) and <i>Nuytsia floribunda</i> (Australian Christmas tree) over an open low shrubland and weeds	Good to Degraded	Scattered Jarrah/Marri over low shrubland.
Total Chicken Creek Lord Fault					0.49
Total DF					≤1.26
Total DE					1.26

5. Assessment of 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 Act or is prescribed by regulation in the *Environmental Protection (Clearing Native Vegetation) Regulations 2004*.

In making a decision 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 aims to ensure that potential impacts resulting from removal of native vegetation can be assessed holistically.

To support the application for the Project, 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 19.

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 found that the proposed clearing associated with the activities may be, is unlikely to be or is not at variance to the clearing principles.

Table 19 Native Vegetation Clearing Principles

a) Native vegetation should not be cleared if it comprises a high level of biological diversity

Proposed clearing is unlikely to be at variance to this Principle.

Assessment

Vegetation

The vegetation within the DF is consistent and contiguous with the native vegetation in the surrounding area. Broad scale (1:250,000) pre-European vegetation mapping of the area has been completed by Beard (1979) at an association level. The mapping indicates that two vegetation associations intersect the DF:

- Vegetation Association 3: Medium forest; Jarrah-Marri
- Vegetation Association 1114: Shrublands tree-heath; paperbark over tea tree thickets

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, most recently updated in March 2019 (GoWA, 2019). The extent remaining of association 3 at the State and IBRA level are greater than 67%, greater than 59% at the and Sub-region level, while the LGA level has greater than 89% remaining. The extent remaining of Association 3 at the State and IBRA level are greater than 60%, less than 43% at the and Sub-region level, while the LGA level has greater than 80% remaining as shown in the table below.

Pre-European Vegetation Association	Scale	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Current Extent in DBCA Managed Land (%)
Vegetation Association No. 3	State: Western Australia	2,661,404.62	1,803,437.48	67.76	81.50
	IBRA Bioregion: Jarrah Forrest	2,390,591.54	1,604,101.56	67.10	81.00
	IBRA Sub-region: Southern Jarrah Forest	1,482,491.85	880,655.65	59.40	78.50
	LGA: Shire of Collie	158,906.02	130,832.25	82.33	89.33
Vegetation Association No. 1114	State: Western Australia	19,836.15	12,047.29	60.73	79.03
	IBRA Bioregion: Jarrah Forrest	19,836.15	12,047.29	60.73	79.03
	IBRA Sub-region: Southern Jarrah Forest	10,001.10	4,279.07	42.79	57.44
	LGA: Shire of Collie	8,686.92	7,020.71	80.82	92.64

Regional Vegetation Complexes

Regional vegetation complexes have been mapped by Mattiske and Havel (1998) with updates from Webb et al. (2016). The mapping indicates five complexes intersect the DF:

- Cardiff Complex (49): Open woodland of *Allocasuarina fraseriana*-*Banksia* spp.-*Xylomelum occidentale*-*Nuytsia floribunda* on sandy soils on valley slopes in the subhumid zone.
- Collie Complex (50): Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Allocasuarina fraseriana* on gravelly-sandy upland soils in the subhumid zone.
- Muja Complex (187): Open woodland of *Melaleuca preissiana*-*Banksia littoralis*-*Banksia ilicifolia* with some *Eucalyptus patens* on moister sites, *Banksia* spp. on drier sites of valley floors in the subhumid zone.

The DBCA and DWER have assessed the vegetation complexes against presumed pre-European extents within the South West Forest Region of Western Australia (SW Forest Region) and the Shire of Collie respectively. At both the SW Forest Region and LGA levels, all intersecting complexes have greater than 50% pre-European extent remaining as shown in the tables below.

Vegetation complex	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA managed lands
Muja	10,200.51	6,070.51	59.51	43.83
Cardiff	6,236.58	3,360.93	53.89	44.60

LGA	Vegetation complex	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Proportion of Complex Class Mapping extent within each LGA	
Shire of Collie	Cardiff	6,048.97	3,289.19	54.38	96.99	
Shire of Collie	Muja	10,197.69	6,070.51	59.53	99.97	
Clearing is located in three distinct areas across the DE, Cardiff Town Pool (0.36 ha), Chicken Creek (0.41 ha), Chicken Creek Lord Fault (0.49 ha). The area of clearing, condition and fauna habitat within the DF are described in the table below.						
Area	Site ID	Vegetation complex	Maximum Clearing (ha)	Vegetation Type	Condition	Fauna Habitat
Cardiff Town Pool	S4_GHD	Muja	0.13	Previously cleared with scattered shrubs of <i>Xanthorrhoea preissii</i> (grass tree) and sedges (<i>Mesomelaena</i> sp.) over weeds. Isolated <i>Eucalyptus marginata</i> (Jarrah) saplings.	Completely Degraded	Cleared with scattered shrubs
	S6_GHD		0.10	Previously cleared with scattered <i>Xanthorrhoea preissii</i> (grass tree) shrubs, <i>Eucalyptus</i> (likely Jarrah and/or Marri) and <i>Xylomelum occidentale</i> (woody pear) saplings over scattered sedges and weeds.	Completely Degraded	Cleared / Scattered shrubs
	S7_GHD		0.13	<i>Scattered tall shrubs of Persoonia longifolia</i> (snottygobble), <i>Xanthorrhoea preissii</i> and <i>Allocasuarina</i> sp. with emergent <i>Eucalyptus</i> sp. (Jarrah and/or Marri) over an open herbland and sedges.	Good to Degraded	Open shrubland
Total Cardiff Town Pool			0.36			
Chicken Creek	S1_GHD	Cardiff	0.17	Predominantly cleared. Jarrah and Marri trees over scattered shrubs of <i>Xanthorrhoea pressii</i> and <i>?Acacia</i> over weeds.	Completely Degraded	
	S2_GHD		0.18	<i>Melaleuca ?viminea</i> closed shrubland with emergent <i>Eucalyptus ?rudis</i> over a sedgeland. Riparian vegetation	Good to Very Good	Melaleuca shrubland / seasonal dampland/wetland
	S3_GHD		0.05	Predominantly cleared with a patch of low shrubs over weeds. Surrounding vegetation comprises of Jarrah and Marri forest.	Degraded	Cleared / low shrubland
Total Chicken Creek			0.41			
Chicken Creek Lord Fault	S12_GHD	Cardiff	0.12	Open tall shrubland of <i>Melaleuca</i> species with emergent <i>?Eucalyptus rudis</i> over a low shrubland and open sedgeland.	Good	Melaleuca open shrubland / seasonal dampland
	S12.5_GHD		0.15	Open tall shrubland of <i>Melaleuca ?preissiana</i> over a	Very Good	Melaleuca dampland/wetland

				mid to low shrubland and sedgeland.		
	S13_GHD		0.21	Scattered young <i>Eucalyptus marginata</i> (Jarrah) and/or <i>Corymbia calophylla</i> (Marri) and <i>Nuytsia floribunda</i> (Australian Christmas tree) over an open low shrubland and weeds	Good to Degraded	Scattered Jarrah/Marri over low shrubland.
Total Chicken Creek Lord Fault			0.49			
Total DF				≤1.26		
Total DE				1.26		

Threatened and Priority Ecological Communities

Desktop searches of the DBCA Threatened and Priority Ecological Communities database and EPBC Act PMST indicated the presence of no EPBC listed community and EPA listed community with the potential to occur within 10 km to the DE. None of the vegetation units are representative of a Threatened or Priority ecological community. There are no ESAs mapped within or in proximity to the study area.

Flora Diversity

The Dandjoo search identified 724 vascular flora species previously recorded within the Study Area (Figure 8). These families and genera recorded within, are typical of species lists from the region.

Significant flora

The desktop assessment identified 55 significant flora species within 10 km of the DE that are known to occur from historical records of the DCCEEW Threatened and Priority Flora database and searches of Dandjoo database (DCCEEW, 2025; DBCA, 2025).

- The PMST search identified the potential presence of 5 flora species listed under the EPBC Act (one CR, three EN, one VU).
- The Dandjoo database search identified historical records of 54 significant flora species under the BC Act. (four CR, four EN, three P1, six P2, 22 P3, 13 P4 and two VU) by the DBCA.

Fauna

The desktop assessment identified 29 significant fauna species within the Study Area that are known to occur from historical records of the DCCEEW Threatened and Priority Fauna database and searches of Dandjoo database (DCCEEW, 2025; DBCA, 2025).

- The PMST search identified the potential presence of 16 fauna species listed under the EPBC Act (two CR, five EN, nine VU).
- The Dandjoo database search identified historical records of 22 significant fauna species under the BC Act. (one CD, three CR, three EN, six VU, one OS, one P2, one P3 and six P4) by the DBCA.

Fauna habitat

The assessment of terrestrial fauna habitats identified a combination of environments: cleared areas with scattered shrubs, Melaleuca shrubland and seasonal dampland and wetland, Melaleuca open shrubland with seasonal dampland characteristics, and scattered Jarrah/Marri trees overlaying low shrubland.

Much of the vegetation within the DF is cleared or partially cleared, in Degraded or Completely Degraded condition offering marginal fauna habitat. The Pads are moderately connected, with three of the Pads located in the Cardiff Pool area are surrounded by intact native vegetation, the other areas are mostly cleared or are in Disturbed condition. This connectivity supports some fauna movement into and through the DFs. Given that the vegetation proposed to be cleared is in poorer condition and bounding extensive areas of intact native vegetation, the area is unlikely to contain a high level of fauna diversity.

The impact to each fauna habitat type within the DE is not expected to impact the availability of significant habitat for fauna indigenous to Western Australia. The 1.26 ha of habitat proposed to be cleared as part of the DF is available consistently and in comparable condition beyond DE. Given the temporary nature of most clearing proposed and distribution of the habitat, it is unlikely there will be a significant impact the availability of habitat for conservation significant fauna.

Conclusion

The National Objectives and Targets for Biodiversity Conservation Australia have been set to prevent the clearance of ecological communities with low proportions of their pre-European extent (Commonwealth of Australia, 2001). Given that the JAF is not a constrained area, the retention objective of 30% applies. The Cardiff and Muja complexes meet this target.

Based on DPIRD remnant vegetation mapping, there is an estimated 42,859.83 ha of native vegetation located in the local area (10 km) and 1,173,624.74 ha of the total native vegetation extent in the JAF. A reduction of up to 1.26 ha in native vegetation will lead to a 0.0001% reduction of native vegetation in the JAF and 0.003% within 10 km of the DF. The native vegetation is not considered to comprise a high level of biological diversity compared to the surrounding areas and is anticipated to regenerate following clearing for the bore installation.

Given the above, the clearing of vegetation within the DF is not considered significant as it is not in an area of extensive clearing and therefore, the proposed works are not 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 WA

Proposed clearing is unlikely to be at variance to this Principle.

Assessment

Fauna habitat

The assessment of terrestrial fauna habitats identified a combination of environments: cleared areas with scattered shrubs, Melaleuca shrubland and seasonal dampland and wetland, Melaleuca open shrubland with seasonal dampland characteristics, and scattered Jarrah/Marri trees overlaying low shrubland. Much of the vegetation within the DF is cleared or partially cleared, in Degraded or Completely Degraded condition offering marginal fauna habitat. The Pads are moderately connected, with three of the Pads located in the Cardiff Pool area are surrounded by intact native vegetation, the other areas are in Disturbed condition. This connectivity supports some fauna movement into and through the DFs. Given that the vegetation proposed to be cleared is in poorer condition and bounding extensive areas of intact native vegetation, the area is unlikely to contain a high level of fauna diversity.

Fauna

The desktop assessment identified 29 significant fauna species within the Study Area that are known to occur from historical records of the DCCEEW Threatened and Priority Fauna database and searches of Dandjoo database (DCCEEW, 2025; DBCA, 2025).

- The PMST search identified the potential presence of 16 fauna species listed under the EPBC Act (two CR, five EN, nine VU).
- The Dandjoo database search identified historical records of 22 significant fauna species under the BC Act. (one CD, three CR, three EN, six VU, one OS, one P2, one P3 and six P4) by the DBCA.

Conclusion

The potential fauna habitat types within the DF will remain well connected and part of a larger contiguous landscape of similar habitats within the local area and surrounding region. The DF is unlikely to support fauna habitat that is in better condition than the surrounding available habitat. Furthermore, given the temporary nature of most clearing proposed, it is unlikely there will be a significant impact the availability of habitat for conservation significant fauna, and are not likely 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

Proposed clearing is unlikely to be at variance to this Principle.

Assessment

The desktop assessment identified 55 significant flora species within 10 km of the DE that are known to occur from historical records of the DCCEEW Threatened and Priority Flora database and searches of Dandjoo database (DCCEEW, 2025; DBCA, 2025).

- The PMST search identified the potential presence of 5 flora species listed under the EPBC Act (one CR, three EN, one VU).
- The Dandjoo database search identified historical records of 54 significant flora species under the BC Act. (four CR, four EN, three P1, six P2, 22 P3, 13 P4 and two VU) by the DBCA.

There was no survey of this site to determine a post survey likelihood of occurrence for the potentially significant flora species, however given the degraded condition of the DF, it is unlikely to be impacting significant flora species. With clearing able to avoid environmental constraints within each Pad, an approach of avoid and minimise during clearing will reduce the impact on significant flora species. Proposed clearing of 1.26 ha of native vegetation is considered unlikely to significantly impact Threatened flora listed under the EPBC or BC Act and therefore is considered not likely 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

Proposed clearing is not at variance to this Principle.

Assessment

Desktop searches of the DBCA Threatened and Priority Ecological Communities (Dandjoo) and EPBC Act (PMST) databases indicated no EPBC listed community or EPA listed community potentially occurring within 10 km to the DE. None of the vegetation types within the DE or DF are representative of a Threatened or Priority ecological community. The proposed clearing is not 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

Proposed clearing is not at variance to this Principle.

Assessment

Flora

The DE is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) region and the Southern Jarrah Forest Subregion (JAF02) (DCCEEW, 2025). This subregion's predominant landuse is grazing of improved pastures and dry land agriculture. Other significant land uses include mining, rural residential, easements for roads and power lines, urban areas and irrigated horticulture. There is approximately 82.33% of Vegetation Association 3 within the Shire of Collie.

Statewide, there is 67.76% of Vegetation Association 3 remaining, 81.50% of which is located in the DBCA Reserve system. There is approximately 80.82% of Vegetation Association 1114 within the Shire of Collie. Statewide there is 60.73% of Vegetation Association 1114 remaining, 79.03% of which is located in the DBCA reserve system. Pre-European Vegetation Association and Vegetation Complex mapping is in the tables below.

Pre-European Vegetation Association	Scale	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Current Extent in DBCA Managed Land (%)
Vegetation Association No. 3	State: Western Australia	2,661,404.62	1,803,437.48	67.76	81.50
	IBRA Bioregion: Jarrah Forrest	2,390,591.54	1,604,101.56	67.10	81.00
	IBRA Sub-region: Southern Jarrah Forest	1,482,491.85	880,655.65	59.40	78.50
	LGA: Shire of Collie	158,906.02	130,832.25	82.33	89.33
Vegetation Association No. 1114	State: Western Australia	19,836.15	12,047.29	60.73	79.03
	IBRA Bioregion: Jarrah Forrest	19,836.15	12,047.29	60.73	79.03
	IBRA Sub-region: Southern Jarrah Forest	10,001.10	4,279.07	42.79	57.44
	LGA: Shire of Collie	8,686.92	7,020.71	80.82	92.64

Vegetation complex	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA managed lands
Muja	10,200.51	6,070.51	59.51	43.83
Cardiff	6,236.58	3,360.93	53.89	44.60

The re-European Vegetation Association and Regional Vegetation Complexes for the clearing areas in the DF are provided in the table below.

Pre-European Vegetation Associations	Regional Vegetation Complex	Clearing Description	Vegetation Condition
Vegetation Association 1114 described as shrublands tree-heath; paperbark over teatree thickets (GoWA, 2019).	Cardiff (0.92 ha)	Clearing of up to 0.41 ha for Chicken Creek Pads S1_GHD, S2_GHD, S3_GHD	Good - Very Good to Completely Degraded condition
		Clearing of up to 0.49 ha for Chicken Creek – Lord Fault Pads	Very Good - Good to Degraded condition

		S12_GHD, S12.5_GHD, and S13_GHD.	
Vegetation Association 3 described as a Medium forest; Jarrah-Marri (GoWA, 2019)	Muja (0.36 ha)	Clearing of up to 0.36 ha for Cardiff Town Pool Pads S4_GHD, S6_GHD, S7_GHD	Good - Degraded to Completely Degraded condition

The National Objectives and Targets for Biodiversity Conservation Australia have been set to prevent the clearance of ecological communities with low proportions of their pre-European extent (Commonwealth of Australia, 2001). Given that the JAF is not a constrained area, the retention objective of 30% applies. The vegetation complexes across the DF are expected to meet this target due to the minimal clearing. Based on DPIRD remnant vegetation mapping, there is an estimated 42,859.83 ha of native vegetation located in the local area (10 km) and 1,173,624.74 ha of the total native vegetation extent in the JAF. A reduction of up to 1.26 ha in native vegetation will lead to a 0.0001% reduction of native vegetation in the JAF and 0.003% within 10 km of the DF.

Given the above, the clearing of vegetation is not considered significant as it is not in an area of extensive clearing. Therefore, the proposed works are not at variance with 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.

Proposed clearing may be at variance to this Principle.

Assessment

The DE is located in the Collie River Basin. Desktop assessment of the hydrological landmarks surrounding the DF included:

- No Internationally Important Wetlands (Ramsar), Nationally Important Wetlands or wetlands occur within 10 km of the DE.
- No wetlands or watercourses intersect the DF.
- A major watercourse, the Collie River, is located 55 m south of pad ID S6_GHD.
- The Preston River, a major watercourse, is located 8.5 km west of the Cardiff Town Pool area.
- A minor watercourse, Chicken Creek, is located 100 m east of Pad S1_GHD and 75 m to the west of Pad S12.5_GHD.
- Camballan Creek branches off of the Collie River approximately 5.9 km east of Pad S12.5_GHD.
- Majority of the DE intersects the Collie River Irrigation District Sub-Area No 2, proclaimed under the RIWI Act. 7.7 km southwest of the Cardiff Town Pool area is the Preston Valley Irrigation District, proclaimed under the RIWI Act

The works do not intersect a watercourse or wetland; however, the clearing of vegetation may be considered at variance to this principle due to some of the clearing being located near to the Collie River and the minor watercourse Chicken Creek.

g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation

Proposed clearing is unlikely to be at variance to this Principle.

Assessment

The DPIRD Soil Landscape Mapping (DPIRD-027) dataset (DPIRD, 2025) has been used to determine the soil landscape for the DE and DF. The assessment determined:

Cardiff Town Pool area includes:

- Muja flats phase: Valley flats and footslopes, relief 5-15 M, slopes 1-5%. Soils are sandy and well drained
- Muja gentle slopes phase: Relief 10-30 m, slopes 3-15%
- Coalfields disturbed land, mine phase: Mine. Disturbed land

Chicken Creek – Lord Fault area includes:

- Cardiff subsystem: Low lying poorly drained flats over coal measures. Soils are deep sands and wet soils
- Coalfields disturbed land, mine phase: Mine. Disturbed land

Chicken Creek area includes:

- Cardiff subsystem: Low lying poorly drained flats over coal measures. Soils are deep sands and wet soils

The Cardiff Town Pool area intersects an area that is mapped as having a low flood risk (DPIRD-007), low water erosion risk (DPIRD-013), low surface acidity (DPIRD-035), low subsurface acidity (DPIRD-036) and moderate repellence risk (DPIRD-015). The Australian Soil Resource Information System (ARIS) Acid Sulfate Soils (ASS) mapping indicates that the Cardiff Town Pool area is in an area with an Extremely Low Probably of Occurrence of ASS (CSIRO, 2024).

The Chicken Creek and Chicken Creek – Lord Fault areas intersect an area that is mapped as having a low flood risk (DPIRD-007), low water erosion risk (DPIRD-013), low surface acidity (DPIRD-035), low to moderate subsurface acidity (DPIRD-036) and moderate repellence risk (DPIRD-015). The Australian Soil Resource Information System (ARIS) Acid Sulfate Soils (ASS) mapping indicates that the Chicken Creek and Chicken Creek – Lord Fault areas are in an area with an Extremely Low Probably of Occurrence of ASS (CSIRO, 2024).

An EMP is being developed which discusses the erosion, sedimentation and dust management control measures which will be implemented during proposed works. If it is determined during bore installation that the ASS risk of any areas are greater than the mapped probabilities in the CSIRO (2024) dataset, further soil testing and an ASSMP will be developed with specific management measures.

Clearing of native vegetation is not expected to cause appreciable land degradation due to the proposed mitigation measures within the EMP and the minor clearing area within the DF. The proposed clearing is unlikely to be at variance to this principle.

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

Proposed clearing may be at variance to this Principle.

Assessment

Desktop assessment of the DBCA Legislated Lands and Waters (DBCA-011) dataset indicates that the DF, specifically pad ID S7_GHD, intersects the Collie State Forest (F 4) Class A reserve. In addition, the Chicken Creek Pads are located within the Muja State Forest (F 24). Three unnamed reserves and four unofficial reserves also occur within the Study Area. Conservation Areas and reserves which occur within or adjacent to the DE are described in the table.

Conservation area	Distance
Collie State Forest	Intersects Pad S7_GHD within the DE and DF
Mumballup State Forest (F 26, Class A)	2.29 km SW of S4_GHD
Muja State Forest	Chicken Creek Pads are located within the Muja State Forrest
Harris State Forest	11 km north of S7_GHD
Muja Conservation Park (F 24)	9.34 km SE of S2_GHD
Westralia Conservation Park (Reserve 28926)	9.62 km NW of S6_GHD
Yallatup Nature Reserve	4.76 km east of S13_GHD
Wyvern Road Nature Reserve (Reserve 45961, Class A)	8.83 km NW of S4_GHD

The South West Regional Ecological Linkages Axis Lines database (WALGA, 2009) describes ecological linkages in the South West region. The desktop assessment of this database identified that there is an existing ecological linkage (ID 203) connecting Pads S6_GHD and S7_GHD within the Cardiff Town Pool portion of the DF with approximately 0.23 ha proposed to be cleared in this area adjacent to the identified ecological linkage (ID 203). There is vegetation proposed to be cleared within the conservation estate in the Study Area, however clearing will be limited to 0.39 ha within the Muja State Forest and 0.13 ha within the Collie State Forest.

Appropriate hygiene measures and construction timing will manage the potential introduction and spread of weeds and dieback to adjacent vegetation. The EMP (Appendix C) provides further management measures.

Although proposed clearing is occurring within State Forest, the clearing is of a small and discrete scale that will not significantly impact ecological linkages or environmental values of the conservation areas. The proposed clearing may be at variance with this clearing 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

Proposed clearing not likely to be at variance to this Principle.

Assessment

The proposal is located in the Collie River Basin in the Collie River South and East Branch sub-catchments. No wetlands or watercourses directly intersect the DE. No Internationally Important Wetlands (Ramsar) or Nationally Important Wetlands occur within 10 km of the DE.

One major watercourse, the Collie River, is located 55 m south of pad ID S6_GHD. One minor watercourse, Chicken Creek, is located 100 m to the east of pad ID S1_GHD and 75 m to the west of pad ID S12.5_GHD.

The Mungallup Dam Catchment Area, a P1 Public Drinking Water Source Area occurs 7.5 km west of the Cardiff Town Pool area. The DE does not intersect a surface water area that is proclaimed under the RiWI Act, however, it is within the Collie Groundwater Area (Proclaimed) and the Collie River Irrigation District Sub-Area No 2 proclaimed under the RiWI Act. The proposal is located within the Wellington Dam Catchment Area under the CAWS Act.

It is considered unlikely that the small, discrete scale of unconnected vegetation clearing would disturb or interrupt any natural drainage and surface water run-off patterns and is unlikely to alter the groundwater quality in the local area. The clearing is not of a scale that would cause the water table to rise, increase waterlogging or mobilise salts within the soil. The clearing will not interrupt water flow and vegetation will be able to naturally regenerate around the installed bore once drill pads are removed.

Proposed clearing of up to 1.26 ha native vegetation is unlikely to cause any deterioration in the quality of surface or underground water. The proposed clearing is not likely to be at variance to this principle.

j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding

Proposed clearing not at variance to this Principle.

Assessment

The annual total rainfall recorded at nearby BoM stations (nearest listed first) are as follows (BoM, 2025):

Station (number)	2021	2022	2023	2024
Collie (9628)	1007.4 mm	671.2 mm	566.1 mm	n.a
Collie East (9994)	930.0 mm	581.8 mm	462.2 mm	548.4 mm
Worsley Downs (9923)	1469.6 mm	964.9 mm	n.a	1079.2 mm
Muja Power Station (9738)	610.9 mm	127.0 mm	n.a	775.8 mm

The DPIRD Soil Landscape Mapping (DPIRD-027) dataset (DPIRD, 2025) indicates that the Cardiff Town Pool area is mapped as the following:

- Muja flats phase: Valley flats and footslopes, relief 5-15 M, slopes 1-5%. Soils are sandy and well drained
- Muja gentle slopes phase: Relief 10-30 m, slopes 3-15%
- Coalfields disturbed land, mine phase: Mine. Disturbed land

The DPIRD Soil Landscape Mapping (DPIRD-027) dataset (DPIRD, 2025) indicates that the Chicken Creek area is mapped as the following:

- Cardiff subsystem: Low lying poorly drained flats over coal measures. Soils are deep sands and wet soils

The DPIRD Soil Landscape Mapping (DPIRD-027) dataset (DPIRD, 2025) indicates that the Chicken Creek – Lord Fault area is mapped as the following:

- Cardiff subsystem: Low lying poorly drained flats over coal measures. Soils are deep sands and wet soils
- Coalfields disturbed land, mine phase: Mine. Disturbed land

The DF intersects an area that is mapped as having a low flood risk (DPIRD-007), low water erosion risk (DPIRD-013) and low to moderate repellence risk (DPIRD-015). The nearest watercourse to the Cardiff Town Pool area is the Collie River, located 55 m south of pad ID S6_GHD. The nearest watercourse to the Chicken Creek area is Chicken Creek, located 100 m to the east of pad ID S1_GHD. The nearest watercourse to the Chicken Creek – Lord Fault area is Chicken Creek, located 75 m to the west of pad ID S12.5_GHD.

The removal of relatively small patches of vegetation is unlikely to change the existing surface water flow rates or paths and is unlikely to increase the incidence or intensity of flooding in the surrounding area. Therefore, the proposed clearing is not at variance to this principle.

6. Mitigation Hierarchy

The disturbance hierarchy of avoid, minimise, reduce, and rehabilitate have been applied throughout the planning and siting process, to mitigate potential environmental impacts associated with the bore installation works. This approach will continue through field activities guided by the Environmental Management Plan (EMP) being prepared for this Project (Appendix C provides the first draft revision of this document). The EMP will be updated and finalised when the approval conditions have been received.

6.1 Impact avoidance and minimisation through design and planning

6.1.1 Flora, Vegetation and Fauna

Clearing of flora and vegetation was avoided through design of the bore locations and access tracks within the DE by avoiding vegetation clearing where possible. Avoidance and minimisation strategies applied in the selection of sites within the DF included:

- An assessment with hydrogeologists, heritage, land-tenure, and environmental disciplines occurred to identify constraints and select the most practicable location of the Pads and access tracks.
- Potential impacts to flora and vegetation have been minimised by selecting cleared areas where possible and using existing access tracks.
- The location of the Pads and access tracks have avoided known heritage locations (where possible)
- Impacts to native fauna and fauna habitat were minimised by siting the Pads within cleared and degraded areas where practicable

6.2 Impact avoidance and minimisation measures applied on site

The following avoidance and minimisation management measures will be adopted onsite during clearing activities. The management measures described in Table 20 aims to reduce the clearing of vegetation, flora and impacts to fauna habitat from the direct and indirect potential impacts outlined in Section 4.

Table 20 *Management Measures*

Aspect	Management measure
Extent of clearing	• Clearing of native vegetation will be restricted to the Pads within the DE • The Project will utilise existing tracks and roads where possible. • The minimum Pad area is to be demarcated (e.g. flagging tape or similar) prior to clearing activities. No clearing of native vegetation or ground disturbance is to occur outside of this area. • Preference will be given to previously disturbed or already cleared vegetation when selecting access tracks where terrain allows.
Flora and Vegetation	• Areas that are sparsely vegetated and/or previously cleared will be used preferentially for the location of pads and access tracks. • Minimise disturbance by avoiding large trees and shrubs and where feasible, leaving rootstock in the ground to assist with stabilisation and natural regeneration. • Topsoil (i.e. typically the top 10 mm of soil) and cleared vegetation will be separately stockpiled and re-spread over cleared areas to assist regeneration
Fauna and Fauna Habitat	• Clearing of native vegetation will be undertaken in a slow, progressive manner in one direction to allow fauna to move away from the clearing area. • Injury or mortality of fauna will be recorded as an environmental incident. • Any excavations left open overnight will include fauna egress and be inspected at the start and end of each day for fauna

Aspect	Management measure
	- All waste containers will have lids to prevent fauna from eating food scraps or becoming trapped in waste containers. - Any tree branches and rocks originally removed as part of pad establishment will be used in rehabilitation to promote ground stability and to provide potential fauna habitat.
Heritage	- No construction activities will be permitted within areas designated as Registered Aboriginal Sites without the appropriate permit and/or stakeholder consultation - Heritage sites within the DE and DF are to be appropriately demarcated. - A New Finds process will be included in the EMP, including the discovery of potential human bones.
Weeds	- Standard biosecurity measures will be developed in the EMP and be implemented to mitigate the risk of weeds entering the site or spreading. - Prior to entering the Basin, and moving between pads, vehicles, plant and equipment shall be free of plant material and soil clumps.
Erosion	Standard management measures regarding erosion and sediment control (including topsoil management) will be implemented during the clearing process within the DF, particularly in Pads close to the Collie River and Chicken Creek.
Dust	- Standard dust control and mitigation measures will be implemented during clearing. This may include the use of a water truck(s). - Ground disturbance and/or clearing of vegetation will be restricted during high winds if dust cannot be adequately controlled. - Review of weather forecasts will be undertaken prior to native vegetation clearing to identify periods of extreme weather conditions likely to result in increased dust emissions so that additional mitigation measures can be implemented.
Fire	- Basic fire-fighting equipment such as fire extinguishers will be provided in all motor vehicles and mobile plant and during any hot works. - Fires will not be permitted on site.
Noise	- Standard construction noise management measures will be implemented. - Complaints regarding noise will be recorded and investigated.
Waste	- Management strategies will be implemented to ensure the generation of waste is minimised during clearing activities. - Rubbish will be disposed of in appropriate containers with lids and all waste will be removed from the site and disposed of lawfully.
Acid Sulphate Soils	ASS management measures will be incorporated into the EMP (if required) to appropriately manage the associated impacts for Pads close to the Collie River or Chicken Creek which may have increased ASS risk. This will appropriately manage any potential disturbance of ASS.

7. Other approvals

Following review of approval requirements under the EP Act, the following approvals are not considered necessary for the purpose of these clearing activities:

- Planning and Development Act 2005
- Works Approval or Licence under Part V of the EP Act
- Referral to DCCEEW for assessment under the EPBC Act
- State or municipal heritage approvals
- Aboriginal Sites of significance under the *Aboriginal Heritage Act 1972*

8. Offsets

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

Potential requirements to counterbalance the residual impacts through environmental offsets for clearing related to the bore installation have been considered as described in Western Australian Government's Environmental Offset Policy (EPA, 2011) and the Western Australian Offsets Guidelines (EPA, 2014).

The hierarchy of avoid, minimise, reduce, rehabilitate and offset for identified environmental impacts has been applied to this Proposal. This hierarchy has been achieved through preferentially siting the bores within areas with cleared or degraded vegetation, using existing tracks and minimising clearing where possible by using smaller plant and machinery. An EMP is being developed and the described management measures in this document will be implemented throughout the clearing and installation phases.

The assessment against the ten clearing principles concluded the proposed clearing is not or unlikely to be at variance with most of the ten clearing principles. The residual impacts from clearing are minimal and therefore offsets are unnecessary to counterbalance the proposed clearing.

9. References

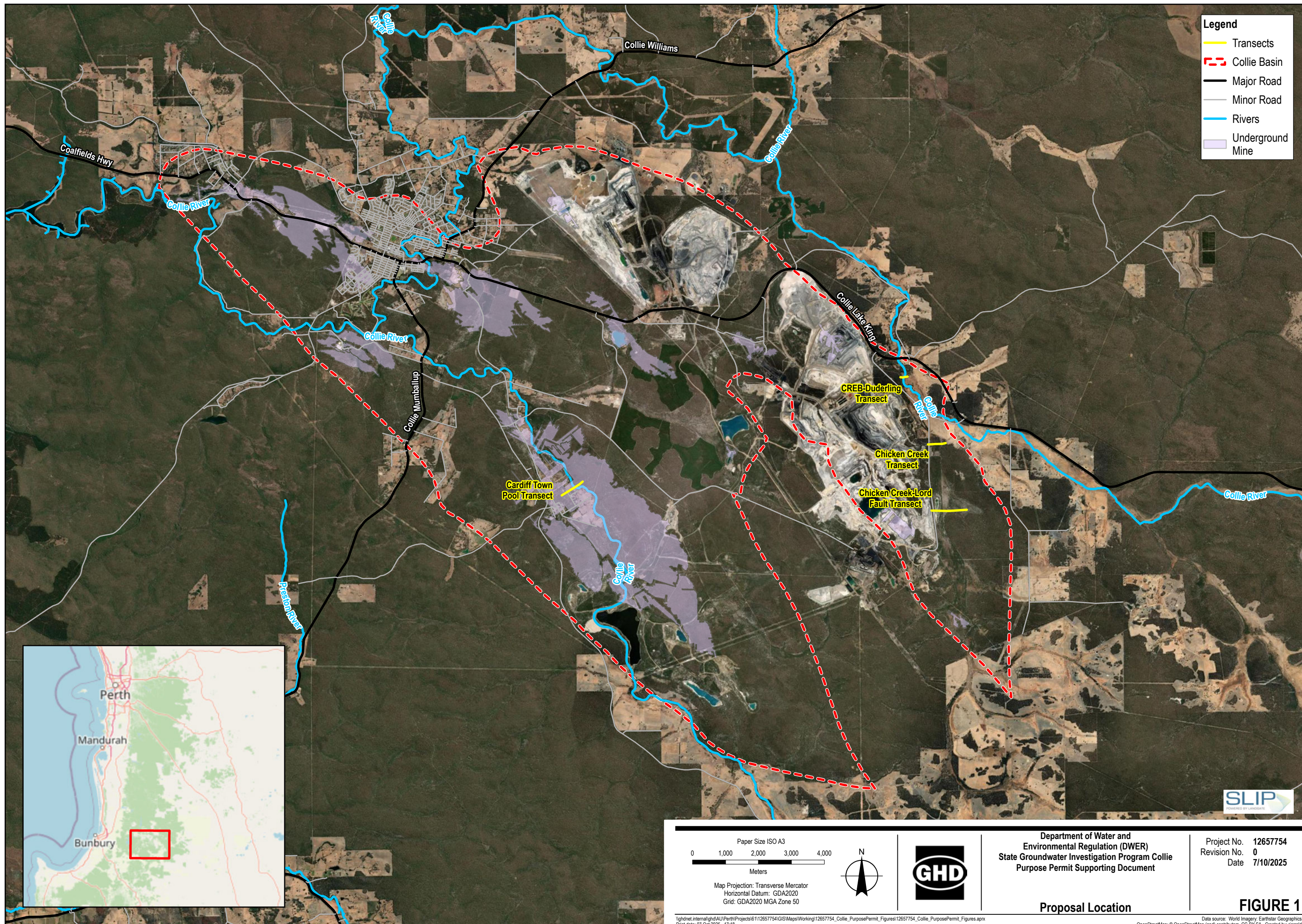
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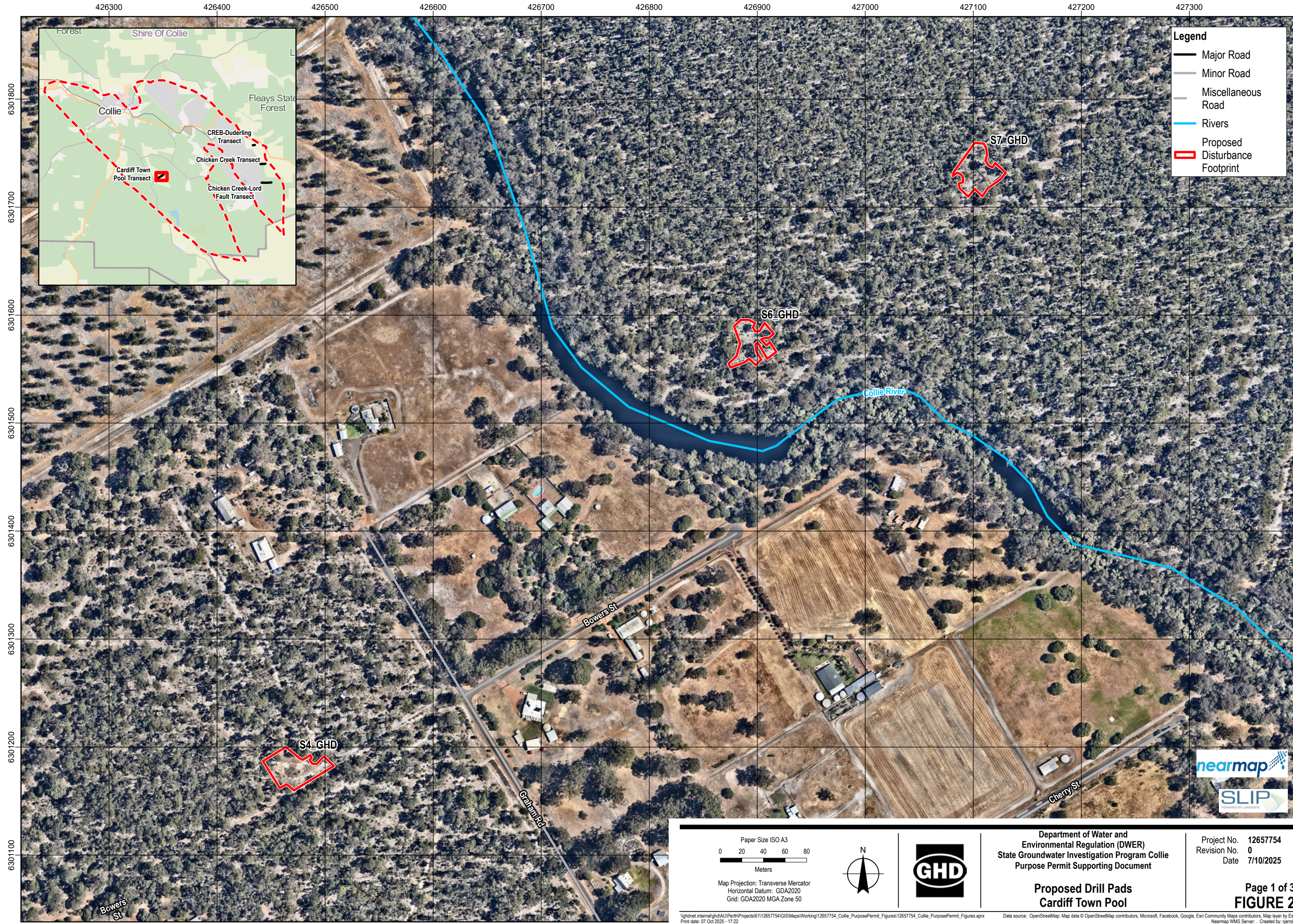
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Appendices

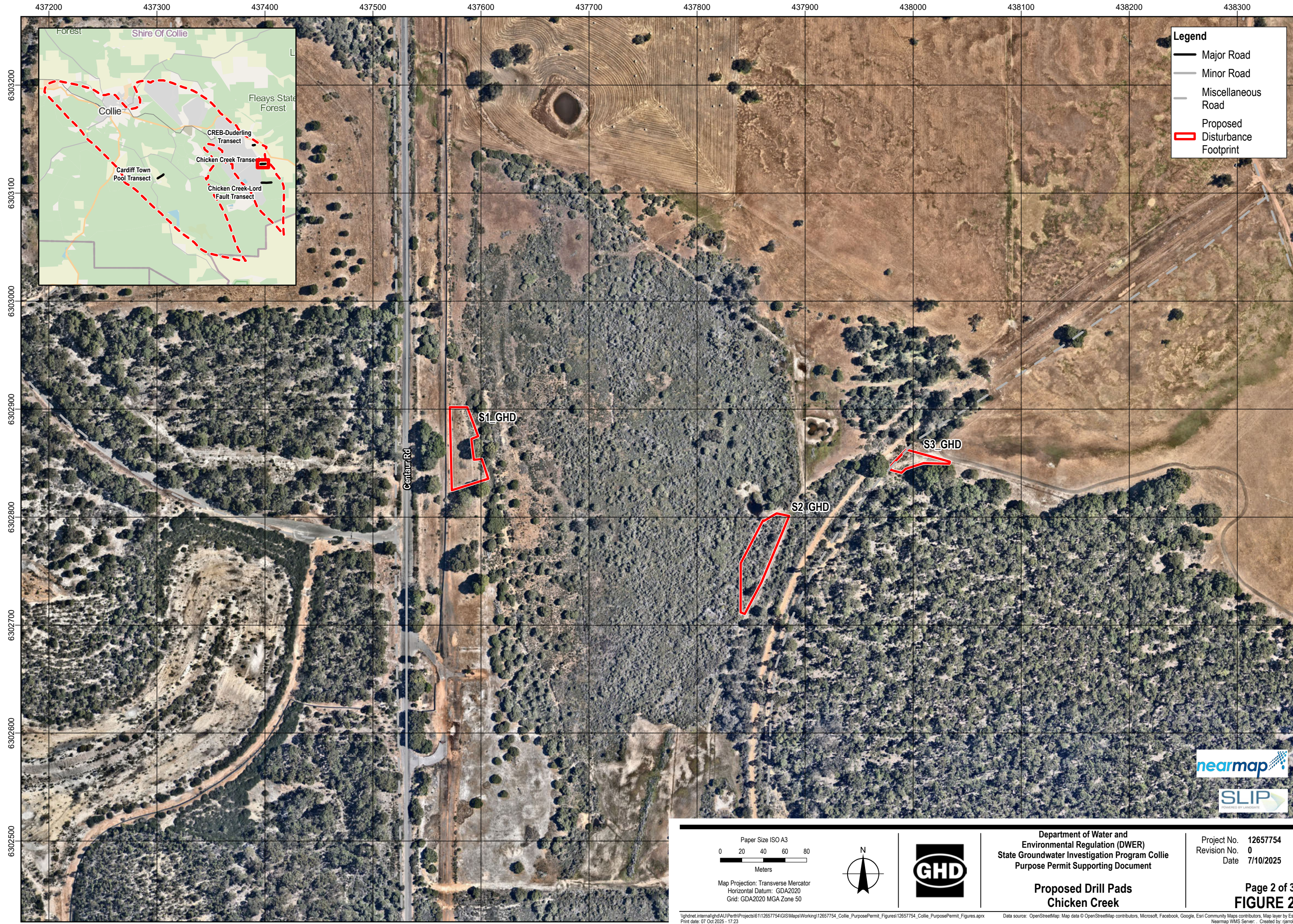
Appendix A

Figures





Paper Size ISO A3 0 20 40 60 80 Meters Map Projection: Transverse Mercator Horizontal Datum: GDA2020 Grid: GDA2020 MGA Zone 50			Department of Water and Environmental Regulation (DWER) State Groundwater Investigation Program Collie Purpose Permit Supporting Document		Project No. 12657754 Revision No. 0 Date 7/10/2025
			Proposed Drill Pads Cardiff Town Pool		Page 1 of 3 FIGURE 2
			\\ghdnet.internal\ghd\AU\Perth\Projects\6112657754\GIS\Maps\Working\12657754_Collie_PurposePermit_Figures\12657754_Collie_PurposePermit_Figures.aprx Print date: 07 Oct 2025 - 17:22 Data source: OpenStreetMap: Map data © OpenStreetMap contributors, Microsoft, Facebook, Google, Esri Community Maps contributors, Map layer by Esri Nearmap WMS Server: Created by: rjarold		



Paper Size ISO A3

0 20 40 60 80

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 50

Department of Water and
Environmental Regulation (DWER)
State Groundwater Investigation Program Collie
Purpose Permit Supporting Document

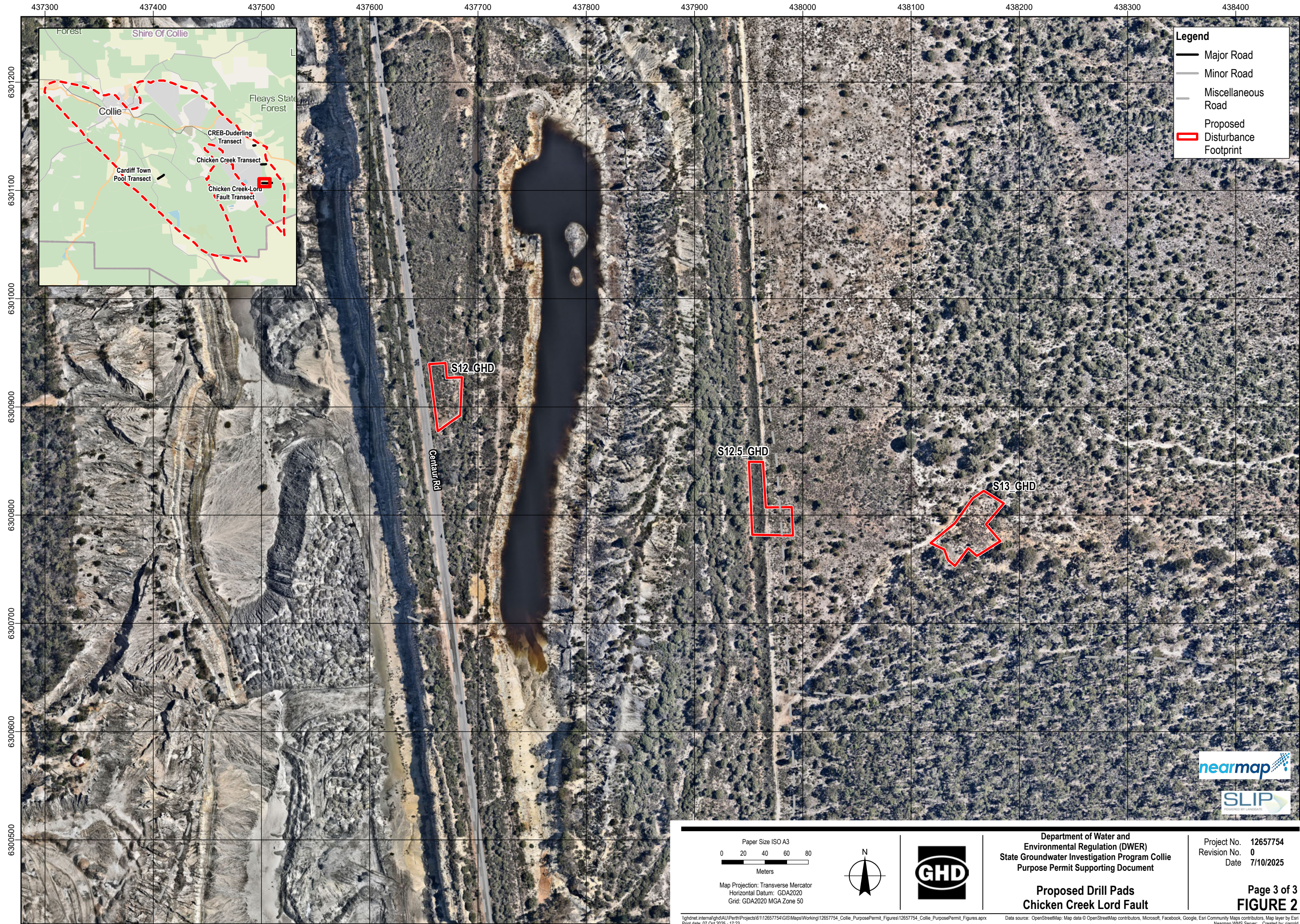
**Proposed Drill Pads
Chicken Creek**

Project No. 12657754
Revision No. 0
Date 7/10/2025

**Page 2 of 3
FIGURE 2**

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Print date: 07 Oct 2025 - 17:23

Data source: OpenStreetMap: Map data © OpenStreetMap contributors, Microsoft, Facebook, Google, Esri Community Maps contributors, Map layer by Esri
Nearmap WMS Server: Created by: rjarold



Paper Size ISO A3

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Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 50

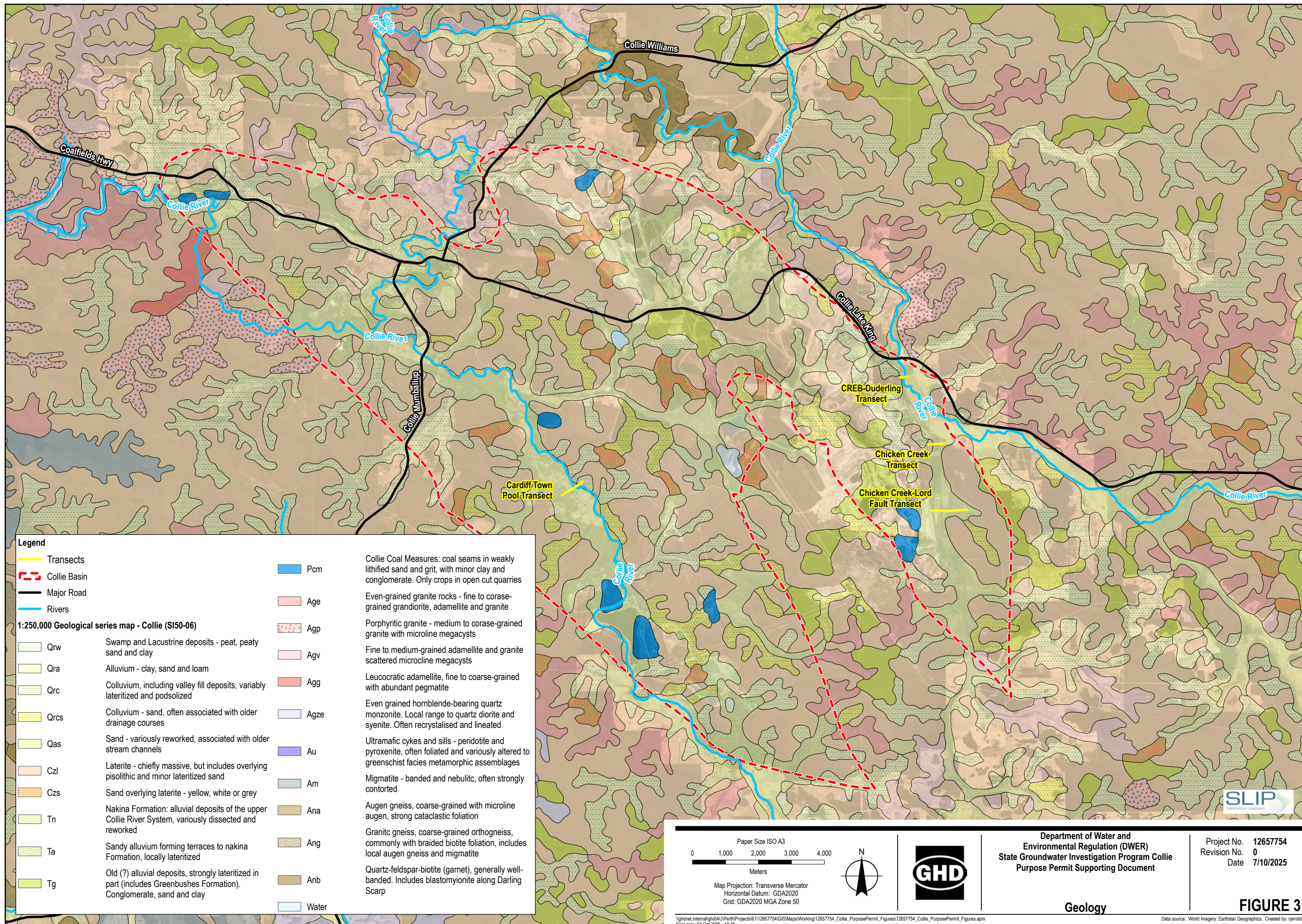
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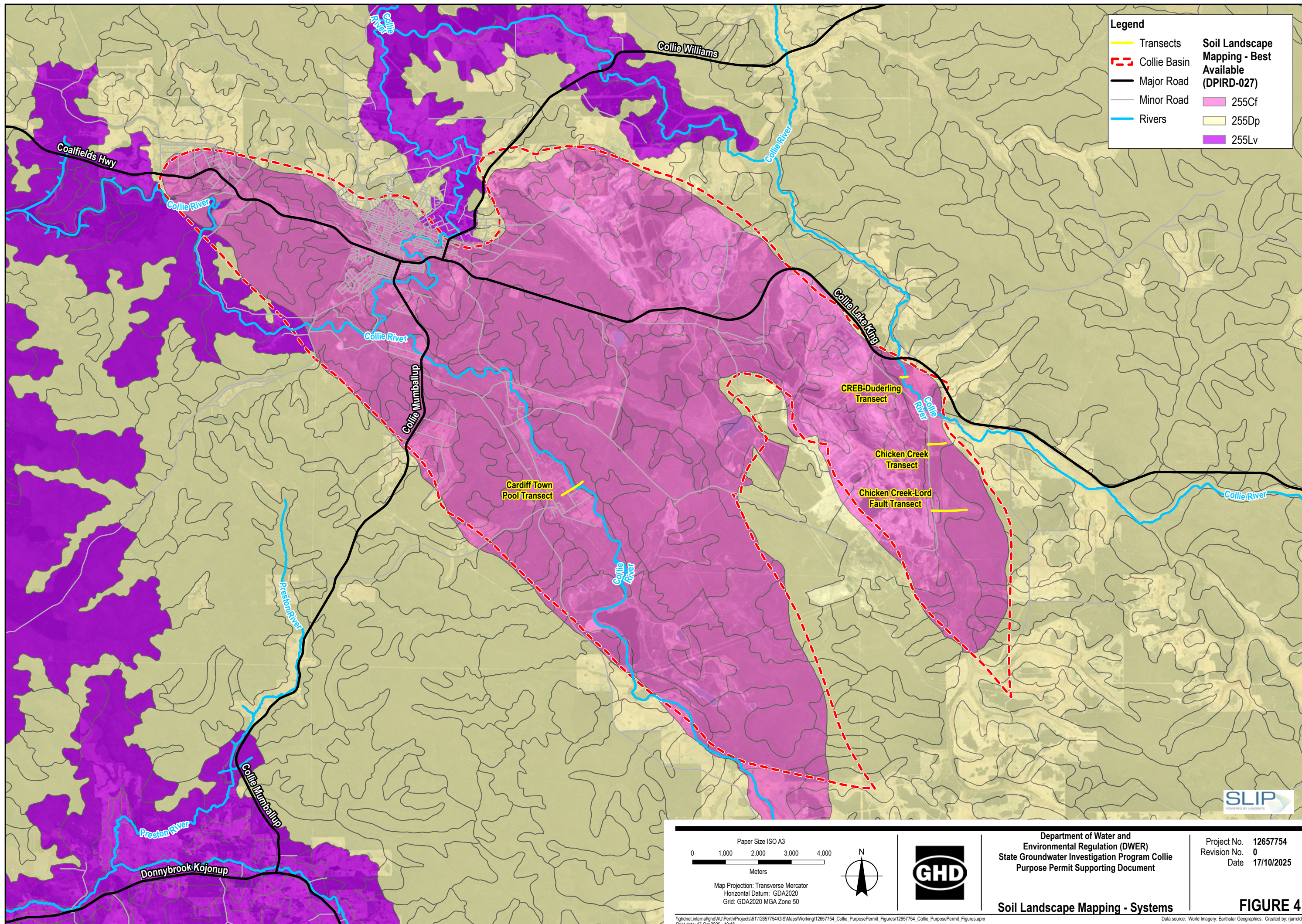
Department of Water and
Environmental Regulation (DWER)
State Groundwater Investigation Program Collie
Purpose Permit Supporting Document

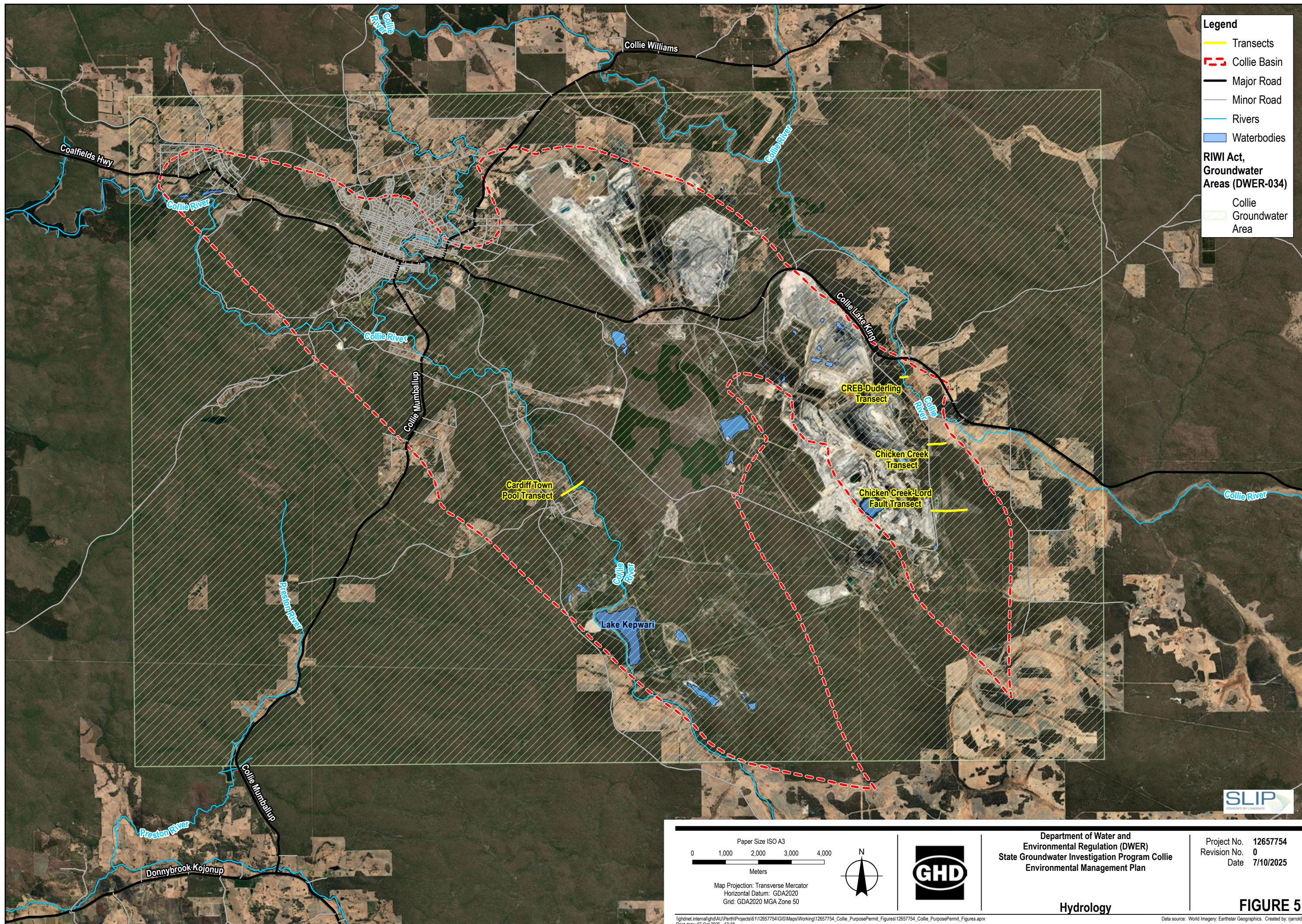
**Proposed Drill Pads
Chicken Creek Lord Fault**

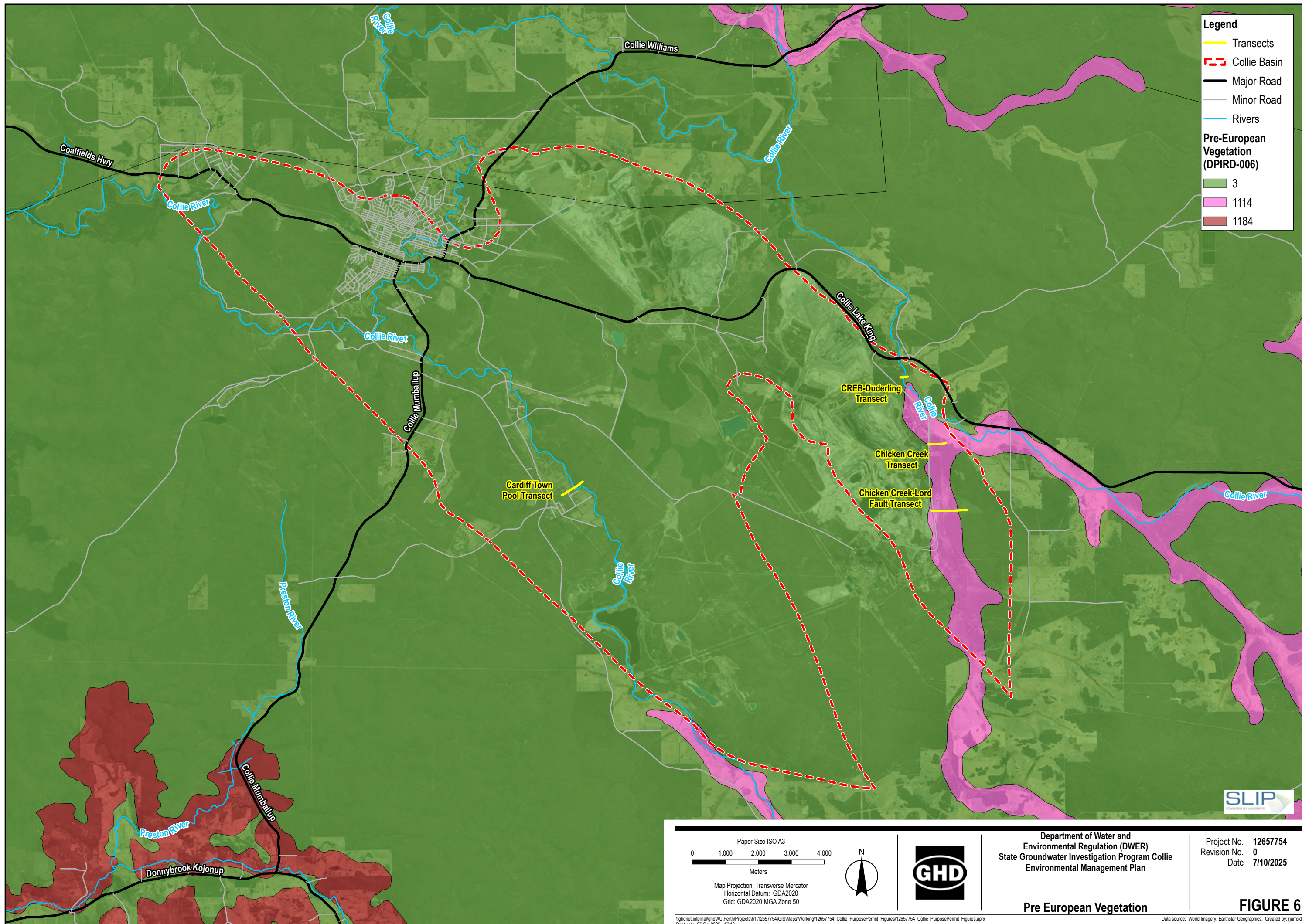
Project No. 12657754
Revision No. 0
Date 7/10/2025

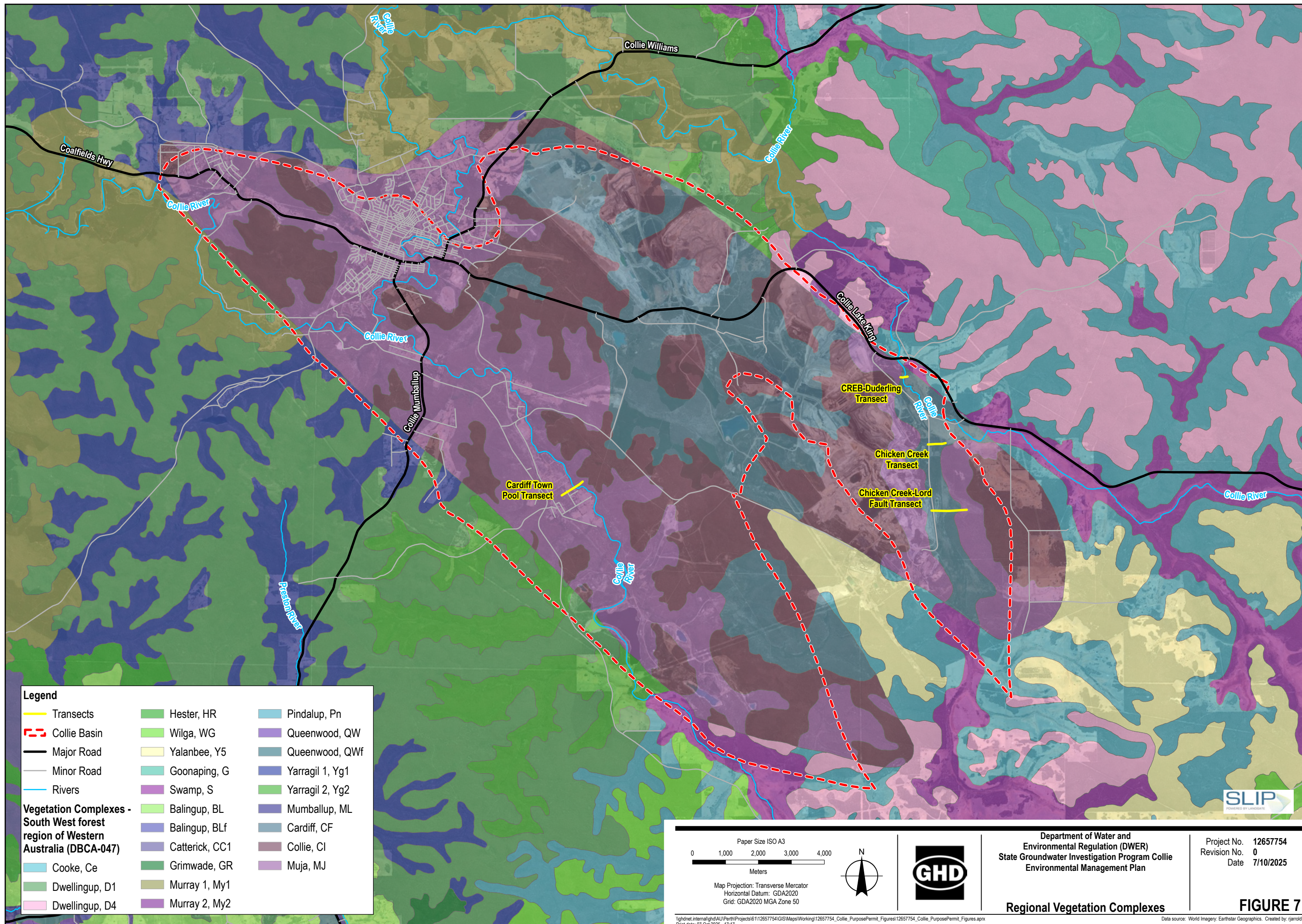
**Page 3 of 3
FIGURE 2**

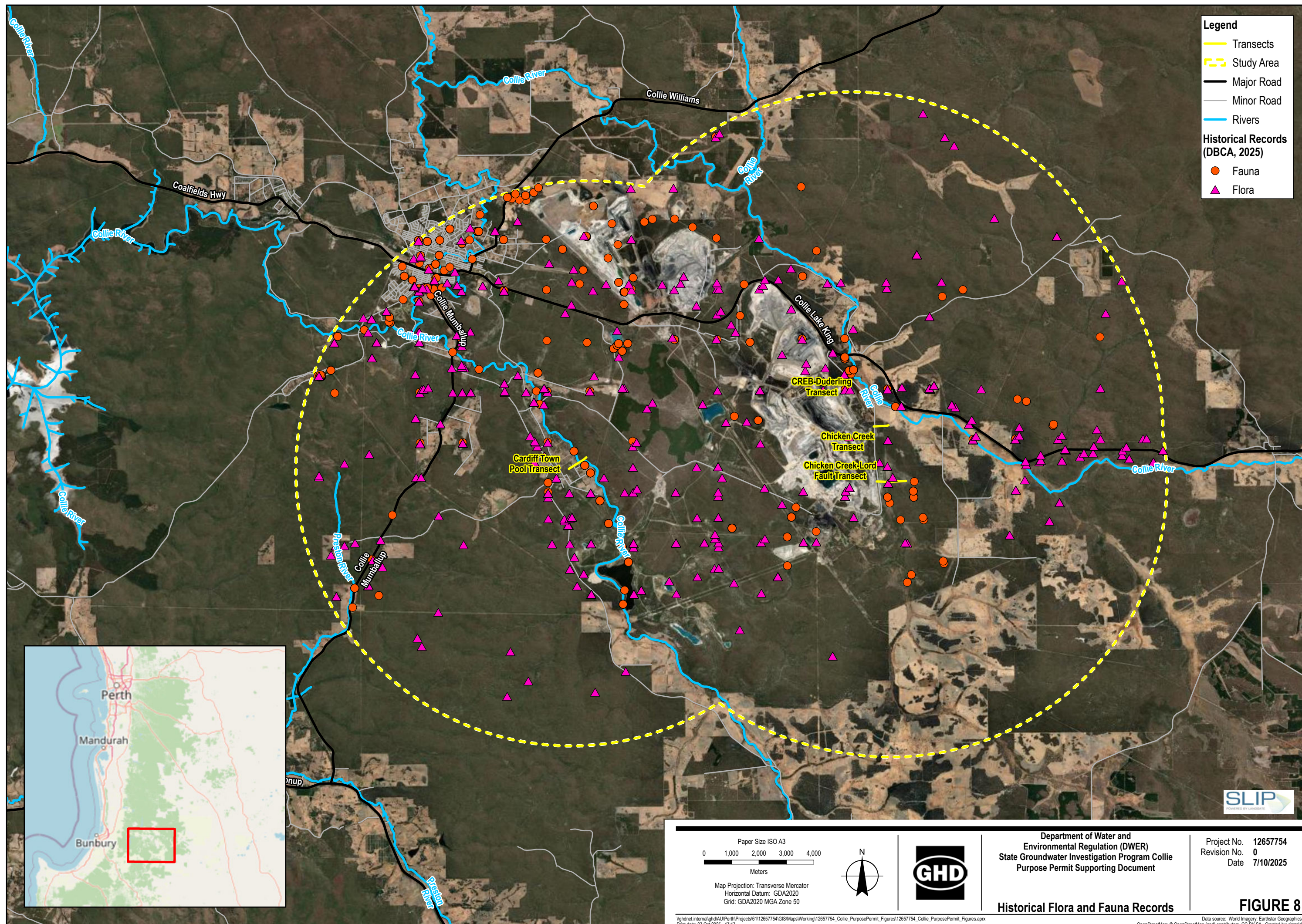


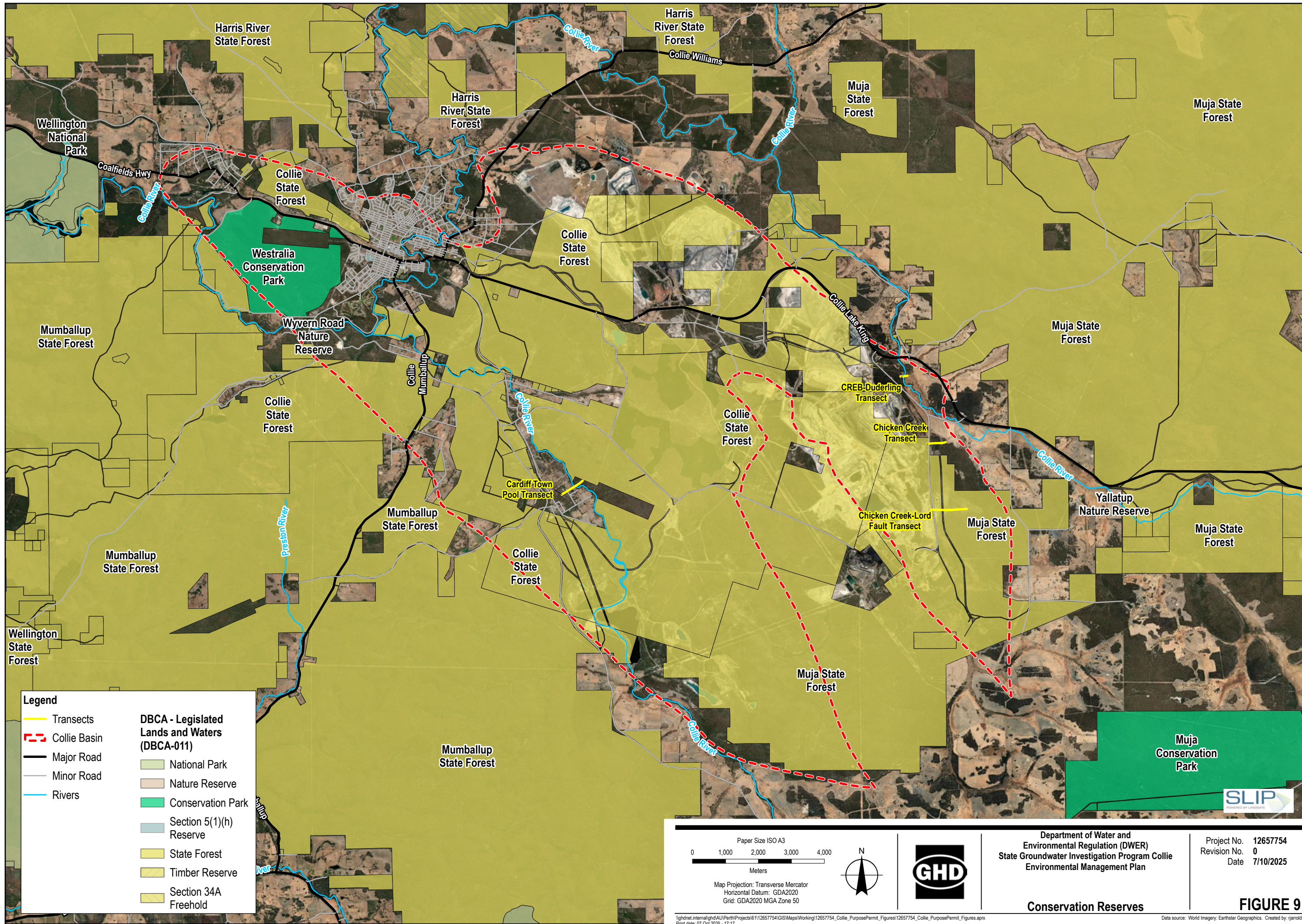


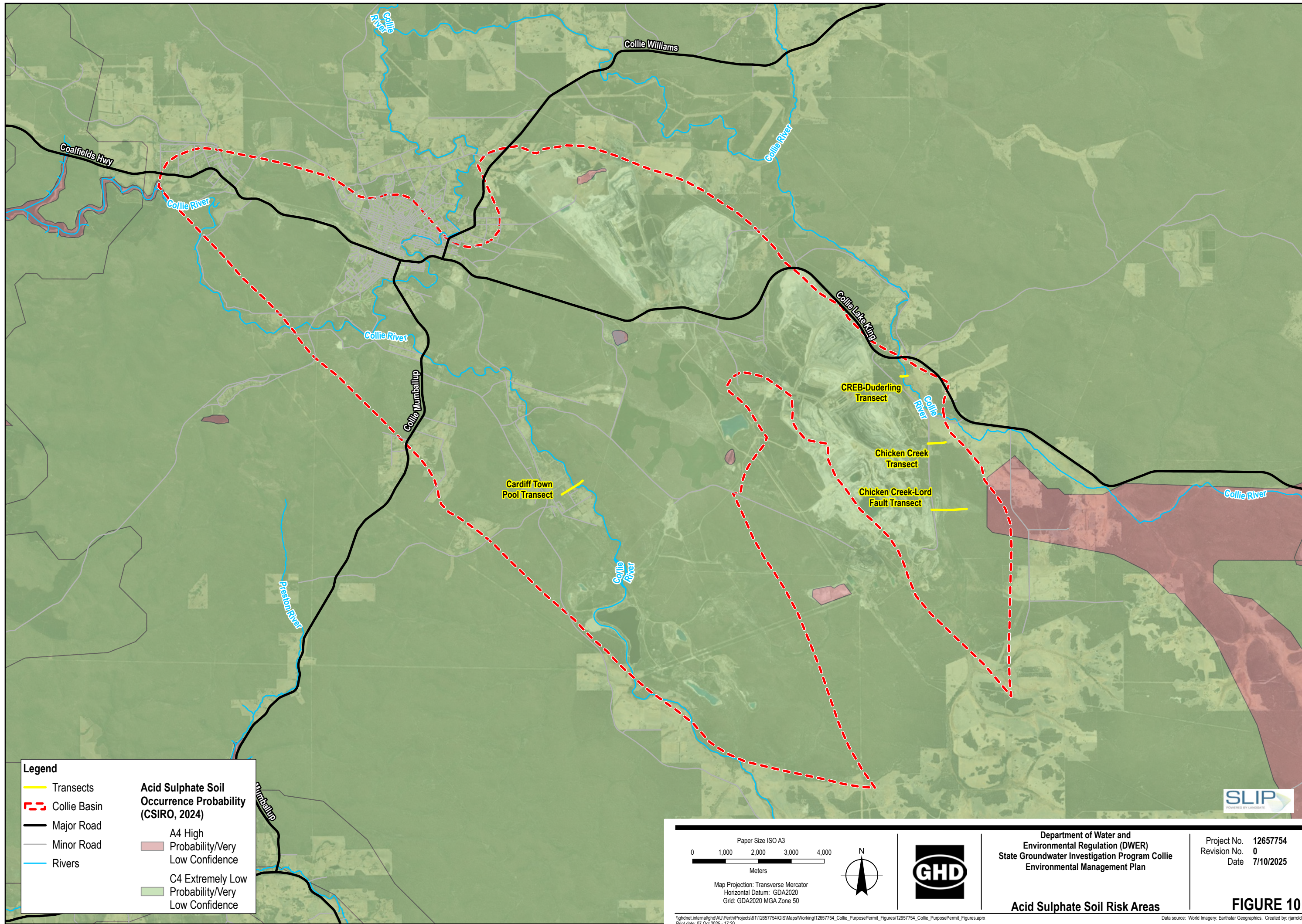












Appendix B

PMST & Dandjoo Desktop Searches



Australian Government

Department of Climate Change, Energy,
the Environment and Water

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: 27-Aug-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

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:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	21
Listed Migratory Species:	7

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:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	11
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
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:	5
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	21
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

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
BIRD		
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Zanda baudinii listed as Calyptorhynchus baudinii Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo [87736]	Endangered	Breeding known to occur within area
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
FISH		

Scientific Name	Threatened Category	Presence Text
Nannatherina balstoni Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat known to occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
Myrmecobius fasciatus Numbat [294]	Endangered	Translocated population known to occur within area
Phascogale calura Red-tailed Phascogale, Red-tailed Wambenger, Kenngoor [316]	Vulnerable	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat may occur within area
OTHER		
Westralunio carteri Carter's Freshwater Mussel, Ambiguous Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
PLANT		
Caladenia leucochila Collie Spider Orchid [88196]	Endangered	Species or species habitat known to occur within area
Caladenia lodgeana Lodge's Spider-orchid [68664]	Critically Endangered	Species or species habitat known to occur within area
Commersonia erythrogyna Trigwell's Rulingia [86397]	Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat known to occur within area
Jacksonia velveta Collie Jacksonia [82671]	Endangered	Species or species habitat likely to occur within area

Listed Migratory Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Migratory Terrestrial Species

Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
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Migratory Wetlands Species

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands

[Resource Information]

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

Commonwealth Land Name	State
Unknown	
Commonwealth Land - [50964]	WA
Commonwealth Land - [50962]	WA

Listed Marine Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat may occur within area overfly marine area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	
Greater Preston	National Park	WA	
Muja	Conservation Park	WA	
Westralia	Conservation Park	WA	
Wyvern Road	Nature Reserve	WA	
Yallatup	Nature Reserve	WA	

Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.	

RFA Name	State
South West WA RFA	Western Australia

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	
Bluewaters Power Station Expansion Phases 3 & 4	2008/4113		Completed	

Title of referral	Reference	Referral Outcome	Assessment Status
Collie Green Steel Mill	2024/09828		Approval
Muja Power Station FAD Raising Project, near Collie, WA	2019/8495		Completed
The Collie Battery Energy Storage System	2023/09462		Completed
Controlled action			
Bowelling curves realignment - Collie Lake King Road 64.76 - 69.84 SLK, WA	2016/7757	Controlled Action	Post-Approval
Coal Mine Expansion	2001/376	Controlled Action	Post-Approval
Collie Motorplex Dragstrip, WA	2015/7455	Controlled Action	Completed
Extension of coal mine, abutting Muja Mine, Collie, WA	2009/5014	Controlled Action	Assessment Approach
Proposed land clearing for Shotts Industrial Park	2009/5086	Controlled Action	Post-Approval
Stage 2 Buckingham Way- Collie Residential Development	2011/6049	Controlled Action	Post-Approval
Transmission Line Project	2011/6066	Controlled Action	Post-Approval
Not controlled action			
300MW Coal-fired Power Station Expansion	2005/2233	Not Controlled Action	Completed
Construction and operation of Bluewaters II power station	2004/1632	Not Controlled Action	Completed
Construction of Bluewaters Power Station	2003/1289	Not Controlled Action	Completed
Discharge of Water From Reverse Osmosis Treatment	2003/1154	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Premier Coal Mine Pit 3 North Extension, Collie, WA	2015/7493	Not Controlled Action	Completed
Water Corporation, Storage and Pipeline, Collie, WA	2021/8936	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Not controlled action (particular manner)			
Construction of urea production plant and supporting infrastructure	2009/5067	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

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 is 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 on the contents of this report.

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 point locations and environmental data layers.

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 when time permits.

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 breeding sites; and
- 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

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

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

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

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

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Dandjoo Species List Export

Created by Guest User on 28 Aug 2025

Source	Dandjoo - Department of Biodiversity, Conservation and Attractions
Method	User defined circle: [[116.26211, -33.42225]] 16.0 km.
Date time	2025-08-28T09:43:15.669044+08:00

Conservation status summary	Count
CD	1
CR	7
Cons code inherited from parent	1
EN	7
None	1103
OS	1
P1	3
P2	8
P3	23
P4	19
Parent of conservation listed taxa	4
VU	7
Total	1184

Kingdoms	Count
Animalia	382
Bacteria	1
Fungi	77
Plantae	724
Total unique species	1184

#	Class	Family	Name	Establishment	Conservation
---	-------	--------	------	---------------	--------------

Animalia

1	None	None	Bryozoa Ehrenberg, 1831		
2	None	Geotriidae	Geotria australis Gray, 1851	native	P3
3	Actinopterygii Klein, 1885	Galaxiidae	Galaxias occidentalis Ogilby, 1899	native	
4	Actinopterygii Klein, 1885	Mugilidae	Liza argentea (Quoy & Gaimard, 1825)		
5	Actinopterygii Klein, 1885	Percichthyidae D.S. Jordan & C.H. Eigenmann, 1890	Nannoperca vittata (Castelnau, 1873)		
6	Amphibia	Limnodynastidae	Heleioporus Gray, 1841		
7	Amphibia	Limnodynastidae	Heleioporus eyrei (Gray, 1845)	native	
8	Amphibia	Limnodynastidae	Heleioporus inornatus (Lee & Main, 1954)	native	
9	Amphibia	Limnodynastidae	Limnodynastes dorsalis (Gray, 1841)	native	
10	Amphibia	Limnodynastidae	Neobatrachus pelobatoides (Werner, 1914) (<i>Humming Frog</i>)	native	
11	Amphibia	Myobatrachidae	Crinia georgiana Tschudi, 1838	native	
12	Amphibia	Myobatrachidae	Crinia glauerti (Loveridge, 1933)	native	
13	Amphibia	Myobatrachidae	Crinia pseudinsignifera (Main, 1957)	native	

14	Amphibia	Myobatrachidae	Geocrinia leai (Fletcher, 1898)	native	
15	Amphibia	Pelodyadidae GÄ¼nther, 1858	Litoria adelaidensis (Gray, 1841)	native	
16	Amphibia	Pelodyadidae GÄ¼nther, 1858	Litoria moorei (Copland, 1957)	native	
17	Arachnida	None	Acariformes		
18	Arachnida	None	Araneae Clerck, 1757		
19	Arachnida	Actinopodidae Simon, 1892	Missulena Walckenaer, 1805		
20	Arachnida	Actinopodidae Simon, 1892	Missulena granulosa (O. P.-Cambridge, 1869)		
21	Arachnida	Actinopodidae Simon, 1892	Missulena hoggi Womersley, 1943		
22	Arachnida	Actinopodidae Simon, 1892	Missulena occatoria Walckenaer, 1805		
23	Arachnida	Anamidae Simon, 1889	Proshermacha Simon, 1908		
24	Arachnida	Araneidae Clerck, 1757	Arachnura Vinson, 1863	uncertain	
25	Arachnida	Araneidae Clerck, 1757	Araneinae Clerck, 1758		
26	Arachnida	Araneidae Clerck, 1757	Hortophora biapicata (L. Koch, 1871)		
27	Arachnida	Aturidae Thor, 1900	Aturidae Thor, 1900		
28	Arachnida	Barychelidae Simon, 1892	Idiommata Ausserer, 1871		
29	Arachnida	Barychelidae Simon, 1892	Synothele Simon, 1908		
30	Arachnida	Bothriuridae	Cercophonius Peters, 1861		
31	Arachnida	Buthidae C.L. Koch, 1837	Lychas C.L. Koch, 1845		
32	Arachnida	Clubionidae Simon, 1878	Clubiona Latreille, 1804		
33	Arachnida	Desidae Pocock, 1895	Colcarteria Gray, 1992	mixed	
34	Arachnida	Desidae Pocock, 1895	Corasoides australis Butler, 1929		
35	Arachnida	Eylaidae Leach, 1815	Eylaidae Leach, 1815		
36	Arachnida	Hydrachnidae Leach, 1815	Hydrachnidae Leach, 1815		
37	Arachnida	Idiopidae Simon, 1889	Gaius cooperi Rix, Raven & Harvey, 2018		
38	Arachnida	Idiopidae Simon, 1889	Idiosoma Ausserer, 1871		Parent of conservation listed taxa
39	Arachnida	Idiopidae Simon, 1889	Idiosoma raphiduca (Rainbow & Pulleine, 1918)	native	
40	Arachnida	Ixodidae	Ixodes hydromyidis Swan, 1931	uncertain	
41	Arachnida	Lamponidae Simon, 1893	Longepi woodman Platnick, 2000	mixed	
42	Arachnida	Limnesiidae	Limnesiidae		
43	Arachnida	Lycosidae	Artoria Thorell, 1877		
44	Arachnida	Lycosidae	Artoriopsis expolita (L. Koch, 1877)		
45	Arachnida	Lycosidae	Dingosa serrata (L. Koch, 1877)		
46	Arachnida	Lycosidae	Lycosidae		
47	Arachnida	Lycosidae	Tasmanicosa leuckarti (Thorell, 1870)		
48	Arachnida	Lycosidae	Venator Hogg, 1833		
49	Arachnida	Lycosidae	Venator immansuetus (Simon, 1909)		
50	Arachnida	Lycosidae	Venatrix pullastra (Simon, 1909)		
51	Arachnida	Salticidae Blackwall, 1841	Maratus madelineae Waldock, 2014		
52	Arachnida	Sparassidae Bertkau, 1872	Isopeda leishmanni Hogg, 1903		
53	Arachnida	Theridiidae Sundevall, 1833	Theridion mortuale Simon, 1908	native	
54	Arachnida	Triaenonychidae	Triaenonychinae		
55	Arachnida	Urodacidae	Urodacus novaehollandiae Peters, 1861		
56	Asteroidea	Asterinidae Gray, 1840	Pseudonepanthiaroughtoni (Livingstone, 1934)		
57	Aves	Acanthizidae	Acanthiza apicalis Gould, 1847	native	
58	Aves	Acanthizidae	Acanthiza chrysorrhoa (Quoy & Gaimard, 1830)	native	
59	Aves	Acanthizidae	Acanthiza chrysorrhoa chrysorrhoa (Quoy & Gaimard, 1830)	native	
60	Aves	Acanthizidae	Acanthiza inornata Gould, 1841	native	
61	Aves	Acanthizidae	Gerygone fusca (Gould, 1838)	native	

62	Aves	Acanthizidae	Sericornis frontalis (Vigors & Horsfield, 1827)	native	
63	Aves	Acanthizidae	Smicrornis brevirostris (Gould, 1838)	native	
64	Aves	Accipitridae	Aquila audax (Latham, 1802)	native	
65	Aves	Accipitridae	Elanus axillaris		
66	Aves	Accipitridae	Hieraaetus morphnoides (Gould, 1841)	native	
67	Aves	Alcedinidae	Dacelo novaeguineae (Hermann, 1783)	alien	
68	Aves	Alcedinidae	Todiramphus sanctus (Vigors & Horsfield, 1827)	native	
69	Aves	Anatidae	Anas superciliosa Gmelin, 1789	native	
70	Aves	Anatidae	Biziura lobata (Shaw, 1796)	native	
71	Aves	Anatidae	Chenonetta jubata (Latham, 1802)	native	
72	Aves	Anatidae	Cygnus atratus (Latham, 1790)	native	
73	Aves	Anatidae	Tadorna tadornoides (Jardine & Selby, 1828)	native	
74	Aves	Ardeidae	Botaurus flavicollis australis (Lesson, 1831)	native	P2
75	Aves	Ardeidae	Egretta novaehollandiae		
76	Aves	Artamidae	Artamus cinereus Vieillot, 1817	native	
77	Aves	Artamidae	Artamus cyanopterus (Latham, 1802)	native	
78	Aves	Artamidae	Cracticus torquatus (Latham, 1802)	native	
79	Aves	Artamidae	Gymnorhina tibicen (Latham, 1802)		
80	Aves	Cacatuidae	Calyptorhynchus banksii (Latham, 1790)	native	
81	Aves	Cacatuidae	Calyptorhynchus banksii naso Gould, 1837	native	VU
82	Aves	Cacatuidae	Eolophus roseicapilla (Vieillot, 1817)	native	
83	Aves	Cacatuidae	Zanda Mathews, 1913		Parent of conservation listed taxa
84	Aves	Cacatuidae	Zanda baudinii Lear, 1832	native	EN
85	Aves	Cacatuidae	Zanda latirostris Carnaby, 1948	native	EN
86	Aves	Campephagidae	Coracina novaehollandiae (Gmelin, 1789)	native	
87	Aves	Charadriidae	Elseyornis melanops	native	
88	Aves	Columbidae	Ocyphaps lophotes (Temminck, 1822)	native	
89	Aves	Columbidae	Phaps chalcoptera (Latham, 1790)	native	
90	Aves	Columbidae	Phaps elegans (Temminck, 1810)	native	
91	Aves	Columbidae	Spilopelia senegalensis (Linnaeus, 1766)		
92	Aves	Corvidae	Corvus coronoides Vigors & Horsfield, 1827	native	
93	Aves	Cracticidae	Strepera versicolor (Latham, 1802)	native	
94	Aves	Cuculidae	Cacomantis flabelliformis (Latham, 1802)	native	
95	Aves	Cuculidae	Chalcites lucidus (Gmelin & JF, 1788)	native	
96	Aves	Cuculidae	Chalcites lucidus plagosus (Latham, 1802)		
97	Aves	Cuculidae	Heteroscenes pallidus (Latham, 1802)		
98	Aves	Falconidae	Falco longipennis Swainson, 1837	native	
99	Aves	Falconidae	Falco peregrinus Tunstall, 1771	native	OS
100	Aves	Hirundinidae	Hirundo neoxena	native	
101	Aves	Hirundinidae	Petrochelidon nigricans (Vieillot, 1817)	native	
102	Aves	Locustellidae Bonaparte, 1854	Cincloramphus mathewsi Iredale, 1911	native	
103	Aves	Maluridae	Malurus elegans Gould, 1837	native	
104	Aves	Maluridae	Malurus splendens (Quoy & Gaimard, 1830)	native	
105	Aves	Meliphagidae	Acanthorhynchus superciliosus Gould, 1837	native	
106	Aves	Meliphagidae	Anthochaera carunculata (Shaw, 1790)	native	
107	Aves	Meliphagidae	Anthochaera lunulata Gould, 1838	native	
108	Aves	Meliphagidae	Gavicalis virescens	native	
109	Aves	Meliphagidae	Gliciphila melanops (Latham, 1802)	native	
110	Aves	Meliphagidae	Lichmera indistincta (Vigors & Horsfield, 1827)	native	
111	Aves	Meliphagidae	Melithreptus brevirostris (Vigors & Horsfield, 1827)	native	
112	Aves	Meliphagidae	Melithreptus chloropsis Gould, 1848	native	
113	Aves	Meliphagidae	Melithreptus lunatus (Vieillot, 1802)	mixed	

114	Aves	Meliphagidae	Phylidonyris niger (Bechstein, 1811)	native	
115	Aves	Meliphagidae	Phylidonyris novaehollandiae (Latham, 1790)	native	
116	Aves	Meliphagidae	Phylidonyris novaehollandiae longirostris (Gould, 1846)	native	
117	Aves	Meropidae	Merops ornatus Latham, 1802	native	
118	Aves	Monarchidae Bonaparte, 1854	Grallina cyanoleuca (Latham, 1802)	native	
119	Aves	Monarchidae Bonaparte, 1854	Myiagra inquieta (Latham, 1802)	native	
120	Aves	Motacillidae	Anthus novaeseelandiae (J.F.Gmelin, 1789)	alien	
121	Aves	Neosittidae	Daphoenositta chrysoptera (Latham, 1802)	native	
122	Aves	Pachycephalidae	Colluricincla harmonica (Latham, 1802)	native	
123	Aves	Pachycephalidae	Pachycephala occidentalis Ramsay, 1878	native	
124	Aves	Pachycephalidae	Pachycephala rufiventris (Latham, 1802)	native	
125	Aves	Pardalotidae	Pardalotus punctatus (Shaw, 1792)	native	
126	Aves	Pardalotidae	Pardalotus striatus (Gmelin, 1789)	native	
127	Aves	Petroicidae Mathews, 1920	Eopsaltria australis (Shaw, 1790)	native	
128	Aves	Petroicidae Mathews, 1920	Eopsaltria griseogularis Gould, 1838		
129	Aves	Petroicidae Mathews, 1920	Melanodryas cucullata (Latham, 1802)	native	
130	Aves	Petroicidae Mathews, 1920	Petroica boodang (Lesson, 1838)	native	
131	Aves	Petroicidae Mathews, 1920	Quoyornis georgianus (Quoy & Gaimard, 1830)		
132	Aves	Phalacrocoracidae	Microcarbo melanoleucos (Vieillot, 1817)		
133	Aves	Phalacrocoracidae	Phalacrocorax carbo (Linnaeus, 1758)	native	
134	Aves	Phalacrocoracidae	Phalacrocorax sulcirostris	native	
135	Aves	Podargidae	Podargus strigoides (Latham, 1802)	native	
136	Aves	Podicipedidae	Tachybaptus novaehollandiae (Stephens, 1826)	native	
137	Aves	Procellariidae	Pachyptila belcheri (Mathews, 1912)	native	
138	Aves	Psittacidae	Neophema elegans (Gould, 1837)	native	
139	Aves	Psittaculidae	Barnardius zonarius (Shaw, 1805)		
140	Aves	Psittaculidae	Platycercus icterotis (Temminck & Kuhl, 1820)	native	
141	Aves	Psittaculidae	Purpureicephalus spurius (Kuhl, 1820)	native	
142	Aves	Rallidae	Fulica atra Linnaeus, 1758	native	
143	Aves	Rallidae	Gallinula tenebrosa Gould, 1846	native	
144	Aves	Rallidae	Porphyrio porphyrio (Linnaeus, 1758)	native	
145	Aves	Rhipiduridae	Rhipidura albiscapa Gould, 1840	native	
146	Aves	Rhipiduridae	Rhipidura leucophrys (Latham, 1802)	native	
147	Aves	Strigidae	Ninox boobook (Latham, 1801)	native	
148	Aves	Threskiornithidae	Threskiornis moluccus (Cuvier, 1829)	native	
149	Aves	Zosteropidae	Zosterops lateralis (Latham, 1802)	native	
150	Bivalvia	Hyriidae	Hyriidae		
151	Bivalvia	Hyriidae	Westralunio carteri Iredale, 1934 (<i>Carter's Freshwater Mussel</i>)	native	VU
152	Branchiopoda Latreille, 1817	None	Diplostraca Gerstaecker, 1866		
153	Branchiopoda Latreille, 1817	Lynceidae	Lynceus Mueller, 1776		
154	Clitellata	None	Oligochaeta Grube, 1850		
155	Clitellata	None	Opisthopora		
156	Clitellata	Phreodrilidae Beddard, 1891	Phreodrilidae Beddard, 1891		
157	Copepoda H. Milne Edwards, 1840	None	Copepoda H. Milne Edwards, 1840		
158	Diplopoda de Blainville, 1844	Dalodesmidae Cook, 1896	Sphaerotrichopus Attems, 1911		
159	Diplopoda de Blainville, 1844	Iulomorphidae Verhoeff, 1924	Podykipus Attems, 1911		
160	Diplopoda de Blainville, 1844	Iulomorphidae Verhoeff, 1924	Podykipus leptoiuloides Attems, 1911		
161	Diplopoda de	Paradoxosomatidae	Antichiropus Attems, 1911		

	Blainville, 1844				
162	Diplopoda de Blainville, 1844	Paradoxosomatidae	Antichiropus variabilis Attems, 1911		
163	Gastropoda	Bothriembryontidae Iredale, 1937	Bothriembryon Pilsbry, 1894		
164	Gastropoda	Lymnaeidae	Bullastra lessoni (Deshayes, 1831)		
165	Gastropoda	Lymnaeidae	Pseudosuccinea columella (Say, 1817)		
166	Gastropoda	Planorbidae Rafinesque, 1815	Ancylinae Rafinesque, 1815		
167	Gastropoda	Planorbidae Rafinesque, 1815	Planorbidae Rafinesque, 1815		
168	Gastropoda	Thiaridae	Thiaridae		
169	Gymnolaemata	Bugulidae	Bugula neritina (Linnaeus, 1758)		
170	Hexacorallia	Dendrophylliidae Gray, 1847	Turbinaria frondens (Dana, 1846)		
171	Hexacorallia	Rhizangiidae	Culicia hoffmeisteri Squires, 1966		
172	Insecta	None	Lepidoptera		
173	Insecta	Aeshnidae	Aeshnidae		
174	Insecta	Aeshnidae	Anax papuensis (Burmeister, 1839)		
175	Insecta	Anisolabididae	Carcinophora occidentalis (Kirby, 1896)		
176	Insecta	Argiolestidae	Archiargiolestes pusillus (Tillyard, 1908)		
177	Insecta	Baetidae	Baetidae		
178	Insecta	Blattidae	Polyzosteria cuprea Saussure, 1863		
179	Insecta	Caenidae	Caenidae		
180	Insecta	Callipappidae	Callipappus Guérin Ménéville, 1841		
181	Insecta	Carabidae Latreille, 1802	Carabidae Latreille, 1802		
182	Insecta	Ceratopogonidae Newman, 1834	Ceratopogonidae Newman, 1834		
183	Insecta	Chaoboridae Newman, 1834	Chaoboridae Newman, 1834		
184	Insecta	Chironomidae Newman, 1834	Chironominae		
185	Insecta	Chironomidae Newman, 1834	Chironomus Meigen, 1803		
186	Insecta	Chironomidae Newman, 1834	Chironomus tepperi Skuse, 1889		
187	Insecta	Chironomidae Newman, 1834	Cladopelma curtivalva (Kieffer, 1917)		
188	Insecta	Chironomidae Newman, 1834	Corynoneura Winnertz, 1846		
189	Insecta	Chironomidae Newman, 1834	Cryptochironomus griseidorsum (Kieffer, 1917)		
190	Insecta	Chironomidae Newman, 1834	Gymnometriocnemus Goetghebuer, 1932		
191	Insecta	Chironomidae Newman, 1834	Harrisius Freeman, 1959		
192	Insecta	Chironomidae Newman, 1834	Kiefferulus martini (Freeman, 1961)		
193	Insecta	Chironomidae Newman, 1834	Macropelopia (Alotanypus) dalyupensis (Freeman, 1961)		
194	Insecta	Chironomidae Newman, 1834	Orthoclaadiinae		
195	Insecta	Chironomidae Newman, 1834	Paralimnophyes pullulus (Skuse, 1889)		
196	Insecta	Chironomidae Newman, 1834	Paramerina levidensis (Skuse, 1889)		
197	Insecta	Chironomidae Newman, 1834	Procladius Skuse, 1889		
198	Insecta	Chironomidae Newman, 1834	Procladius paludicola Skuse, 1889		
199	Insecta	Chironomidae Newman, 1834	Tanypodinae		

200	Insecta	Chironomidae Newman, 1834	Tanytarsus palmatus Freeman, 1961		
201	Insecta	Chironomidae Newman, 1834	Tanytarsus van der Wulp, 1874		
202	Insecta	Chironomidae Newman, 1834	Thienemanniella Kieffer, 1911		
203	Insecta	Chrysomelidae	Arsipoda kingensis Blackburn, 1907		
204	Insecta	Coccinellidae	Diomus notescens (Blackburn, 1889)		
205	Insecta	Coenagrionidae	Coenagrionidae		
206	Insecta	Colletidae	Callohesma occidentalis (Exley, 1974)		
207	Insecta	Colletidae	Euryglossa rubricata Smith, 1879		
208	Insecta	Colletidae	Euryglossa schomburgki Cockerell, 1910		
209	Insecta	Colletidae	Hylaeus (Euprosopis) elegans (Smith, 1853)		
210	Insecta	Colletidae	Hylaeus (Euprosopis) violaceus (Smith, 1853)		
211	Insecta	Colletidae	Hylaeus (Euprosopoides) obtusatus (Smith, 1879)		
212	Insecta	Colletidae	Hylaeus (Euprosopoides) ruficeps (Smith, 1853)		
213	Insecta	Colletidae	Hylaeus (Prosopisteron) quadratus (Smith, 1853)		
214	Insecta	Colletidae	Hyleoides zonalis Smith, 1853		
215	Insecta	Corduliidae	Corduliidae		
216	Insecta	Corduliidae	Hemicordulia tau (Selys, 1871)		
217	Insecta	Corixidae	Agraptocorixa Kirkaldy, 1898		
218	Insecta	Corixidae	Agraptocorixa parvipunctata (Hale, 1922)		
219	Insecta	Corixidae	Corixidae		
220	Insecta	Corixidae	Sigara (Tropocorixa) mullaka Lansbury, 1970		
221	Insecta	Corixidae	Sigara Fabricius, 1775		
222	Insecta	Culicidae Meigen, 1818	Culicidae Meigen, 1818		
223	Insecta	Curculionidae	Curculionidae		
224	Insecta	Curculionidae	Naupactus cervinus Boheman, 1840		
225	Insecta	Dytiscidae	Antiporus Sharp, 1882		
226	Insecta	Dytiscidae	Antiporus gilbertii (Clark, 1862)		
227	Insecta	Dytiscidae	Antiporus occidentalis Hawlitschek, Porch, Hendrich & Balke, 2011		
228	Insecta	Dytiscidae	Dytiscidae		
229	Insecta	Dytiscidae	Hyderodes Hope, 1838		
230	Insecta	Dytiscidae	Hyphydrus elegans (Montrouzier, 1860)		
231	Insecta	Dytiscidae	Lancetes lanceolatus (Clark, 1863)		
232	Insecta	Dytiscidae	Limbodessus inornatus (Sharp, 1882)		
233	Insecta	Dytiscidae	Megaporus Brinck, 1944		
234	Insecta	Dytiscidae	Megaporus howittii (Clark, 1862)		
235	Insecta	Dytiscidae	Necterosoma Macleay, 1871		
236	Insecta	Dytiscidae	Necterosoma darwini (Babington, 1841)		
237	Insecta	Dytiscidae	Onychohydrus Schaum, 1847		
238	Insecta	Dytiscidae	Platynectes R��gimbart, 1879		
239	Insecta	Dytiscidae	Sternopriscus Sharp, 1882		
240	Insecta	Dytiscidae	Sternopriscus browni Sharp, 1882		
241	Insecta	Ecnomidae	Ecnomidae		
242	Insecta	Empididae Latreille, 1804	Empididae Latreille, 1804		
243	Insecta	Erebidae Leach, 1815	Eudocima materna (Linnaeus, 1767)		
244	Insecta	Gelechiidae	Scrobipalpa aptatella (Walker, 1864)		
245	Insecta	Gomphidae	Gomphidae		
246	Insecta	Gripopterygidae	Gripopterygidae		
247	Insecta	Gryllotalpidae Leach, 1815	Gryllotalpa Latreille, 1802		
248	Insecta	Gyrinidae	Gyrinidae		
249	Insecta	Halictidae	Lasioglossum (Chilalictus) erythrurum (Cockerell, 1914)		
250	Insecta	Haliplidae Aub��, 1836	Haliplidae Aub��, 1836		

251	Insecta	Haliplidae Aub��, 1836	Haliplus Latreille, 1802		
252	Insecta	Hebridae	Hebridae		
253	Insecta	Hepialidae	Oxycanus occidentalis Tindale, 1935		
254	Insecta	Hydraenidae	Hydraenidae		
255	Insecta	Hydrometridae	Hydrometridae		
256	Insecta	Hydrophilidae Latreille, 1802	Berosus (Berosus) approximans Fairmaire, 1879		
257	Insecta	Hydrophilidae Latreille, 1802	Hydrophilidae Latreille, 1802		
258	Insecta	Hydrophilidae Latreille, 1802	Limnoxenus Motschulsky, 1853		
259	Insecta	Hydroptilidae	Hydroptilidae		
260	Insecta	Leptoceridae	Leptoceridae		
261	Insecta	Leptoceridae	Notalina Mosely, 1936		
262	Insecta	Leptoceridae	Triplectides Kolenati, 1859		
263	Insecta	Leptoceridae	Triplectides australis Nav��s, 1934		
264	Insecta	Leptophlebiidae	Leptophlebiidae		
265	Insecta	Leptophlebiidae	Nousia Nav��s, 1918		
266	Insecta	Leptophlebiidae	Nyungara bunni Dean, 1987		
267	Insecta	Lestidae	Austrolestes analis (Rambur, 1842)		
268	Insecta	Lestidae	Lestidae		
269	Insecta	Libellulidae	Libellulidae		
270	Insecta	Mantispidae	Campion rubellus Nav��s, 1914		
271	Insecta	Megachilidae	Megachile (Hackeriapis) tosticauda Cockerell, 1912		
272	Insecta	Megachilidae	Megachile ferox Smith, 1879		
273	Insecta	Mesoveliidae	Mesoveliidae		
274	Insecta	Micronectidae Jaczewski, 1924	Micronecta gracilis Hale, 1922		
275	Insecta	Micronectidae Jaczewski, 1924	Micronecta robusta Hale, 1922		
276	Insecta	Monophlebidae	Icerya Signoret, 1875		
277	Insecta	Noctuidae Latreille, 1809	Agrotis porphyricollis Guen��e, 1852		
278	Insecta	Noctuidae Latreille, 1809	Helicoverpa punctigera (Wallengren, 1860)		
279	Insecta	Noctuidae Latreille, 1809	Proteuxoa sanguinipuncta (Guen��e, 1852)		
280	Insecta	Notodontidae Stephens, 1829	Epicoma melanosticta Donovan, 1805		
281	Insecta	Notodontidae Stephens, 1829	Ochrogaster lunifer Herrich-Sch��ffer, 1855		
282	Insecta	Notodontidae Stephens, 1829	Tanystola isabella (White, 1841)		
283	Insecta	Notonectidae	Anisops Spinola, 1837		
284	Insecta	Notonectidae	Anisops hyperion Kirkaldy, 1898		
285	Insecta	Notonectidae	Anisops thienemanni Lundblad, 1933		
286	Insecta	Notonectidae	Notonectidae		
287	Insecta	Notonectidae	Paranisops Hale, 1924		
288	Insecta	Pentatomidae	Arniscus humeralis (Dallas, 1851)		
289	Insecta	Philopotamidae	Philopotamidae		
290	Insecta	Phoridae Curtis, 1833	Megaselia laevubrevis Disney, 2003		
291	Insecta	Rhinotermitidae	Coptotermes acinaciformis raffrayi Wasmann, 1900		
292	Insecta	Rhinotermitidae	Heterotermes platycephalus Froggatt, 1897		
293	Insecta	Scirtidae Fleming, 1821	Scirtidae Fleming, 1821		
294	Insecta	Simuliidae Newman, 1834	Simuliidae Newman, 1834		
295	Insecta	Tabanidae	Tabanidae		
296	Insecta	Telephlebiidae	Telephlebiidae		
297	Insecta	Termitidae	Amitermes obeuntis (Silvestri, 1909)		
298	Insecta	Termitidae	Microcerotermes serratus (Froggatt, 1898)		
299	Insecta	Termitidae	Occasitermes occasus (Silvestri, 1909)		

300	Insecta	Termitidae	Paracapritermes kraepelinii (Silvestri, 1909)		
301	Insecta	Termitidae	Xylochomitermes occidualis (Gay, 1971)		
302	Insecta	Tettigoniidae	Hemisaga denticulata (White, 1841)		
303	Insecta	Tettigoniidae	Kawanaphila mirla Rentz, 1993		
304	Insecta	Tettigoniidae	Oligodectoides tindalei Rentz, 1985		
305	Insecta	Tettigoniidae	Phasmodes ranatriformis Westwood, 1845		
306	Insecta	Tipulidae Latreille, 1802	Tipulidae Latreille, 1802		
307	Insecta	Veliidae	Veliidae		
308	Malacostraca	Amphisopodidae	Amphisopodidae		
309	Malacostraca	Ceinidae J. L. Barnard, None	Ceinidae J. L. Barnard, None		
310	Malacostraca	Melitidae Bousfield, 1973	Melita zeylanica kauerti J. L. Barnard, 1972		
311	Malacostraca	Palaemonidae Rafinesque, 1815	Palaemonidae Rafinesque, 1815		
312	Malacostraca	Paramelitidae Bousfield, 1977	Paramelitidae Bousfield, 1977		
313	Malacostraca	Parastacidae	Cherax Erichson, 1846		
314	Malacostraca	Parastacidae	Cherax cainii Austin, 2002	native	
315	Malacostraca	Parastacidae	Cherax destructor Clark, 1936		
316	Malacostraca	Parastacidae	Cherax plebejus (Hess, 1865)		
317	Malacostraca	Parastacidae	Cherax preissii (Erichson, 1846)		
318	Malacostraca	Parastacidae	Cherax quinquecarinatus (Gray, 1845)		
319	Malacostraca	Parastacidae	Cherax tenuimanus Smith, 2002	native	CR
320	Malacostraca	Parastacidae	Parastacidae		
321	Malacostraca	Perthiidae	Perthiidae		
322	Mammalia	Bovidae	Ovis aries Linnaeus, 1758	alien	
323	Mammalia	Canidae	Canis familiaris L., 1758	alien	
324	Mammalia	Canidae	Vulpes vulpes Linnaeus, 1758	alien	
325	Mammalia	Dasyuridae	Antechinus flavipes (Waterhouse, 1838)	native	
326	Mammalia	Dasyuridae	Antechinus flavipes leucogaster (Gray, 1841)	native	
327	Mammalia	Dasyuridae	Dasyurus geoffroii Gould, 1841	native	VU
328	Mammalia	Dasyuridae	Dasyurus geoffroii fortis Thomas, 1906 (<i>Chuditch</i>)	native	Cons code inherited from parent
329	Mammalia	Dasyuridae	Phascogale tapoatafa (Meyer, 1793)	native	Parent of conservation listed taxa
330	Mammalia	Dasyuridae	Phascogale tapoatafa wambenger Aplin, Rhind, Ten Have & Chesser, 2015 (<i>South-western Brush-tailed Phascogale</i>)	native	CD
331	Mammalia	Felidae	Felis catus Linnaeus, 1758	alien	
332	Mammalia	Leporidae	Oryctolagus cuniculus (Linnaeus, 1758)	alien	
333	Mammalia	Macropodidae	Macropus fuliginosus (Desmarest, 1817)	native	
334	Mammalia	Macropodidae	Notamacropus eugenii derbianus J.E. Gray, 1837 (<i>Tammar Wallaby</i>)	native	P4
335	Mammalia	Macropodidae	Notamacropus irma (Jourdan, 1837)	native	P4
336	Mammalia	Macropodidae	Setonix brachyurus (Quoy & Gaimard, 1830) (<i>Quokka</i>)	native	VU
337	Mammalia	Molossidae	Austronomus australis Gray, 1838	native	
338	Mammalia	Molossidae	Ozimops kitcheneri McKenzie, Reardon & Adams, 2014	native	
339	Mammalia	Muridae	Hydromys chrysogaster Geoffroy, 1804 (<i>Water-rat</i>)	native	P4
340	Mammalia	Muridae	Mus musculus	alien	
341	Mammalia	Muridae	Rattus rattus (Linnaeus, 1758)	alien	
342	Mammalia	Myrmecobiidae	Myrmecobius fasciatus Waterhouse, 1836 (<i>Numbat</i>)	native	EN
343	Mammalia	Peramelidae	Isoodon fusciventer (Gray, 1841)	native	P4
344	Mammalia	Phalangeridae	Trichosurus vulpecula (Kerr, 1793)	native	
345	Mammalia	Phalangeridae	Trichosurus vulpecula hypoleucus (Wagner, 1855)	native	
346	Mammalia	Potoroidae	Bettongia penicillata ogilbyi (Waterhouse, 1841)	native	CR
347	Mammalia	Pseudocheiridae	Pseudocheirus occidentalis (Thomas, 1888) (<i>Western Ringtail Possum</i>)	native	CR

348	Mammalia	Suidae	Sus scrofa Linnaeus, 1758	alien	
349	Mammalia	Tachyglossidae	Tachyglossus aculeatus (Shaw, 1792)	native	
350	Mammalia	Tachyglossidae	Tachyglossus aculeatus acanthion Collet, 1884	native	
351	Mammalia	Thylacomyidae	Macrotis lagotis (Reid, 1837) (<i>Bilby</i>)	native	VU
352	Mammalia	Vespertilionidae	Chalinolobus gouldii (Gray, 1841)	native	
353	Mammalia	Vespertilionidae	Chalinolobus morio (Gray, 1841)	native	
354	Mammalia	Vespertilionidae	Falsistrellus mackenziei Kitchener, Caputi & Jones, 1986	native	P4
355	Mammalia	Vespertilionidae	Nyctophilus geoffroyi Leach, 1821	native	
356	Mammalia	Vespertilionidae	Vespadelus regulus (Thomas, 1906)	native	
357	Ostracoda	None	Ostracoda		
358	Reptilia	Agamidae	Pogona minor minor (Sternfeld, 1919) (<i>Western Bearded Dragon</i>)	native	
359	Reptilia	Diplodactylidae	Diplodactylus lateroides Doughty & Oliver, 2013 (<i>Speckled Stone Gecko</i>)	native	
360	Reptilia	Elapidae	Pseudonaja affinis affinis GÃ¼nther, 1872 (<i>Dugite</i>)	native	
361	Reptilia	Pygopodidae	Aprasia pulchella Gray, 1839 (<i>Granite Worm-lizard</i>)	native	
362	Reptilia	Pygopodidae	Aprasia repens (Fry, 1914) (<i>Sand-plain Worm-lizard</i>)	native	
363	Reptilia	Scincidae	Acritoscincus trilineatus (Gray, 1839) (<i>Western Three-lined Skink</i>)	native	
364	Reptilia	Scincidae	Cryptoblepharus buchananii (Gray, 1838) (<i>Buchanan's Snake-eyed Skink</i>)	native	
365	Reptilia	Scincidae	Ctenotus delli Storr, 1974 (<i>Darling Range Heath Ctenotus, Dell's skink</i>)	native	P4
366	Reptilia	Scincidae	Ctenotus impar Storr, 1969 (<i>South-western Odd-striped Ctenotus</i>)	native	
367	Reptilia	Scincidae	Ctenotus labillardieri Dumeril & Bibron, 1839 (<i>Common South-west Ctenotus</i>)	native	
368	Reptilia	Scincidae	Egernia napoleonis (Gray, 1838) (<i>South-western Crevice-skink</i>)	native	
369	Reptilia	Scincidae	Hemiergis gracilipes (Gray, 1839) (<i>South-western Mulch-skink</i>)	native	
370	Reptilia	Scincidae	Hemiergis initialis initialis (Werner, 1910) (<i>Western Earless Skink</i>)	native	
371	Reptilia	Scincidae	Hemiergis peronii tridactyla (Boulenger, 1915) (<i>Four-toed Earless Skink</i>)	native	
372	Reptilia	Scincidae	Lerista distinguenda (Werner, 1910) (<i>Dwarf Four-toed Slider</i>)	native	
373	Reptilia	Scincidae	Menetia greyii Gray, 1845 (<i>Common Dwarf Skink</i>)	native	
374	Reptilia	Scincidae	Morethia obscura (Storr, 1973) (<i>Shrubland Pale-flecked Morethia</i>)	native	
375	Reptilia	Scincidae	Tiliqua rugosa (Gray, 1825)	native	
376	Reptilia	Scincidae	Tiliqua rugosa rugosa (Gray, 1825) (<i>Bobtail</i>)	native	
377	Reptilia	Typhlopidae Merrem, 1820	Anilius australis Gray, 1845 (<i>Southern Blind Snake</i>)	native	
378	Reptilia	Varanidae	Varanus gouldii (Gray, 1838)	native	
379	Reptilia	Varanidae	Varanus rosenbergi Mertens, 1957	native	
380	Rhabditophora Ehlers, 1985	Dugesiidæ Ball, 1974	Dugesiidæ Ball, 1974		
381	Rhynchonellata	Cancellothyrididae	Cancellothyris hedleyi Finlay, 1927		
382	Rhynchonellata	Terebratellidae King, 1850	Magellania flavescens (Lamarck, 1819)		

Bacteria

383	Cyanophyceae	Oscillatoriaceae Engl.	Oscillatoria Vaucher ex Gomont		
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Fungi

384	Ascomycetes	Icmadophilaceae Triebel	Siphula coriacea Nyl.	native	
385	Ascomycetes	Ochrolechiaceae Lumbsch & I.Schmitt	Ochrolechia A.Massal.		
386	Ascomycetes	Ochrolechiaceae Lumbsch & I.Schmitt	Ochrolechia pallescens (L.) A.Massal.	native	

387	Ascomycetes	Pertusariaceae Korb.	Lepra scaberula (A.W.Archer) I.Schmitt, B.P.Hodk. & Lumbsch	native	
388	Basidiomycetes	Clavariaceae Chevall.	Clavulinopsis corniculata (Schaeff.) Corner		
389	Basidiomycetes	Entolomataceae Kotl. & Pouzar	Entoloma incanum (Fr.) Hesler	alien	
390	Basidiomycetes	Hymenochaetaceae Donk	Fomitiporia lukinsii (N. Walters) Y.C.Dai & F. Wu		
391	Basidiomycetes	Inocybaceae JÄ¼lich	Inocybe (Fr.) Fr.		
392	Basidiomycetes	Omphalotaceae Bres.	Rhodocollybia Singer		
393	Basidiomycetes	Sclerodermataceae Corda	Pisolithus microcarpus (Cooke & Massee) G.Cunn.	native	
394	Basidiomycetes	Sclerodermataceae Corda	Scleroderma cepa Pers.	native	
395	Basidiomycetes	Strophariaceae Singer & A.H.Sm.	Galerina Earle		
396	Basidiomycetes	Strophariaceae Singer & A.H.Sm.	Pholiota (Fr.) P.Kumm.		
397	Basidiomycetes	Strophariaceae Singer & A.H.Sm.	Psilocybe (Fr.) P.Kumm.		
398	Dothideomycetes O.E.Erikss. & Winka	Pleosporaceae	Pyrenophora teres (Sacc.) Drechsler	uncertain	
399	Lecanoromycetes	Caliciaceae Chevall.	Buellia De Not.		
400	Lecanoromycetes	Caliciaceae Chevall.	Buellia disciformis (Fr.) Mudd.	native	
401	Lecanoromycetes	Caliciaceae Chevall.	Buellia dissa (Stirt.) Zahlbr.	native	
402	Lecanoromycetes	Cladoniaceae Zenker	Cladia aggregata (Sw.) Nyl.	native	
403	Lecanoromycetes	Cladoniaceae Zenker	Cladia muelleri (Hampe) Parnmen & Lumbsch	native	
404	Lecanoromycetes	Cladoniaceae Zenker	Cladia schizopora (Nyl.) Nyl.	native	
405	Lecanoromycetes	Cladoniaceae Zenker	Cladonia P.Browne		
406	Lecanoromycetes	Cladoniaceae Zenker	Cladonia angustata Nyl.	native	
407	Lecanoromycetes	Cladoniaceae Zenker	Cladonia chlorophaea (Sommerf.) Spreng.	native	
408	Lecanoromycetes	Cladoniaceae Zenker	Cladonia krempelhuberi (Vain.) Zahlbr.	native	
409	Lecanoromycetes	Cladoniaceae Zenker	Cladonia macilenta Hoffm.	native	
410	Lecanoromycetes	Cladoniaceae Zenker	Cladonia neozelandica Vain.	native	
411	Lecanoromycetes	Cladoniaceae Zenker	Cladonia ochrochlora FlÄ¼rke	native	
412	Lecanoromycetes	Cladoniaceae Zenker	Cladonia rigida (Hook.f. & Taylor) Hampe	native	
413	Lecanoromycetes	Cladoniaceae Zenker	Cladonia tessellata Ahti & Kashiw.	native	
414	Lecanoromycetes	Cladoniaceae Zenker	Thysanothecium hookeri Mont. & Berk.	native	
415	Lecanoromycetes	Cladoniaceae Zenker	Thysanothecium scutellatum (Fr.) D.J.Galloway	native	
416	Lecanoromycetes	Collemaataceae Zenker	Collema leucocarpum Hook.f. & Taylor	native	
417	Lecanoromycetes	Graphidaceae Dumort.	Graphis Adans.		
418	Lecanoromycetes	Lecanoraceae Korb.	Ramboldia laeta (Stirt.) Kalb, Lumbsch & Elix	native	
419	Lecanoromycetes	Lecanoraceae Korb.	Ramboldia stuartii (Hampe) Kantvilas & Elix	native	
420	Lecanoromycetes	Lecideaceae Chevall.	Lecidea capensis Zahlbr.	native	
421	Lecanoromycetes	Lecideaceae Chevall.	Lecidea tragorum Zahlbr.	native	
422	Lecanoromycetes	Lecideaceae Chevall.	Paraporpidia glauca (Taylor) Rambold	native	
423	Lecanoromycetes	Ophioparmaceae R.W.Rogers & Hafellner	Hypocenomyce australis Timdal	native	
424	Lecanoromycetes	Ophioparmaceae R.W.Rogers & Hafellner	Hypocenomyce scalaris (Ach.) M.Choisy	native	
425	Lecanoromycetes	Parmeliaceae Zenker	Austroparmelina conlabrosa (Hale) A.Crespo, Divakar & Elix	native	
426	Lecanoromycetes	Parmeliaceae Zenker	Austroparmelina subarida (Elix) A.Crespo, Divakar & Elix	native	
427	Lecanoromycetes	Parmeliaceae Zenker	Flavoparmelia marchantii Elix, Blanco & Crespo	native	
428	Lecanoromycetes	Parmeliaceae Zenker	Flavoparmelia soledians (Nyl.) Hale	native	
429	Lecanoromycetes	Parmeliaceae Zenker	Hypogymnia (Nyl.) Nyl.		
430	Lecanoromycetes	Parmeliaceae Zenker	Hypogymnia pulverata (Nyl.) Elix	native	
431	Lecanoromycetes	Parmeliaceae Zenker	Hypogymnia subphysodes (Kremp.) Filson	native	
432	Lecanoromycetes	Parmeliaceae Zenker	Menegazzia caesiopruinosa P.James	native	
433	Lecanoromycetes	Parmeliaceae Zenker	Menegazzia fertilis P.James	native	
434	Lecanoromycetes	Parmeliaceae Zenker	Parmotrema cooperi (J.Steiner & Zahlbr.) SÄ©rus.	native	

435	Lecanoromycetes	Parmeliaceae Zenker	Protoparmelia hesperia (Kantvilas & Elix) Kantvilas, Papong & Lumbsch	native	
436	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia (Vain.) Hale		
437	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia antleriformis (Elix) Elix & J.Johnst.	native	
438	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia louisii Elix & J.Johnst.	native	P2
439	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia luminosa (Elix) Hale	native	
440	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia nana (Kurok.) Elix & J.Johnst.	native	
441	Lecanoromycetes	Parmeliaceae Zenker	Xanthoparmelia oleosa (Elix & P.M.Armstr.) Elix & T.H.Nash	native	
442	Lecanoromycetes	Peltigeraceae Dumort.	Peltigera Willd.		
443	Lecanoromycetes	Peltigeraceae Dumort.	Peltigera dolichorhiza (Nyl.) Nyl.	native	
444	Lecanoromycetes	Physciaceae Zahlbr.	Amandinea M.Choisy		
445	Lecanoromycetes	Physciaceae Zahlbr.	Pyxine soorediata (Ach.) Mont.	native	
446	Lecanoromycetes	Ramalinaceae C.Agardh	Ramalina inflata (Hook.f. & Taylor) Hook.f. & Taylor	native	
447	Lecanoromycetes	Rhizocarpaceae Hafellner	Rhizocarpon reductum Th.Fr.	native	
448	Lecanoromycetes	Stereocaulaceae Chevall.	Lepraria Ach.		
449	Lecanoromycetes	Teloschistaceae Zahlbr.	Caloplaca Th.Fr.		
450	Lecanoromycetes	Teloschistaceae Zahlbr.	Caloplaca kaernefeltii S.Y.Kondr., Elix & A.Thell	native	
451	Lecanoromycetes	Tephromelataceae	Tephromela alectoronica Kalb	native	
452	Lecanoromycetes	Usneaceae Zenker	Usnea Adans.		
453	Lecanoromycetes	Usneaceae Zenker	Usnea cornuta Korb.	native	
454	Lecanoromycetes	Usneaceae Zenker	Usnea dasaea Stirt.	native	
455	Lecanoromycetes	Usneaceae Zenker	Usnea inermis Motyka	native	
456	Lecanoromycetes	Usneaceae Zenker	Usnea subalpina G.N.Stevens	native	
457	Leotiomyces	Chlorospleniaceae Ekanayaka	Chlorosplenium Fr.	uncertain	
458	Lichinomycetes Reeb, Lutzoni & Cl.Roux	Lichinaceae Nyl.	Pyrenopsis (Nyl.) Nyl.		
459	Lichinomycetes Reeb, Lutzoni & Cl.Roux	Peltulaceae BÅ¼del	Peltula obscurans (Nyl.) Gyeln.	native	
460	Pezizomycetes	Candelariaceae Hakul.	Candelariella xanthostigmoides (MÅ¼ll.Arg.) R.W.Rogers	native	

Plantae

461	Bryopsida	Bryaceae Schwagr.	Gemmabryum pachythea (MÅ¼ll.Hal.) J.R.Spence & H.P.Ramsay	native	
462	Bryopsida	Bryaceae Schwagr.	Ptychostomum angustifolium (Brid.) J.R.Spence & H.P.Ramsay	native	
463	Bryopsida	Bryaceae Schwagr.	Rosulabryum torquescens (De Not.) J.R.Spence	native	
464	Bryopsida	Dicranaceae Schimp.	Campylopus introflexus (Hedw.) Brid.	alien	
465	Bryopsida	Ditrichaceae Limpr.	Ceratodon purpureus (Hedw.) Brid.	native	
466	Bryopsida	Ditrichaceae Limpr.	Ditrichum difficile (Duby) M.Fleisch.	native	
467	Bryopsida	Funariaceae	Entosthodon subnudus (Taylor) Fife	native	
468	Bryopsida	Funariaceae	Funaria hygrometrica Hedw.	native	
469	Bryopsida	Orthotrichaceae Arn.	Zygodon intermedius Bruch & Schimp.	native	
470	Bryopsida	Orthotrichaceae Arn.	Zygodon menziesii (Schwagr.) Arn.	native	
471	Bryopsida	Pottiaceae Schimp.	Barbula calycina SchwÃ¼gr.	native	
472	Bryopsida	Pottiaceae Schimp.	Syntrichia papillosa (Wilson) Jur.	native	
473	Bryopsida	Sematophyllaceae Broth.	Sematophyllum homomallum (Hampe) Broth.	native	
474	Bryopsida	Sematophyllaceae Broth.	Sematophyllum subhumile (MÅ¼ll.Hal.) M.Fleisch.	native	
475	Bryopsida	Sematophyllaceae Broth.	Sematophyllum subhumile var. contiguum (Mitt.) B.C.Tan, W.B.Schofield & H.P.Ramsay	native	
476	Cycadopsida	Zamiaceae Horan.	Macrozamia riedlei (Gaudich.) C.A.Gardner (<i>Zamia</i>)	native	
477	Jungermanniopsida	Acrobolbaceae E.A.Hodgs.	Lethocolea pansa (Taylor) G.A.M.Scott & K.G.Beckm.	native	
478	Jungermanniopsida	Cephaloziellaceae Douin	Cephaloziella varians (Gottsche) Steph.	native	
479	Jungermanniopsida	Fossombroniaceae	Fossombronia Raddi		
480	Jungermanniopsida	Jungermanniaceae	Jamesoniella colorata (Lehm.) Schiffn.	native	

481	Jungermanniopsida	Scapaniaceae	Chaetophyllopsis whiteleggei (Carrington & Pearson) R.M.Schust	native	
482	Liliopsida	Anarthriaceae D.F.Cutler & Airy Shaw	Lyginia imberbis R.Br.	native	
483	Liliopsida	Asparagaceae Juss.	Dichopogon Kunth		
484	Liliopsida	Asparagaceae Juss.	Laxmannia minor R.Br.	native	
485	Liliopsida	Asparagaceae Juss.	Laxmannia ramosa Lindl. subsp. ramosa	native	
486	Liliopsida	Asparagaceae Juss.	Laxmannia sessiliflora Decne.	native	
487	Liliopsida	Asparagaceae Juss.	Laxmannia sessiliflora subsp. australis Keighery	native	
488	Liliopsida	Asparagaceae Juss.	Laxmannia squarrosa Lindl.	native	
489	Liliopsida	Asparagaceae Juss.	Lomandra Labill.		
490	Liliopsida	Asparagaceae Juss.	Lomandra caespitosa (Benth.) Ewart (<i>Tufted Mat Rush</i>)	native	
491	Liliopsida	Asparagaceae Juss.	Lomandra drummondii (Benth.) Ewart	native	
492	Liliopsida	Asparagaceae Juss.	Lomandra integra T.Macfarlane	native	
493	Liliopsida	Asparagaceae Juss.	Lomandra nigricans T.Macfarlane	native	
494	Liliopsida	Asparagaceae Juss.	Lomandra odora (Endl.) Ewart (<i>Tiered Matrush</i>)	native	
495	Liliopsida	Asparagaceae Juss.	Lomandra pauciflora (R.Br.) Ewart	native	
496	Liliopsida	Asparagaceae Juss.	Lomandra preissii (Endl.) Ewart (<i>Preiss' Mat Rush</i>)	native	
497	Liliopsida	Asparagaceae Juss.	Lomandra purpurea (Endl.) Ewart (<i>Purple Mat Rush</i>)	native	
498	Liliopsida	Asparagaceae Juss.	Lomandra sericea (Endl.) Ewart (<i>Silky Mat Rush</i>)	native	
499	Liliopsida	Asparagaceae Juss.	Lomandra spartea (Endl.) Ewart	native	
500	Liliopsida	Asparagaceae Juss.	Lomandra suaveolens (Endl.) Ewart	native	
501	Liliopsida	Asparagaceae Juss.	Lomandra whicherensis Keighery	native	P3
502	Liliopsida	Asparagaceae Juss.	Sowerbaea laxiflora Lindl. (<i>Purple Tassels</i>)	native	
503	Liliopsida	Asparagaceae Juss.	Thysanotus R.Br.		
504	Liliopsida	Asparagaceae Juss.	Thysanotus arbuscula Baker	native	
505	Liliopsida	Asparagaceae Juss.	Thysanotus manglesianus Kunth (<i>Fringed Lily, Mangles' Fringed Lily</i>)	native	
506	Liliopsida	Asparagaceae Juss.	Thysanotus multiflorus R.Br. (<i>Many-flowered Fringe Lily</i>)	native	
507	Liliopsida	Asparagaceae Juss.	Thysanotus patersonii R.Br. (<i>Paterson's Fringed Lily</i>)	native	
508	Liliopsida	Asparagaceae Juss.	Thysanotus sparteus R.Br. (<i>Leafless Fringed Lily</i>)	native	
509	Liliopsida	Asparagaceae Juss.	Thysanotus tenellus Endl.	native	
510	Liliopsida	Asparagaceae Juss.	Thysanotus thyrsoides Baker	native	
511	Liliopsida	Asparagaceae Juss.	Thysanotus unicipensis Sirisena, T.Macfarlane & Conran	native	P3
512	Liliopsida	Centrolepidaceae Endl.	Centrolepis aristata (R.Br.) Poir.	native	
513	Liliopsida	Centrolepidaceae Endl.	Centrolepis pilosa Hieron.	native	
514	Liliopsida	Colchicaceae DC.	Burchardia congesta Lindl. (<i>Milkmaids</i>)	native	
515	Liliopsida	Colchicaceae DC.	Wurmbea Thunb.		
516	Liliopsida	Colchicaceae DC.	Wurmbea sinora T.Macfarlane	native	
517	Liliopsida	Cyperaceae Juss.	Carex appressa R.Br. (<i>Tall Sedge</i>)	native	
518	Liliopsida	Cyperaceae Juss.	Chaetospora curvifolia R.Br.	native	
519	Liliopsida	Cyperaceae Juss.	Cyathochaeta avenacea (R.Br.) Benth.	native	
520	Liliopsida	Cyperaceae Juss.	Cyathochaeta teretifolia W.Fitzg.	native	P3
521	Liliopsida	Cyperaceae Juss.	Cyperus alterniflorus R.Br.	native	
522	Liliopsida	Cyperaceae Juss.	Cyperus congestus Vahl	alien	
523	Liliopsida	Cyperaceae Juss.	Eleocharis keigheryi K.L.Wilson	native	VU
524	Liliopsida	Cyperaceae Juss.	Gahnia decomposita (R.Br.) Benth.	native	
525	Liliopsida	Cyperaceae Juss.	Isolepis cernua var. setiformis (Benth.) Muasya	native	
526	Liliopsida	Cyperaceae Juss.	Isolepis cyperoides R.Br.	native	
527	Liliopsida	Cyperaceae Juss.	Isolepis hystrix (Thunb.) Nees	alien	
528	Liliopsida	Cyperaceae Juss.	Lepidosperma Labill.		
529	Liliopsida	Cyperaceae Juss.	Lepidosperma leptostachyum Benth.	native	
530	Liliopsida	Cyperaceae Juss.	Lepidosperma sp. Margaret River (B.J. Lepschi 1841)	native	
531	Liliopsida	Cyperaceae Juss.	Lepidosperma squamatum Labill.	native	
532	Liliopsida	Cyperaceae Juss.	Lepidosperma tenue Benth.	native	

533	Liliopsida	Cyperaceae Juss.	Lepidosperma tetraquetrum Nees	native	
534	Liliopsida	Cyperaceae Juss.	Mesomelaena graciliceps (C.B.Clarke) K.L.Wilson	native	
535	Liliopsida	Cyperaceae Juss.	Mesomelaena tetragona (R.Br.) Benth. (<i>Semaphore Sedge</i>)	native	
536	Liliopsida	Cyperaceae Juss.	Morelotia octandra (Nees) R.L.Barrett & J.J.Bruhl	native	
537	Liliopsida	Cyperaceae Juss.	Netrostylis R.L.Barrett, J.J.Bruhl & K.L.Wilson		
538	Liliopsida	Cyperaceae Juss.	Netrostylis sp. Jarrah Forest (R. Davis 7391)	native	
539	Liliopsida	Cyperaceae Juss.	Schoenus natans (F.Muell.) Benth. (<i>Floating Bog-rush</i>)	native	P4
540	Liliopsida	Cyperaceae Juss.	Schoenus sp. Waroona (G.J. Keighery 12235)	native	P3
541	Liliopsida	Dasypogonaceae Dumort.	Dasypogon bromeliifolius R.Br. (<i>Pineapple Bush</i>)	native	
542	Liliopsida	Haemodoraceae R.Br.	Anigozanthos bicolor Endl. (<i>Little Kangaroo Paw</i>)	native	
543	Liliopsida	Haemodoraceae R.Br.	Anigozanthos bicolor subsp. decrescens Hopper	native	
544	Liliopsida	Haemodoraceae R.Br.	Anigozanthos flavidus DC. (<i>Tall Kangaroo Paw</i>)	native	
545	Liliopsida	Haemodoraceae R.Br.	Anigozanthos manglesii D.Don subsp. manglesii (<i>Mangles' Kangaroo Paw</i>)	native	
546	Liliopsida	Haemodoraceae R.Br.	Conostylis aculeata R.Br.	native	
547	Liliopsida	Haemodoraceae R.Br.	Conostylis aculeata R.Br. subsp. aculeata	native	
548	Liliopsida	Haemodoraceae R.Br.	Conostylis laxiflora Benth.	native	
549	Liliopsida	Haemodoraceae R.Br.	Conostylis pusilla Endl.	native	
550	Liliopsida	Haemodoraceae R.Br.	Conostylis serrulata R.Br.	native	
551	Liliopsida	Haemodoraceae R.Br.	Conostylis setigera R.Br. subsp. setigera	native	
552	Liliopsida	Haemodoraceae R.Br.	Haemodorum Sm.		
553	Liliopsida	Haemodoraceae R.Br.	Haemodorum simplex Lindl.	native	
554	Liliopsida	Haemodoraceae R.Br.	Haemodorum spicatum R.Br.	native	
555	Liliopsida	Haemodoraceae R.Br.	Phlebocarya ciliata R.Br.	native	
556	Liliopsida	Haemodoraceae R.Br.	Tribonanthes elongata E.J.Hickman & Hopper (<i>Brilliant-flowered Tiurndin</i>)	native	
557	Liliopsida	Haemodoraceae R.Br.	Tribonanthes longipetala Lindl. (<i>Branching Tiurndin</i>)	native	
558	Liliopsida	Haemodoraceae R.Br.	Tribonanthes violacea Endl. (<i>Violet Tiurndin</i>)	native	
559	Liliopsida	Hemerocallidaceae R.Br.	Agrostocrinum hirsutum (Lindl.) Keighery (<i>Grass Lily</i>)	native	
560	Liliopsida	Hemerocallidaceae R.Br.	Caesia micrantha Lindl. (<i>Pale Grass Lily</i>)	native	
561	Liliopsida	Hemerocallidaceae R.Br.	Caesia occidentalis R.Br.	native	
562	Liliopsida	Hemerocallidaceae R.Br.	Chamaescilla corymbosa (R.Br.) Benth.	native	
563	Liliopsida	Hemerocallidaceae R.Br.	Chamaescilla corymbosa (R.Br.) Benth. var. corymbosa	native	
564	Liliopsida	Hemerocallidaceae R.Br.	Corynotheca elongata (R.J.F.Hend.) R.L.Barrett & T.Macfarlane (<i>Spreading Sand Lily</i>)	native	
565	Liliopsida	Hemerocallidaceae R.Br.	Dianella Lam.		
566	Liliopsida	Hemerocallidaceae R.Br.	Dianella revoluta R.Br.	native	
567	Liliopsida	Hemerocallidaceae R.Br.	Dianella revoluta var. divaricata (R.Br.) R.J.F.Hend.	native	
568	Liliopsida	Hemerocallidaceae R.Br.	Johnsonia acaulis Endl.	native	
569	Liliopsida	Hemerocallidaceae R.Br.	Johnsonia lupulina R.Br.	native	
570	Liliopsida	Hemerocallidaceae R.Br.	Stypandra glauca R.Br. (<i>Blind Grass</i>)	native	
571	Liliopsida	Hemerocallidaceae R.Br.	Tricoryne elatior R.Br. (<i>Yellow Autumn Lily</i>)	native	
572	Liliopsida	Hemerocallidaceae R.Br.	Tricoryne humilis Endl.	native	
573	Liliopsida	Iridaceae Juss.	Ixia fuscocitrina Redoute	alien	
574	Liliopsida	Iridaceae Juss.	Ixia polystachya L.	alien	
575	Liliopsida	Iridaceae Juss.	Patersonia babianoides Benth.	native	
576	Liliopsida	Iridaceae Juss.	Patersonia maxwellii (F.Muell.) Benth.	native	
577	Liliopsida	Iridaceae Juss.	Patersonia occidentalis R.Br.	native	
578	Liliopsida	Iridaceae Juss.	Patersonia occidentalis R.Br. var. occidentalis	native	
579	Liliopsida	Iridaceae Juss.	Patersonia pygmaea Lindl.	native	
580	Liliopsida	Iridaceae Juss.	Patersonia umbrosa var. xanthina (F.Muell.) Domin (<i>Yellow Flags</i>)	native	
581	Liliopsida	Iridaceae Juss.	Watsonia meriana (L.) Mill. (<i>Bulbil Watsonia</i>)	alien	
582	Liliopsida	Juncaceae Juss.	Juncus L.		
583	Liliopsida	Juncaceae Juss.	Juncus bufonius L.	alien	

584	Liliopsida	Juncaceae Juss.	Juncus capitatus Weigel	alien	
585	Liliopsida	Juncaceae Juss.	Juncus meianthus K.L.Wilson	native	P3
586	Liliopsida	Juncaceae Juss.	Juncus pallidus R.Br.	native	
587	Liliopsida	Juncaceae Juss.	Juncus planifolius R.Br.	native	
588	Liliopsida	Juncaceae Juss.	Juncus usitatus L.A.S.Johnson	alien	
589	Liliopsida	Juncaceae Juss.	Luzula meridionalis H.Nordensk. (<i>Field Woodrush</i>)	native	
590	Liliopsida	Juncaginaceae Rich.	Cycnogeton lineare (Endl.) Sond.	native	
591	Liliopsida	Juncaginaceae Rich.	Triglochin mucronata R.Br.	native	
592	Liliopsida	Orchidaceae Juss.	Arachnorchis macrostylis (Fitzg.) D.L.Jones & M.A.Clem.		
593	Liliopsida	Orchidaceae Juss.	Caladenia R.Br. (<i>Fairy Orchids</i>)		
594	Liliopsida	Orchidaceae Juss.	Caladenia cairnsiana F.Muell. (<i>Zebra Orchid</i>)	native	
595	Liliopsida	Orchidaceae Juss.	Caladenia denticulata Lindl.	native	
596	Liliopsida	Orchidaceae Juss.	Caladenia discoidea Lindl.	native	
597	Liliopsida	Orchidaceae Juss.	Caladenia dorrienii Domin	native	EN
598	Liliopsida	Orchidaceae Juss.	Caladenia flava R.Br. (<i>Cowslip Orchid</i>)	native	
599	Liliopsida	Orchidaceae Juss.	Caladenia flava subsp. sylvestris Hopper & A.P.Br. (<i>Karri Cowslip Orchid</i>)	native	
600	Liliopsida	Orchidaceae Juss.	Caladenia leucochila A.P.Br., R.D.Phillips & G.Brockman (<i>Collie Spider Orchid</i>)	native	EN
601	Liliopsida	Orchidaceae Juss.	Caladenia longicauda Lindl. (<i>Common White Spider Orchid</i>)	native	
602	Liliopsida	Orchidaceae Juss.	Caladenia longicauda subsp. eminens (Domin) Hopper & A.P.Br.	native	
603	Liliopsida	Orchidaceae Juss.	Caladenia longicauda subsp. redacta Hopper & A.P.Br.	native	
604	Liliopsida	Orchidaceae Juss.	Caladenia longiclavata E.Coleman (<i>Clubbed Spider Orchid</i>)	native	
605	Liliopsida	Orchidaceae Juss.	Caladenia macrostylis Fitzg. (<i>Leaping Spider Orchid</i>)	native	
606	Liliopsida	Orchidaceae Juss.	Caladenia nana Endl. (<i>Pink Fan Orchid</i>)	native	
607	Liliopsida	Orchidaceae Juss.	Caladenia polychroma Hopper & A.P.Br. (<i>Joseph's Spider Orchid</i>)	native	
608	Liliopsida	Orchidaceae Juss.	Caladenia reptans Lindl. (<i>Little Pink Fairy Orchid</i>)	native	
609	Liliopsida	Orchidaceae Juss.	Caladenia reptans Lindl. subsp. reptans (<i>Little Pink Fairy</i>)	native	
610	Liliopsida	Orchidaceae Juss.	Caladenia splendens Hopper & A.P.Br.	native	
611	Liliopsida	Orchidaceae Juss.	Caladenia uliginosa A.S.George	native	
612	Liliopsida	Orchidaceae Juss.	Caladenia validinervia A.P.Br. & G.Brockman (<i>Lake Muir Spider Orchid</i>)	native	P1
613	Liliopsida	Orchidaceae Juss.	Calochilus sp. Boyup Brook (E. Chapman s.n. 12/10/2002)	native	P1
614	Liliopsida	Orchidaceae Juss.	Cyanicula sericea (Lindl.) Hopper & A.P.Br.	native	
615	Liliopsida	Orchidaceae Juss.	Cyrtostylis huegelii Endl.	native	
616	Liliopsida	Orchidaceae Juss.	Disa bracteata Sw.	alien	
617	Liliopsida	Orchidaceae Juss.	Diuris laxiflora Lindl. (<i>Bee Orchid</i>)	native	
618	Liliopsida	Orchidaceae Juss.	Diuris longifolia R.Br. (<i>Purple Pansy Orchid</i>)	native	
619	Liliopsida	Orchidaceae Juss.	Diuris micrantha D.L.Jones	native	VU
620	Liliopsida	Orchidaceae Juss.	Diuris porrifolia Lindl.	native	
621	Liliopsida	Orchidaceae Juss.	Drakaea confluens Hopper & A.P.Br.	native	CR
622	Liliopsida	Orchidaceae Juss.	Drakaea elastica Lindl. (<i>Glossy-leaved Hammer Orchid</i>)	native	CR
623	Liliopsida	Orchidaceae Juss.	Drakaea glyptodon Fitzg. (<i>King-in-his-carriage</i>)	native	
624	Liliopsida	Orchidaceae Juss.	Drakaea livida J.Drumm.	native	
625	Liliopsida	Orchidaceae Juss.	Elythranthera brunonis (Endl.) A.S.George (<i>Purple Enamel Orchid</i>)	native	
626	Liliopsida	Orchidaceae Juss.	Eriochilus dilatatus Lindl. (<i>White Bunny Orchid</i>)	native	
627	Liliopsida	Orchidaceae Juss.	Eriochilus dilatatus Lindl. subsp. dilatatus	native	
628	Liliopsida	Orchidaceae Juss.	Eriochilus scaber Lindl.	native	
629	Liliopsida	Orchidaceae Juss.	Eriochilus scaber Lindl. subsp. scaber	native	
630	Liliopsida	Orchidaceae Juss.	Leporella fimbriata (Lindl.) A.S.George (<i>Fringed Hare Orchid, Hare Orchid</i>)	native	
631	Liliopsida	Orchidaceae Juss.	Leptoceras menziesii (R.Br.) Lindl.	native	
632	Liliopsida	Orchidaceae Juss.	Lyperanthus serratus Lindl.	native	
633	Liliopsida	Orchidaceae Juss.	Paracaleana nigrita (Lindl.) Blaxell (<i>Flying Duck Orchid</i>)	native	

634	Liliopsida	Orchidaceae Juss.	Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem. (<i>Blue Beard, Blue Fairy Orchid</i>)	native	
635	Liliopsida	Orchidaceae Juss.	Praecoxanthus aphyllus (Benth.) Hopper & A.P.Br.	native	
636	Liliopsida	Orchidaceae Juss.	Prasophyllum hians Rchb.f. (<i>Yawning Leek Orchid</i>)	native	
637	Liliopsida	Orchidaceae Juss.	Prasophyllum macrotys Lindl. (<i>Inland Leek Orchid</i>)	native	
638	Liliopsida	Orchidaceae Juss.	Prasophyllum parvifolium Lindl. (<i>Autumn Leek Orchid</i>)	native	
639	Liliopsida	Orchidaceae Juss.	Pterostylis angulata (D.L.Jones & C.J.French) D.L.Jones & C.J.French (<i>Helena River Snail Orchid</i>)	native	
640	Liliopsida	Orchidaceae Juss.	Pterostylis aspera D.L.Jones & M.A.Clem.	native	
641	Liliopsida	Orchidaceae Juss.	Pterostylis crispula (D.L.Jones & C.J.French) D.L.Jones & C.J.French (<i>Slender Snail Orchid</i>)	native	
642	Liliopsida	Orchidaceae Juss.	Pterostylis pyramidalis Lindl. (<i>Tall Snail Orchid</i>)	native	
643	Liliopsida	Orchidaceae Juss.	Pterostylis recurva Benth. (<i>Jug Orchid</i>)	native	
644	Liliopsida	Orchidaceae Juss.	Pterostylis rogersii E.Coleman	native	
645	Liliopsida	Orchidaceae Juss.	Pterostylis vittata Lindl. (<i>Banded Greenhood</i>)	native	
646	Liliopsida	Orchidaceae Juss.	Pyrorchis nigricans (R.Br.) D.L.Jones & M.A.Clem. (<i>Red beaks</i>)	native	
647	Liliopsida	Orchidaceae Juss.	Thelymitra antennifera (Lindl.) Hook.f. (<i>Vanilla Orchid</i>)	native	
648	Liliopsida	Orchidaceae Juss.	Thelymitra crinita Lindl. (<i>Blue Lady Orchid, Lily Orchid, Queen Orchid</i>)	native	
649	Liliopsida	Orchidaceae Juss.	Thelymitra vulgaris Jeanes	native	
650	Liliopsida	Poaceae Barnhart	Aira cupaniana Guss. (<i>Silvery Hairgrass</i>)	alien	
651	Liliopsida	Poaceae Barnhart	Alopecurus geniculatus L. (<i>Marsh Foxtail</i>)	alien	
652	Liliopsida	Poaceae Barnhart	Amphipogon laguroides R.Br. subsp. laguroides	native	
653	Liliopsida	Poaceae Barnhart	Austrostipa mollis (R.Br.) S.W.L.Jacobs & J.Everett	native	
654	Liliopsida	Poaceae Barnhart	Austrostipa variabilis (Hughes) S.W.L.Jacobs & J.Everett	native	
655	Liliopsida	Poaceae Barnhart	Briza maxima L.	alien	
656	Liliopsida	Poaceae Barnhart	Briza minor L.	alien	
657	Liliopsida	Poaceae Barnhart	Lachnagrostis filiformis (G.Forst.) Trin.	native	
658	Liliopsida	Poaceae Barnhart	Lolium perenne L. (<i>Perennial Ryegrass</i>)	alien	
659	Liliopsida	Poaceae Barnhart	Molineriella minuta (L.) Rouy	alien	
660	Liliopsida	Poaceae Barnhart	Neurachne alopecuroidea R.Br.	native	
661	Liliopsida	Poaceae Barnhart	Pentameris airoides Nees (<i>False Hairgrass</i>)	alien	
662	Liliopsida	Poaceae Barnhart	Phalaris minor Retz. (<i>Lesser Canary Grass</i>)	alien	
663	Liliopsida	Poaceae Barnhart	Rytidosperma Steud.		
664	Liliopsida	Poaceae Barnhart	Rytidosperma caespitosum (Gaudich.) Connor & Edgar	native	
665	Liliopsida	Poaceae Barnhart	Rytidosperma setaceum (R.Br.) Connor & Edgar	native	
666	Liliopsida	Poaceae Barnhart	Vulpia myuros (L.) C.C.Gmel. forma myuros	alien	
667	Liliopsida	Poaceae Barnhart	Vulpia myuros forma megalura (Nutt.) Stace & R.Cotton	alien	
668	Liliopsida	Restionaceae R.Br.	Apodasmia ceramophila B.G.Briggs & L.A.S.Johnson	native	
669	Liliopsida	Restionaceae R.Br.	Chaetanthus aristatus (R.Br.) B.G.Briggs & L.A.S.Johnson	native	
670	Liliopsida	Restionaceae R.Br.	Cytogonidium leptocarpoides (Benth.) B.G.Briggs & L.A.S.Johnson	native	
671	Liliopsida	Restionaceae R.Br.	Desmocladius fasciculatus (R.Br.) B.G.Briggs & L.A.S.Johnson	native	
672	Liliopsida	Restionaceae R.Br.	Hypolaena exsulca R.Br.	native	
673	Liliopsida	Restionaceae R.Br.	Hypolaena robusta Meney & Pate	native	P4
674	Liliopsida	Restionaceae R.Br.	Leptocarpus thysananthus B.G.Briggs	native	
675	Liliopsida	Restionaceae R.Br.	Lepyrodia glauca (Nees) F.Muell.	native	
676	Liliopsida	Restionaceae R.Br.	Lepyrodia macra Nees	native	
677	Liliopsida	Restionaceae R.Br.	Lepyrodia muirii F.Muell.	native	
678	Liliopsida	Restionaceae R.Br.	Lepyrodia riparia B.G.Briggs & L.A.S.Johnson	native	
679	Liliopsida	Restionaceae R.Br.	Tremulina tremula (R.Br.) B.G.Briggs & L.A.S.Johnson	native	
680	Liliopsida	Restionaceae R.Br.	Tyrbastes glaucescens B.G.Briggs & L.A.S.Johnson	native	
681	Liliopsida	Xanthorrhoeaceae Dumort.	Xanthorrhoea gracilis Endl.	native	
682	Liliopsida	Xanthorrhoeaceae	Xanthorrhoea preissii Endl.	native	

		Dumort.			
683	Magnoliopsida	Amaranthaceae Juss.	Ptilotus manglesii (Lindl.) F.Muell. (<i>Pom Poms</i>)	native	
684	Magnoliopsida	Apiaceae Lindl.	Actinotus glomeratus Benth.	native	
685	Magnoliopsida	Apiaceae Lindl.	Apium prostratum Vent. subsp. prostratum	native	
686	Magnoliopsida	Apiaceae Lindl.	Daucus glochidiatus (Labill.) Fisch., C.A.Mey. & Ave-Lall. (<i>Australian Carrot</i>)	native	
687	Magnoliopsida	Apiaceae Lindl.	Eryngium sp. Ferox (G.J. Keighery 16034)	native	P3
688	Magnoliopsida	Apiaceae Lindl.	Homalosciadium homalocarpum (F.Muell.) H.Eichler	native	
689	Magnoliopsida	Apiaceae Lindl.	Pentapeltis silvatica (Diels) Domin (<i>Southern Pentapeltis</i>)	native	
690	Magnoliopsida	Apiaceae Lindl.	Platysace tenuissima (Benth.) C.Norman	native	
691	Magnoliopsida	Apiaceae Lindl.	Xanthosia atkinsoniana F.Muell.	native	
692	Magnoliopsida	Apiaceae Lindl.	Xanthosia candida (Benth.) Steud.	native	
693	Magnoliopsida	Apiaceae Lindl.	Xanthosia ciliata Hook.	native	
694	Magnoliopsida	Apiaceae Lindl.	Xanthosia huegelii (Benth.) Steud.	native	
695	Magnoliopsida	Apiaceae Lindl.	Xanthosia singuliflora F.Muell.	native	
696	Magnoliopsida	Apocynaceae Juss.	Gomphocarpus fruticosus (L.) W.T.Aiton (<i>Narrowleaf Cottonbush</i>)	alien	
697	Magnoliopsida	Araliaceae Juss.	Hydrocotyle alata A.Rich.	native	
698	Magnoliopsida	Araliaceae Juss.	Hydrocotyle lemnoides Benth. (<i>Aquatic Pennywort</i>)	native	P4
699	Magnoliopsida	Araliaceae Juss.	Trachymene pilosa Sm. (<i>Native Parsnip</i>)	native	
700	Magnoliopsida	Asteraceae Bercht. & J.Presl	Angianthus drummondii (Turcz.) Benth.	native	P3
701	Magnoliopsida	Asteraceae Bercht. & J.Presl	Angianthus platycephalus Benth.	native	
702	Magnoliopsida	Asteraceae Bercht. & J.Presl	Blennospora doliiformis Keighery	native	P3
703	Magnoliopsida	Asteraceae Bercht. & J.Presl	Blennospora drummondii A.Gray	native	
704	Magnoliopsida	Asteraceae Bercht. & J.Presl	Brachyscome iberidifolia Benth.	native	
705	Magnoliopsida	Asteraceae Bercht. & J.Presl	Centipeda cunninghamii (DC.) A.Braun & Asch. (<i>Common Sneezewood</i>)	native	
706	Magnoliopsida	Asteraceae Bercht. & J.Presl	Cotula coronopifolia L. (<i>Waterbuttons</i>)	alien	
707	Magnoliopsida	Asteraceae Bercht. & J.Presl	Cotula cotuloides (Steetz) Druce	native	
708	Magnoliopsida	Asteraceae Bercht. & J.Presl	Craspedia variabilis J.Everett & Doust	native	
709	Magnoliopsida	Asteraceae Bercht. & J.Presl	Gamochaeta calviceps (Fernald) Cabrera	alien	
710	Magnoliopsida	Asteraceae Bercht. & J.Presl	Hyalosperma cotula (Benth.) Paul G.Wilson	native	
711	Magnoliopsida	Asteraceae Bercht. & J.Presl	Hypochaeris glabra L. (<i>Smooth Cats-ear</i>)	alien	
712	Magnoliopsida	Asteraceae Bercht. & J.Presl	Lagenophora Cass.		
713	Magnoliopsida	Asteraceae Bercht. & J.Presl	Lagenophora platysperma Jian Wang ter & A.R.Bean	native	
714	Magnoliopsida	Asteraceae Bercht. & J.Presl	Leontodon saxatilis Lam. (<i>Hairy Hawkbit</i>)	alien	
715	Magnoliopsida	Asteraceae Bercht. & J.Presl	Millotia tenuifolia Cass.	native	
716	Magnoliopsida	Asteraceae Bercht. & J.Presl	Millotia tenuifolia Cass. var. tenuifolia	native	
717	Magnoliopsida	Asteraceae Bercht. & J.Presl	Millotia tenuifolia var. laevis P.S.Short	native	P2
718	Magnoliopsida	Asteraceae Bercht. & J.Presl	Olearia axillaris (DC.) Benth.	native	
719	Magnoliopsida	Asteraceae Bercht. & J.Presl	Pithocarpa ramosa (DC.) Schmidt-Leb. & R.L.Barrett	native	
720	Magnoliopsida	Asteraceae Bercht. & J.Presl	Podolepis gracilis (Lehm.) Graham (<i>Slender Podolepis</i>)	native	

721	Magnoliopsida	Asteraceae Bercht. & J.Presl	Quinetia urvillei Cass.	native	
722	Magnoliopsida	Asteraceae Bercht. & J.Presl	Rhodanthe citrina (Benth.) Paul G.Wilson	native	
723	Magnoliopsida	Asteraceae Bercht. & J.Presl	Rhodanthe manglesii Lindl.	native	
724	Magnoliopsida	Asteraceae Bercht. & J.Presl	Rhodanthe pyrethrum (Steetz) Paul G.Wilson	native	
725	Magnoliopsida	Asteraceae Bercht. & J.Presl	Senecio diaschides D.G.Drury	native	
726	Magnoliopsida	Asteraceae Bercht. & J.Presl	Senecio leucoglossus F.Muell.	native	P4
727	Magnoliopsida	Asteraceae Bercht. & J.Presl	Senecio multicaulis A.Rich. subsp. multicaulis	native	
728	Magnoliopsida	Asteraceae Bercht. & J.Presl	Siloxerus filifolius (Benth.) Ostenf.	native	
729	Magnoliopsida	Asteraceae Bercht. & J.Presl	Siloxerus humifusus Labill. (<i>Procumbent Siloxerus</i>)	native	
730	Magnoliopsida	Asteraceae Bercht. & J.Presl	Sonchus asper (L.) Hill	alien	
731	Magnoliopsida	Asteraceae Bercht. & J.Presl	Sonchus oleraceus L. (<i>Common Sowthistle</i>)	alien	
732	Magnoliopsida	Asteraceae Bercht. & J.Presl	Tolpis barbata (L.) Gaertn.	alien	
733	Magnoliopsida	Asteraceae Bercht. & J.Presl	Trichocline spathulata (DC.) J.H.Willis (<i>Native Gerbera</i>)	native	
734	Magnoliopsida	Asteraceae Bercht. & J.Presl	Ursinia anthemoides (L.) Poir. subsp. anthemoides	alien	
735	Magnoliopsida	Asteraceae Bercht. & J.Presl	Vellereophyton dealbatum (Thunb.) Hilliard & B.L.Burt	alien	
736	Magnoliopsida	Asteraceae Bercht. & J.Presl	Waitzia nitida (Lindl.) Paul G.Wilson	native	
737	Magnoliopsida	Asteraceae Bercht. & J.Presl	Waitzia suaveolens (Benth.) Druce var. suaveolens	native	
738	Magnoliopsida	Asteraceae Bercht. & J.Presl	Xerochrysum macranthum (Benth.) Paul G.Wilson	native	
739	Magnoliopsida	Campanulaceae Juss.	Grammatotheca bergiana (Cham.) C.Presl var. bergiana	alien	
740	Magnoliopsida	Campanulaceae Juss.	Isotoma hypocrateriformis (R.Br.) Druce	native	
741	Magnoliopsida	Campanulaceae Juss.	Lobelia anceps L.f. (<i>Angled Lobelia</i>)	native	
742	Magnoliopsida	Campanulaceae Juss.	Lobelia rhombifolia de Vriese (<i>Tufted Lobelia</i>)	native	
743	Magnoliopsida	Campanulaceae Juss.	Wahlenbergia Roth		
744	Magnoliopsida	Campanulaceae Juss.	Wahlenbergia preissii de Vriese	native	
745	Magnoliopsida	Caprifoliaceae Juss.	Centranthus macrosiphon Boiss.	alien	
746	Magnoliopsida	Caprifoliaceae Juss.	Centranthus ruber (L.) DC. subsp. ruber	alien	
747	Magnoliopsida	Caprifoliaceae Juss.	Lonicera japonica Thunb. (<i>Japanese Honeysuckle</i>)	alien	
748	Magnoliopsida	Casuarinaceae R.Br.	Allocasuarina fraseriana (Miq.) L.A.S.Johnson (<i>Sheoak</i>)	native	
749	Magnoliopsida	Casuarinaceae R.Br.	Allocasuarina humilis (Otto & A.Dietr.) L.A.S.Johnson	native	
750	Magnoliopsida	Casuarinaceae R.Br.	Allocasuarina thuyoides (Miq.) L.A.S.Johnson	native	
751	Magnoliopsida	Celastraceae R.Br.	Stackhousia huegelii Endl.	native	
752	Magnoliopsida	Celastraceae R.Br.	Stackhousia pubescens A.Rich. (<i>Downy Stackhousia</i>)	native	
753	Magnoliopsida	Celastraceae R.Br.	Tripterococcus brunonis Endl.	native	
754	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia Andrews		
755	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia amplexicaulis Steud.	native	
756	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia commutata Steud.	native	
757	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia cunninghamii Hook.	native	
758	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia diamesogenos (Steud.) J.R.Wheeler	native	
759	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia ferruginea J.R.Wheeler	native	
760	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia glaucophylla (Steud.) K.R.Thiele & T.Hammer	native	
761	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia hemignosta (Steud.) J.R.Wheeler	native	
762	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia hypericoides (DC.) Benth. (<i>Yellow Buttercups</i>)	native	

763	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia hypericoides (DC.) Benth. subsp. hypericoides (<i>Yellow Buttercups</i>)	native	
764	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia nymphaea Diels	native	
765	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia polystachya Benth.	native	
766	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia pulchra Ostenf. var. pulchra	native	
767	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia quadricolor Domin	native	
768	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia racemosa (Endl.) Gilg (<i>Stalked Guinea Flower</i>)	native	
769	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia silvestris Diels	native	
770	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia stellaris Endl. (<i>Orange Stars</i>)	native	
771	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia subvaginata (Steud.) F.Muell.	native	
772	Magnoliopsida	Dilleniaceae Salisb.	Hibbertia vaginata (Benth.) F.Muell.	native	
773	Magnoliopsida	Droseraceae Salisb.	Drosera L.		
774	Magnoliopsida	Droseraceae Salisb.	Drosera collina (N.G.Marchant & Lowrie) Lowrie	native	
775	Magnoliopsida	Droseraceae Salisb.	Drosera gigantea Lindl.	native	
776	Magnoliopsida	Droseraceae Salisb.	Drosera glanduligera Lehm.	native	
777	Magnoliopsida	Droseraceae Salisb.	Drosera huegelii Endl.	native	
778	Magnoliopsida	Droseraceae Salisb.	Drosera indumenta Lowrie & Conran	native	
779	Magnoliopsida	Droseraceae Salisb.	Drosera marchantii DeBuhr	native	
780	Magnoliopsida	Droseraceae Salisb.	Drosera menziesii DC.	native	
781	Magnoliopsida	Droseraceae Salisb.	Drosera nitidula Planch.	native	
782	Magnoliopsida	Droseraceae Salisb.	Drosera pallida Lindl.	native	
783	Magnoliopsida	Elaeocarpaceae Juss.	Platytheca galioides Steetz	native	
784	Magnoliopsida	Elaeocarpaceae Juss.	Tetratheca hirsuta Lindl. (<i>Black Eyed Susan</i>)	native	
785	Magnoliopsida	Elaeocarpaceae Juss.	Tetratheca hirsuta Lindl. subsp. hirsuta	native	
786	Magnoliopsida	Elaeocarpaceae Juss.	Tetratheca hirsuta subsp. viminea (Lindl.) Joyce (<i>Slender Tetratheca</i>)	native	
787	Magnoliopsida	Elaeocarpaceae Juss.	Tetratheca parvifolia Joy Thomps.	native	P3
788	Magnoliopsida	Elaeocarpaceae Juss.	Tetratheca virgata Steetz	native	
789	Magnoliopsida	Elaeocarpaceae Juss.	Tremandra stelligera DC.	native	
790	Magnoliopsida	Ericaceae Juss.	Andersonia caerulea R.Br. (<i>Foxtails</i>)	native	
791	Magnoliopsida	Ericaceae Juss.	Andersonia involucrata Sond.	native	
792	Magnoliopsida	Ericaceae Juss.	Conostephium minus Lindl.	native	
793	Magnoliopsida	Ericaceae Juss.	Conostephium pendulum Benth. (<i>Pearl Flower</i>)	native	
794	Magnoliopsida	Ericaceae Juss.	Leucopogon R.Br.		
795	Magnoliopsida	Ericaceae Juss.	Leucopogon australis R.Br.	native	
796	Magnoliopsida	Ericaceae Juss.	Leucopogon capitellatus DC.	native	
797	Magnoliopsida	Ericaceae Juss.	Leucopogon extremus Hislop & Puente-Lel.	native	P2
798	Magnoliopsida	Ericaceae Juss.	Leucopogon glabellus R.Br.	native	
799	Magnoliopsida	Ericaceae Juss.	Leucopogon pulchellus Sond. (<i>Beard-heath</i>)	native	
800	Magnoliopsida	Ericaceae Juss.	Leucopogon reflexus R.Br. (<i>Heart-leaf Beard-heath</i>)	native	
801	Magnoliopsida	Ericaceae Juss.	Leucopogon sprengelioides Sond.	native	
802	Magnoliopsida	Ericaceae Juss.	Leucopogon verticillatus R.Br. (<i>Tassel Flower</i>)	native	
803	Magnoliopsida	Ericaceae Juss.	Lysinema pentapetalum R.Br. (<i>Curry Flower</i>)	native	
804	Magnoliopsida	Ericaceae Juss.	Sphenotoma gracilis (R.Br.) Sweet (<i>Swamp Paper-heath</i>)	native	
805	Magnoliopsida	Ericaceae Juss.	Styphelia Sm.		
806	Magnoliopsida	Ericaceae Juss.	Styphelia conostephioides (DC.) F.Muell.	native	
807	Magnoliopsida	Ericaceae Juss.	Styphelia discolor (Sond.) Hislop, Crayn & Puente-Lel.	native	
808	Magnoliopsida	Ericaceae Juss.	Styphelia erectifolia Hislop, Crayn & Puente-Lel.	native	
809	Magnoliopsida	Ericaceae Juss.	Styphelia erubescens F.Muell.	native	
810	Magnoliopsida	Ericaceae Juss.	Styphelia nitens Sleumer	native	
811	Magnoliopsida	Ericaceae Juss.	Styphelia pallida (R.Br.) Spreng.	native	
812	Magnoliopsida	Ericaceae Juss.	Styphelia pendula (R.Br.) Spreng.	native	
813	Magnoliopsida	Ericaceae Juss.	Styphelia propinqua (R.Br.) Spreng.	native	
814	Magnoliopsida	Ericaceae Juss.	Styphelia stricta (Benth.) F.Muell.	native	
815	Magnoliopsida	Ericaceae Juss.	Styphelia tenuiflora Lindl. (<i>Common Pinheath</i>)	native	

816	Magnoliopsida	Euphorbiaceae Juss.	Calycopeplus oligandrus P.I.Forst.	native	
817	Magnoliopsida	Euphorbiaceae Juss.	Euphorbia dendroides L.	alien	
818	Magnoliopsida	Euphorbiaceae Juss.	Stachystemon vermicularis Planch.	native	
819	Magnoliopsida	Fabaceae Lindl.	Acacia Mill.		
820	Magnoliopsida	Fabaceae Lindl.	Acacia applanata Maslin	native	
821	Magnoliopsida	Fabaceae Lindl.	Acacia browniana var. endlicheri (Meisn.) Maslin	native	
822	Magnoliopsida	Fabaceae Lindl.	Acacia celastrifolia Benth. (<i>Glowing Wattle</i>)	mixed	
823	Magnoliopsida	Fabaceae Lindl.	Acacia decurrens Willd.	alien	
824	Magnoliopsida	Fabaceae Lindl.	Acacia dentifera Benth.	native	
825	Magnoliopsida	Fabaceae Lindl.	Acacia divergens Benth.	native	
826	Magnoliopsida	Fabaceae Lindl.	Acacia drummondii Lindl. subsp. drummondii	native	
827	Magnoliopsida	Fabaceae Lindl.	Acacia drummondii subsp. candolleana (Meisn.) Maslin	native	
828	Magnoliopsida	Fabaceae Lindl.	Acacia elata Benth.	alien	
829	Magnoliopsida	Fabaceae Lindl.	Acacia ephedroides Benth.	native	
830	Magnoliopsida	Fabaceae Lindl.	Acacia extensa Lindl. (<i>Wiry Wattle</i>)	native	
831	Magnoliopsida	Fabaceae Lindl.	Acacia huegelii Benth. (<i>Huegel's Wattle</i>)	native	
832	Magnoliopsida	Fabaceae Lindl.	Acacia incurva Benth.	native	
833	Magnoliopsida	Fabaceae Lindl.	Acacia insolita E.Pritz. subsp. insolita	native	
834	Magnoliopsida	Fabaceae Lindl.	Acacia lateriticola Maslin	native	Parent of conservation listed taxa
835	Magnoliopsida	Fabaceae Lindl.	Acacia nervosa DC. (<i>Rib Wattle</i>)	native	
836	Magnoliopsida	Fabaceae Lindl.	Acacia obovata Benth.	native	
837	Magnoliopsida	Fabaceae Lindl.	Acacia podalyriifolia G.Don	alien	
838	Magnoliopsida	Fabaceae Lindl.	Acacia preissiana (Meisn.) Maslin	native	
839	Magnoliopsida	Fabaceae Lindl.	Acacia pulchella R.Br. var. pulchella	mixed	
840	Magnoliopsida	Fabaceae Lindl.	Acacia pulchella var. glaberrima Meisn. (<i>Prickly Moses</i>)	native	
841	Magnoliopsida	Fabaceae Lindl.	Acacia saligna (Labill.) H.L.Wendl. (<i>Kudjong, Orange Wattle</i>)	native	
842	Magnoliopsida	Fabaceae Lindl.	Acacia semitrullata Maslin	native	P4
843	Magnoliopsida	Fabaceae Lindl.	Acacia squamata Lindl.	native	
844	Magnoliopsida	Fabaceae Lindl.	Acacia stenoptera Benth.	native	
845	Magnoliopsida	Fabaceae Lindl.	Acacia tetragonocarpa Meisn.	native	
846	Magnoliopsida	Fabaceae Lindl.	Acacia urophylla Benth.	native	
847	Magnoliopsida	Fabaceae Lindl.	Acacia willdenowiana H.L.Wendl.	native	
848	Magnoliopsida	Fabaceae Lindl.	Aotus cordifolia Benth.	native	
849	Magnoliopsida	Fabaceae Lindl.	Aotus gracillima Meisn.	native	
850	Magnoliopsida	Fabaceae Lindl.	Bossiaea aquifolium Benth. subsp. aquifolium	native	
851	Magnoliopsida	Fabaceae Lindl.	Bossiaea eriocarpa Benth.	native	
852	Magnoliopsida	Fabaceae Lindl.	Bossiaea linophylla R.Br.	native	
853	Magnoliopsida	Fabaceae Lindl.	Bossiaea ornata (Lindl.) Benth. (<i>Broad Leaved Brown Pea</i>)	native	
854	Magnoliopsida	Fabaceae Lindl.	Bossiaea praetermissa J.H.Ross	native	
855	Magnoliopsida	Fabaceae Lindl.	Bossiaea pulchella Meisn.	native	
856	Magnoliopsida	Fabaceae Lindl.	Bossiaea rufa R.Br.	native	
857	Magnoliopsida	Fabaceae Lindl.	Chamaecytisus palmensis (Christ) F.A.Bisby & K.W.Nicholls (<i>Tagasaste</i>)	alien	
858	Magnoliopsida	Fabaceae Lindl.	Chorizema aciculare (DC.) C.A.Gardner subsp. aciculare	native	
859	Magnoliopsida	Fabaceae Lindl.	Chorizema aciculare subsp. laxum J.M.Taylor & Crisp	native	
860	Magnoliopsida	Fabaceae Lindl.	Chorizema cordatum Lindl.	native	
861	Magnoliopsida	Fabaceae Lindl.	Chorizema dicksonii Graham (<i>Yellow-eyed Flame Pea</i>)	native	
862	Magnoliopsida	Fabaceae Lindl.	Chorizema diversifolium A.DC.	native	
863	Magnoliopsida	Fabaceae Lindl.	Chorizema rhombeum R.Br.	native	
864	Magnoliopsida	Fabaceae Lindl.	Daviesia benthamii Meisn.	native	
865	Magnoliopsida	Fabaceae Lindl.	Daviesia cordata Sm.	native	
866	Magnoliopsida	Fabaceae Lindl.	Daviesia costata Cheel	native	
867	Magnoliopsida	Fabaceae Lindl.	Daviesia decurrens Meisn.	native	

868	Magnoliopsida	Fabaceae Lindl.	Daviesia decurrens Meisn. subsp. decurrens (<i>Prickly Bitter-pea</i>)	native	
869	Magnoliopsida	Fabaceae Lindl.	Daviesia decurrens subsp. hamata (Crisp) Crisp & G.Chandler	native	
870	Magnoliopsida	Fabaceae Lindl.	Daviesia hakeoides subsp. subnuda (Benth.) Crisp	native	
871	Magnoliopsida	Fabaceae Lindl.	Daviesia incrassata Sm. subsp. incrassata	native	
872	Magnoliopsida	Fabaceae Lindl.	Daviesia longifolia Benth.	native	
873	Magnoliopsida	Fabaceae Lindl.	Daviesia mesophylla Ewart	native	P2
874	Magnoliopsida	Fabaceae Lindl.	Daviesia preissii Meisn.	native	
875	Magnoliopsida	Fabaceae Lindl.	Dillwynia laxiflora Benth.	native	
876	Magnoliopsida	Fabaceae Lindl.	Dillwynia sp. Capel (P.A. Jurjevich 1771)	native	P3
877	Magnoliopsida	Fabaceae Lindl.	Euchilopsis linearis (Benth.) F.Muell.	native	
878	Magnoliopsida	Fabaceae Lindl.	Eutaxia virgata Benth.	native	
879	Magnoliopsida	Fabaceae Lindl.	Gastrolobium capitatum (Benth.) G.Chandler & Crisp	native	
880	Magnoliopsida	Fabaceae Lindl.	Gastrolobium ebracteolatum G.Chandler & Crisp	native	
881	Magnoliopsida	Fabaceae Lindl.	Gastrolobium praemorsum (Meisn.) G.Chandler & Crisp	native	
882	Magnoliopsida	Fabaceae Lindl.	Gastrolobium spinosum Benth. (<i>Prickly Poison</i>)	native	
883	Magnoliopsida	Fabaceae Lindl.	Gastrolobium tomentosum C.A.Gardner (<i>Woolly Poison</i>)	native	P4
884	Magnoliopsida	Fabaceae Lindl.	Gompholobium burtonioides Meisn.	native	
885	Magnoliopsida	Fabaceae Lindl.	Gompholobium capitatum Lindl.	native	
886	Magnoliopsida	Fabaceae Lindl.	Gompholobium knightianum Lindl.	native	
887	Magnoliopsida	Fabaceae Lindl.	Gompholobium marginatum R.Br.	native	
888	Magnoliopsida	Fabaceae Lindl.	Gompholobium ovatum Meisn.	native	
889	Magnoliopsida	Fabaceae Lindl.	Gompholobium polymorphum R.Br.	native	
890	Magnoliopsida	Fabaceae Lindl.	Gompholobium preissii Meisn.	native	
891	Magnoliopsida	Fabaceae Lindl.	Gompholobium scabrum Sm.	native	
892	Magnoliopsida	Fabaceae Lindl.	Gompholobium tomentosum Labill. (<i>Hairy Yellow Pea</i>)	native	
893	Magnoliopsida	Fabaceae Lindl.	Hovea chorizemifolia (Sweet) DC. (<i>Holly-leaved Hovea</i>)	native	
894	Magnoliopsida	Fabaceae Lindl.	Hovea elliptica (Sm.) DC. (<i>Tree Hovea</i>)	native	
895	Magnoliopsida	Fabaceae Lindl.	Hovea trisperma Benth. (<i>Common Hovea</i>)	native	
896	Magnoliopsida	Fabaceae Lindl.	Isotropis cuneifolia (Sm.) Heynh. subsp. cuneifolia	native	
897	Magnoliopsida	Fabaceae Lindl.	Jacksonia capitata Benth.	native	
898	Magnoliopsida	Fabaceae Lindl.	Jacksonia condensata Crisp & J.R.Wheeler	native	
899	Magnoliopsida	Fabaceae Lindl.	Jacksonia furcellata (Bonpl.) DC.	native	
900	Magnoliopsida	Fabaceae Lindl.	Jacksonia horrida DC.	native	
901	Magnoliopsida	Fabaceae Lindl.	Jacksonia velveta Chappill	native	EN
902	Magnoliopsida	Fabaceae Lindl.	Jennata verruculosa (Turcz.) R.L.Barrett & Clugston	native	
903	Magnoliopsida	Fabaceae Lindl.	Kennedia carinata (Benth.) Domin	native	
904	Magnoliopsida	Fabaceae Lindl.	Kennedia coccinea (Curtis) Vent.	native	
905	Magnoliopsida	Fabaceae Lindl.	Kennedia coccinea (Curtis) Vent. subsp. coccinea	native	
906	Magnoliopsida	Fabaceae Lindl.	Kennedia prostrata R.Br. (<i>Scarlet Runner</i>)	native	
907	Magnoliopsida	Fabaceae Lindl.	Labichea punctata Benth. (<i>Lance-leaved Cassia</i>)	native	
908	Magnoliopsida	Fabaceae Lindl.	Loricobbia ochreate (Meisn.) R.L.Barrett & T.Macfarlane	native	
909	Magnoliopsida	Fabaceae Lindl.	Loricobbia skinneri (F.Muell.) R.L.Barrett & T.Macfarlane (<i>Skinner's Pea</i>)	native	P4
910	Magnoliopsida	Fabaceae Lindl.	Lotus angustissimus L. (<i>Narrowleaf Trefoil</i>)	alien	
911	Magnoliopsida	Fabaceae Lindl.	Lotus subbiflorus Lag.	alien	
912	Magnoliopsida	Fabaceae Lindl.	Mirbelia dilatata R.Br.	native	
913	Magnoliopsida	Fabaceae Lindl.	Phyllota gracilis Turcz.	native	
914	Magnoliopsida	Fabaceae Lindl.	Pultenaea Sm.		
915	Magnoliopsida	Fabaceae Lindl.	Sphaerolobium benetectum R.Butcher	native	P2
916	Magnoliopsida	Fabaceae Lindl.	Sphaerolobium drummondii Turcz.	native	
917	Magnoliopsida	Fabaceae Lindl.	Sphaerolobium medium R.Br.	native	
918	Magnoliopsida	Fabaceae Lindl.	Trifolium dubium Sibth. (<i>Suckling Clover</i>)	alien	
919	Magnoliopsida	Fabaceae Lindl.	Trifolium subterraneum L.	alien	
920	Magnoliopsida	Gentianaceae Juss.	Centaurium erythraea Rafn (<i>Common Centaury</i>)	alien	

921	Magnoliopsida	Gentianaceae Juss.	Centaurium tenuiflorum (Hoffmanns. & Link) Fritsch	alien	
922	Magnoliopsida	Geraniaceae Juss.	Erodium botrys (Cav.) Bertol.	alien	
923	Magnoliopsida	Geraniaceae Juss.	Geranium retrorsum DC.	native	
924	Magnoliopsida	Goodeniaceae R.Br.	Dampiera alata Lindl.	native	
925	Magnoliopsida	Goodeniaceae R.Br.	Dampiera hederacea R.Br.	native	
926	Magnoliopsida	Goodeniaceae R.Br.	Dampiera linearis R.Br.	native	
927	Magnoliopsida	Goodeniaceae R.Br.	Dampiera pedunculata Rajput & Carolin	native	
928	Magnoliopsida	Goodeniaceae R.Br.	Dampiera trigona de Vriese (<i>Angled-stem Dampiera</i>)	native	
929	Magnoliopsida	Goodeniaceae R.Br.	Goodenia caerulea R.Br.	native	
930	Magnoliopsida	Goodeniaceae R.Br.	Goodenia eatoniana F.Muell.	native	
931	Magnoliopsida	Goodeniaceae R.Br.	Goodenia pulchella subsp. Coastal Plain A (M. Hislop 634)	native	
932	Magnoliopsida	Goodeniaceae R.Br.	Goodenia pusilla (de Vriese) de Vriese	native	
933	Magnoliopsida	Goodeniaceae R.Br.	Goodenia trinervis (Labill.) K.A.Sheph.	native	
934	Magnoliopsida	Goodeniaceae R.Br.	Lechenaultia R.Br.		
935	Magnoliopsida	Goodeniaceae R.Br.	Lechenaultia biloba Lindl.	mixed	
936	Magnoliopsida	Goodeniaceae R.Br.	Lechenaultia expansa R.Br.	native	
937	Magnoliopsida	Goodeniaceae R.Br.	Lechenaultia floribunda Benth. (<i>Free-flowering Leschenaultia</i>)	native	
938	Magnoliopsida	Goodeniaceae R.Br.	Scaevola L.		
939	Magnoliopsida	Goodeniaceae R.Br.	Scaevola calliptera Benth.	native	
940	Magnoliopsida	Goodeniaceae R.Br.	Scaevola glandulifera DC. (<i>Viscid Hand-flower</i>)	native	
941	Magnoliopsida	Goodeniaceae R.Br.	Scaevola lanceolata Benth. (<i>Long-leaved Scaevola</i>)	native	
942	Magnoliopsida	Goodeniaceae R.Br.	Scaevola pilosa Benth. (<i>Hairy Fan-flower</i>)	native	
943	Magnoliopsida	Goodeniaceae R.Br.	Scaevola striata R.Br. (<i>Royal Robe</i>)	native	
944	Magnoliopsida	Haloragaceae R.Br.	Glischrocaryon Endl.		
945	Magnoliopsida	Haloragaceae R.Br.	Glischrocaryon angustifolium (Nees) M.L.Moody & Les	native	
946	Magnoliopsida	Haloragaceae R.Br.	Glischrocaryon aureum (Lindl.) Orchard (<i>Common Popflower</i>)	native	
947	Magnoliopsida	Haloragaceae R.Br.	Gonocarpus diffusus (Diels) Orchard	native	
948	Magnoliopsida	Haloragaceae R.Br.	Meionectes tenuifolia (Benth.) M.L.Moody & Les	native	P3
949	Magnoliopsida	Haloragaceae R.Br.	Myriophyllum crispatum Orchard	native	
950	Magnoliopsida	Hypericaceae Juss.	Hypericum perforatum L.	alien	
951	Magnoliopsida	Lamiaceae Martinov	Apatelantha albicans (Hook.) T.C.Wilson & Henwood	native	
952	Magnoliopsida	Lamiaceae Martinov	Hemiandra pungens R.Br. (<i>Snakebush</i>)	native	
953	Magnoliopsida	Lamiaceae Martinov	Hemiandra sp. Jurien (B.J. Conn & M.E. Tozer BJC 3885)	native	
954	Magnoliopsida	Lamiaceae Martinov	Hemigenia incana (Lindl.) Benth.	native	
955	Magnoliopsida	Lamiaceae Martinov	Hemigenia pritzelii S.Moore	native	
956	Magnoliopsida	Lamiaceae Martinov	Lachnostachys verbascifolia F.Muell. var. verbascifolia	native	
957	Magnoliopsida	Lamiaceae Martinov	Mentha pulegium L.	alien	
958	Magnoliopsida	Lauraceae Juss.	Cassytha glabella R.Br. (<i>Tangled Dodder Laurel</i>)	native	
959	Magnoliopsida	Lauraceae Juss.	Cassytha racemosa Nees	native	
960	Magnoliopsida	Lauraceae Juss.	Cassytha racemosa Nees forma racemosa	native	
961	Magnoliopsida	Lentibulariaceae Rich.	Utricularia petertaylorii Lowrie	native	
962	Magnoliopsida	Loganiaceae Mart.	Orianthera serpyllifolia subsp. angustifolia (Benth.) C.S.P.Foster & B.J.Conn	native	
963	Magnoliopsida	Loranthaceae Juss.	Nuytsia floribunda (Labill.) G.Don (<i>Christmas Tree</i>)	native	
964	Magnoliopsida	Malvaceae Juss.	Commersonia erythrogyna C.F.Wilkins	native	CR
965	Magnoliopsida	Malvaceae Juss.	Lasiopetalum cardiophyllum Paust	native	P4
966	Magnoliopsida	Malvaceae Juss.	Thomasia J.Gay		
967	Magnoliopsida	Malvaceae Juss.	Thomasia grandiflora Lindl. (<i>Large Flowered Thomasia</i>)	native	
968	Magnoliopsida	Malvaceae Juss.	Thomasia pauciflora Lindl. (<i>Few Flowered Thomasia</i>)	native	
969	Magnoliopsida	Malvaceae Juss.	Thomasia sp. Big Brook (M. Koch 2373)	native	
970	Magnoliopsida	Menyanthaceae Dumort.	Liparophyllum capitatum (Lehm.) Tippet & Les	native	
971	Magnoliopsida	Menyanthaceae Dumort.	Liparophyllum latifolium (Benth.) Tippet & Les	native	
972	Magnoliopsida	Menyanthaceae Dumort.	Ornduffia albiflora (F.Muell.) Tippet & Les	native	

973	Magnoliopsida	Menyanthaceae Dumort.	Ornduffia submersa (Aston) Tippery & Les	native	P4
974	Magnoliopsida	Montiaceae Raf.	Calandrinia sp. Kenwick (G.J. Keighery 10905)	native	
975	Magnoliopsida	Myrtaceae Juss.	Astartea DC.		
976	Magnoliopsida	Myrtaceae Juss.	Astartea scoparia Schauer	native	
977	Magnoliopsida	Myrtaceae Juss.	Babingtonia camphorosmae (Endl.) Lindl.	native	
978	Magnoliopsida	Myrtaceae Juss.	Callistemon glaucus Sweet	native	
979	Magnoliopsida	Myrtaceae Juss.	Callistemon phoeniceus Lindl.	mixed	
980	Magnoliopsida	Myrtaceae Juss.	Calothamnus graniticus subsp. leptophyllus (Benth.) Hawkeswood	native	P4
981	Magnoliopsida	Myrtaceae Juss.	Calothamnus lateralis Lindl.	native	
982	Magnoliopsida	Myrtaceae Juss.	Calothamnus lehmannii Schauer	native	
983	Magnoliopsida	Myrtaceae Juss.	Calothamnus rupestris Schauer (<i>Mouse Ears</i>)	mixed	
984	Magnoliopsida	Myrtaceae Juss.	Calytrix flavescens A.Cunn. (<i>Summer Starflower</i>)	native	
985	Magnoliopsida	Myrtaceae Juss.	Calytrix pulchella (Turcz.) B.D.Jacks.	native	P3
986	Magnoliopsida	Myrtaceae Juss.	Calytrix tenuiramea (Turcz.) Benth.	native	
987	Magnoliopsida	Myrtaceae Juss.	Calytrix tetragona Labill. (<i>Common Fringe-myrtle</i>)	native	
988	Magnoliopsida	Myrtaceae Juss.	Corymbia calophylla (Lindl.) K.D.Hill & L.A.S.Johnson	native	
989	Magnoliopsida	Myrtaceae Juss.	Darwinia citriodora (Endl.) Benth. (<i>Lemon-scented Darwinia</i>)	native	
990	Magnoliopsida	Myrtaceae Juss.	Darwinia oederoides (Turcz.) Benth.	native	
991	Magnoliopsida	Myrtaceae Juss.	Eremaea pauciflora (Endl.) Druce var. pauciflora	native	
992	Magnoliopsida	Myrtaceae Juss.	Eucalyptus aspersa Brooker & Hopper	native	
993	Magnoliopsida	Myrtaceae Juss.	Eucalyptus decipiens Endl. (<i>Redheart</i>)	native	
994	Magnoliopsida	Myrtaceae Juss.	Eucalyptus kondininensis Maiden & Blakely	native	
995	Magnoliopsida	Myrtaceae Juss.	Eucalyptus marginata Sm. subsp. marginata	native	
996	Magnoliopsida	Myrtaceae Juss.	Eucalyptus megacarpa F.Muell.	native	
997	Magnoliopsida	Myrtaceae Juss.	Eucalyptus patens Benth.	native	
998	Magnoliopsida	Myrtaceae Juss.	Eucalyptus rudis Endl.	native	
999	Magnoliopsida	Myrtaceae Juss.	Eucalyptus rudis subsp. cratyantha Brooker & Hopper (<i>Large-flowered Flooded Gum</i>)	native	P4
1000	Magnoliopsida	Myrtaceae Juss.	Homalospermum firmum Schauer	native	
1001	Magnoliopsida	Myrtaceae Juss.	Hypocalymma angustifolium (Endl.) Schauer	native	
1002	Magnoliopsida	Myrtaceae Juss.	Hypocalymma cordifolium Schauer	native	
1003	Magnoliopsida	Myrtaceae Juss.	Kunzea glabrescens Toelken	native	
1004	Magnoliopsida	Myrtaceae Juss.	Kunzea micromera Schauer	native	
1005	Magnoliopsida	Myrtaceae Juss.	Kunzea recurva Schauer	native	
1006	Magnoliopsida	Myrtaceae Juss.	Leptospermopsis erubescens (Schauer) Peter G.Wilson	native	
1007	Magnoliopsida	Myrtaceae Juss.	Melaleuca acutifolia (Benth.) Craven & Lepschi	native	
1008	Magnoliopsida	Myrtaceae Juss.	Melaleuca cuticularis Labill. (<i>Saltwater Paperbark</i>)	native	
1009	Magnoliopsida	Myrtaceae Juss.	Melaleuca incana R.Br.	native	
1010	Magnoliopsida	Myrtaceae Juss.	Melaleuca incana R.Br. subsp. incana	native	
1011	Magnoliopsida	Myrtaceae Juss.	Melaleuca lateritia A.Dietr. (<i>Robin Redbreast Bush</i>)	native	
1012	Magnoliopsida	Myrtaceae Juss.	Melaleuca pauciflora Turcz.	native	
1013	Magnoliopsida	Myrtaceae Juss.	Melaleuca preissiana Schauer (<i>Modong, Moonah</i>)	native	
1014	Magnoliopsida	Myrtaceae Juss.	Melaleuca raphiophylla Schauer (<i>Swamp Paperbark</i>)	native	
1015	Magnoliopsida	Myrtaceae Juss.	Melaleuca spathulata Schauer	native	
1016	Magnoliopsida	Myrtaceae Juss.	Melaleuca subtrigona Schauer	native	
1017	Magnoliopsida	Myrtaceae Juss.	Melaleuca trichophylla Lindl.	native	
1018	Magnoliopsida	Myrtaceae Juss.	Melaleuca viminea Lindl. subsp. viminea	native	
1019	Magnoliopsida	Myrtaceae Juss.	Pericalymma ellipticum (Endl.) Schauer var. ellipticum	native	
1020	Magnoliopsida	Myrtaceae Juss.	Pericalymma spongiocaule Cranfield	native	
1021	Magnoliopsida	Myrtaceae Juss.	Regelia cymbifolia (Diels) C.A.Gardner	native	P4
1022	Magnoliopsida	Myrtaceae Juss.	Rinzia fumana Schauer	native	
1023	Magnoliopsida	Myrtaceae Juss.	Taxandria linearifolia (DC.) J.R.Wheeler & N.G.Marchant	native	
1024	Magnoliopsida	Myrtaceae Juss.	Tetrapora glomerata Turcz.	native	

1025	Magnoliopsida	Myrtaceae Juss.	Verticordia DC.		
1026	Magnoliopsida	Myrtaceae Juss.	Verticordia densiflora Lindl. var. densiflora	native	
1027	Magnoliopsida	Myrtaceae Juss.	Verticordia densiflora var. cespitosa (Turcz.) A.S.George	native	
1028	Magnoliopsida	Myrtaceae Juss.	Verticordia lindleyi subsp. purpurea A.S.George	native	
1029	Magnoliopsida	Myrtaceae Juss.	Verticordia multiflora Turcz. subsp. multiflora	native	
1030	Magnoliopsida	Myrtaceae Juss.	Verticordia plumosa var. brachyphylla (Diels) A.S.George	native	
1031	Magnoliopsida	Olacaceae R.Br.	Olax benthamiana Miq.	native	
1032	Magnoliopsida	Onagraceae Juss.	Epilobium hirtigerum A.Cunn. (<i>Hairy Willow Herb</i>)	native	
1033	Magnoliopsida	Onagraceae Juss.	Oenothera stricta Link subsp. stricta	alien	
1034	Magnoliopsida	Orobanchaceae Vent.	Bellardia viscosa (L.) Fisch. & C.A.Mey.	alien	
1035	Magnoliopsida	Orobanchaceae Vent.	Parentucellia latifolia (L.) Caruel	alien	
1036	Magnoliopsida	Oxalidaceae R.Br.	Oxalis exilis A.Cunn.	native	
1037	Magnoliopsida	Phyllanthaceae Martinov	Lysiandra calycina (Labill.) R.W.Bouman (<i>False Boronia</i>)	native	
1038	Magnoliopsida	Phyllanthaceae Martinov	Poranthera Rudge		
1039	Magnoliopsida	Phyllanthaceae Martinov	Poranthera huegelii Klotzsch	native	
1040	Magnoliopsida	Phyllanthaceae Martinov	Poranthera microphylla Brongn.	native	
1041	Magnoliopsida	Pittosporaceae R.Br.	Billardiera Sm.		
1042	Magnoliopsida	Pittosporaceae R.Br.	Billardiera floribunda (Putt.) F.Muell. (<i>White-flowered Billardiera</i>)	native	
1043	Magnoliopsida	Pittosporaceae R.Br.	Billardiera fraseri (Hook.) L.Cayzer, Crisp & I.Telford (<i>Elegant Pronaya</i>)	native	
1044	Magnoliopsida	Pittosporaceae R.Br.	Billardiera fusiformis Labill. (<i>Australian Bluebell</i>)	native	
1045	Magnoliopsida	Pittosporaceae R.Br.	Billardiera variifolia DC.	native	
1046	Magnoliopsida	Plantaginaceae Juss.	Gratiola pubescens R.Br.	native	
1047	Magnoliopsida	Plantaginaceae Juss.	Veronica calycina R.Br.	native	
1048	Magnoliopsida	Polygalaceae Hoffmanns. & Link	Comesperma calymega Labill.	native	
1049	Magnoliopsida	Polygalaceae Hoffmanns. & Link	Comesperma ciliatum Steetz	native	
1050	Magnoliopsida	Polygalaceae Hoffmanns. & Link	Comesperma virgatum Labill. (<i>Milkwort</i>)	native	
1051	Magnoliopsida	Polygonaceae Juss.	Rumex crispus L. (<i>Curled Dock</i>)	alien	
1052	Magnoliopsida	Proteaceae Juss.	Adenanthos cygnorum subsp. chamaephyton E.C.Nelson	native	P3
1053	Magnoliopsida	Proteaceae Juss.	Adenanthos obovatus Labill.	native	
1054	Magnoliopsida	Proteaceae Juss.	Banksia L.f.		
1055	Magnoliopsida	Proteaceae Juss.	Banksia attenuata R.Br. (<i>Slender Banksia</i>)	native	
1056	Magnoliopsida	Proteaceae Juss.	Banksia dallanneyi subsp. sylvestris (A.S.George) A.R.Mast & K.R.Thiele	native	
1057	Magnoliopsida	Proteaceae Juss.	Banksia dallanneyi var. mellicula		
1058	Magnoliopsida	Proteaceae Juss.	Banksia grandis Willd. (<i>Bull Banksia</i>)	native	
1059	Magnoliopsida	Proteaceae Juss.	Banksia ilicifolia R.Br. (<i>Holly-leaved Banksia</i>)	native	
1060	Magnoliopsida	Proteaceae Juss.	Banksia littoralis R.Br. (<i>Swamp Banksia</i>)	native	
1061	Magnoliopsida	Proteaceae Juss.	Banksia meisneri Lehm. subsp. meisneri	native	
1062	Magnoliopsida	Proteaceae Juss.	Banksia seminuda (A.S.George) Rye (<i>River Banksia</i>)	native	
1063	Magnoliopsida	Proteaceae Juss.	Banksia sessilis (Knight) A.R.Mast & K.R.Thiele var. sessilis	native	
1064	Magnoliopsida	Proteaceae Juss.	Banksia sphaerocarpa R.Br. var. sphaerocarpa (<i>Fox Banksia</i>)	native	
1065	Magnoliopsida	Proteaceae Juss.	Banksia squarrosa (R.Br.) A.R.Mast & K.R.Thiele subsp. squarrosa	native	
1066	Magnoliopsida	Proteaceae Juss.	Banksia subpinnatifida var. imberbis (A.S.George) A.R.Mast & K.R.Thiele	native	P3
1067	Magnoliopsida	Proteaceae Juss.	Conospermum caeruleum subsp. spathulatum (Benth.) E.M.Benn.	native	
1068	Magnoliopsida	Proteaceae Juss.	Conospermum capitatum subsp. glabratum E.M.Benn.	native	
1069	Magnoliopsida	Proteaceae Juss.	Conospermum flexuosum subsp. laevigatum (Meisn.) E.M.Benn.	native	
1070	Magnoliopsida	Proteaceae Juss.	Conospermum stoechadis Endl. subsp. stoechadis	native	
1071	Magnoliopsida	Proteaceae Juss.	Grevillea bipinnatifida R.Br. subsp. bipinnatifida	native	

1072	Magnoliopsida	Proteaceae Juss.	Grevillea depauperata R.Br.	native	
1073	Magnoliopsida	Proteaceae Juss.	Grevillea dissectifolia (McGill.) Olde	native	P3
1074	Magnoliopsida	Proteaceae Juss.	Grevillea leptobotrys Meisn.	native	
1075	Magnoliopsida	Proteaceae Juss.	Grevillea prominens Olde & Marriott	native	P3
1076	Magnoliopsida	Proteaceae Juss.	Grevillea quercifolia R.Br.	native	
1077	Magnoliopsida	Proteaceae Juss.	Grevillea rara Olde & Marriott	native	EN
1078	Magnoliopsida	Proteaceae Juss.	Grevillea ripicola A.S.George (<i>Collie Grevillea</i>)	native	P4
1079	Magnoliopsida	Proteaceae Juss.	Grevillea trifida (R.Br.) Meisn.	native	
1080	Magnoliopsida	Proteaceae Juss.	Hakea Schrad. & J.C.Wendl.		
1081	Magnoliopsida	Proteaceae Juss.	Hakea amplexicaulis R.Br. (<i>Prickly Hakea</i>)	native	
1082	Magnoliopsida	Proteaceae Juss.	Hakea ceratophylla (Sm.) R.Br.	native	
1083	Magnoliopsida	Proteaceae Juss.	Hakea lissocarpha R.Br. (<i>Honey Bush</i>)	native	
1084	Magnoliopsida	Proteaceae Juss.	Hakea ruscifolia Labill. (<i>Candle Hakea</i>)	native	
1085	Magnoliopsida	Proteaceae Juss.	Hakea sulcata R.Br. (<i>Furrowed Hakea</i>)	native	
1086	Magnoliopsida	Proteaceae Juss.	Hakea trifurcata (Sm.) R.Br. (<i>Two-leaf Hakea</i>)	native	
1087	Magnoliopsida	Proteaceae Juss.	Hakea undulata R.Br.	native	
1088	Magnoliopsida	Proteaceae Juss.	Hakea varia R.Br.	native	
1089	Magnoliopsida	Proteaceae Juss.	Isopogon crithmifolius F.Muell.	native	
1090	Magnoliopsida	Proteaceae Juss.	Isopogon formosus subsp. dasylepis (Meisn.) Foreman	native	P3
1091	Magnoliopsida	Proteaceae Juss.	Isopogon spathulatus R.Br.	native	
1092	Magnoliopsida	Proteaceae Juss.	Isopogon spathulatus subsp. spathulatus R.Br.	native	
1093	Magnoliopsida	Proteaceae Juss.	Lambertia orbifolia subsp. pecuniosa A.D.Webb, L.T.Monks & Wege	native	CR
1094	Magnoliopsida	Proteaceae Juss.	Persoonia elliptica R.Br. (<i>Spreading Snottygobble</i>)	native	
1095	Magnoliopsida	Proteaceae Juss.	Persoonia longifolia R.Br. (<i>Snottygobble</i>)	native	
1096	Magnoliopsida	Proteaceae Juss.	Petrophile linearis R.Br. (<i>Pixie Mops</i>)	native	
1097	Magnoliopsida	Proteaceae Juss.	Petrophile serruriae R.Br.	native	
1098	Magnoliopsida	Proteaceae Juss.	Stirlingia latifolia (R.Br.) Steud. (<i>Blueboy</i>)	native	
1099	Magnoliopsida	Proteaceae Juss.	Stirlingia seselifolia Domin	native	
1100	Magnoliopsida	Proteaceae Juss.	Stirlingia simplex Lindl.	native	
1101	Magnoliopsida	Proteaceae Juss.	Synaphea R.Br.		
1102	Magnoliopsida	Proteaceae Juss.	Synaphea cuneata A.S.George	native	
1103	Magnoliopsida	Proteaceae Juss.	Synaphea damopsis A.S.George	native	
1104	Magnoliopsida	Proteaceae Juss.	Synaphea decorticans Lindl.	native	
1105	Magnoliopsida	Proteaceae Juss.	Synaphea decumbens A.S.George	native	P3
1106	Magnoliopsida	Proteaceae Juss.	Synaphea floribunda A.S.George	native	
1107	Magnoliopsida	Proteaceae Juss.	Synaphea gracillima Lindl.	native	
1108	Magnoliopsida	Proteaceae Juss.	Synaphea hians A.S.George	native	P3
1109	Magnoliopsida	Proteaceae Juss.	Synaphea obtusata (Meisn.) A.S.George	native	
1110	Magnoliopsida	Proteaceae Juss.	Synaphea petiolaris R.Br. (<i>Synaphea</i>)	native	
1111	Magnoliopsida	Proteaceae Juss.	Synaphea petiolaris subsp. simplex A.S.George	native	P3
1112	Magnoliopsida	Proteaceae Juss.	Synaphea trinacriformis R.Butcher	native	P1
1113	Magnoliopsida	Proteaceae Juss.	Xylomelum occidentale R.Br. (<i>Woody Pear</i>)	native	
1114	Magnoliopsida	Ranunculaceae Juss.	Clematis pubescens Endl.	native	
1115	Magnoliopsida	Ranunculaceae Juss.	Ranunculus colonorum Endl. (<i>Common Buttercup</i>)	native	
1116	Magnoliopsida	Rhamnaceae Juss.	Cryptandra arbutiflora var. tubulosa (Fenzl) Benth. (<i>Waxy Cryptandra</i>)	native	
1117	Magnoliopsida	Rhamnaceae Juss.	Trymalium ledifolium Fenzl	native	
1118	Magnoliopsida	Rhamnaceae Juss.	Trymalium ledifolium var. rosmarinifolium (Steud.) Benth.	native	
1119	Magnoliopsida	Rhamnaceae Juss.	Trymalium odoratissimum subsp. trifidum (Rye) Kellermann, Rye & K.R.Thiele	native	
1120	Magnoliopsida	Rosaceae Juss.	Acaena echinata Nees (<i>Sheep's Burr</i>)	native	
1121	Magnoliopsida	Rosaceae Juss.	Rosa canina L.	alien	
1122	Magnoliopsida	Rosaceae Juss.	Rosa rubiginosa L. (<i>Sweet Briar</i>)	alien	
1123	Magnoliopsida	Rubiaceae Juss.	Opercularia apiciflora Juss.	native	
1124	Magnoliopsida	Rubiaceae Juss.	Opercularia echinocephala Benth.	native	

1125	Magnoliopsida	Rubiaceae Juss.	Opercularia hispidula Endl.	native	
1126	Magnoliopsida	Rutaceae Juss.	Boronia Sm.		
1127	Magnoliopsida	Rutaceae Juss.	Boronia crenulata Sm. (<i>Aniseed Boronia</i>)	native	
1128	Magnoliopsida	Rutaceae Juss.	Boronia crenulata Sm. var. crenulata		
1129	Magnoliopsida	Rutaceae Juss.	Boronia crenulata subsp. pubescens (Benth.) Paul G.Wilson	native	
1130	Magnoliopsida	Rutaceae Juss.	Boronia fastigiata Bartl.	native	
1131	Magnoliopsida	Rutaceae Juss.	Boronia megastigma Bartl. (<i>Scented Boronia</i>)	native	
1132	Magnoliopsida	Rutaceae Juss.	Boronia molloyae J.Drumm.	native	
1133	Magnoliopsida	Rutaceae Juss.	Boronia nematophylla F.Muell.	native	
1134	Magnoliopsida	Rutaceae Juss.	Boronia spathulata Lindl. (<i>Boronia</i>)	native	
1135	Magnoliopsida	Rutaceae Juss.	Cyanothamnus ramosus subsp. anethifolius (Bartl.) Duretto & Heslewood	native	
1136	Magnoliopsida	Rutaceae Juss.	Diplolaena R.Br.		
1137	Magnoliopsida	Rutaceae Juss.	Diplolaena drummondii (Benth.) Ostenf.	native	
1138	Magnoliopsida	Rutaceae Juss.	Diplolaena graniticola Paul G.Wilson	native	
1139	Magnoliopsida	Rutaceae Juss.	Diplolaena microcephala Bartl.	native	
1140	Magnoliopsida	Rutaceae Juss.	Philotheca nodiflora subsp. lasiocalyx (Domin) Paul G.Wilson	native	
1141	Magnoliopsida	Rutaceae Juss.	Philotheca spicata (A.Rich.) Paul G.Wilson (<i>Pepper and Salt</i>)	native	
1142	Magnoliopsida	Santalaceae R.Br.	Leptomeria cunninghamii Miq.	native	
1143	Magnoliopsida	Sapindaceae Juss.	Dodonaea pinifolia Miq.	native	
1144	Magnoliopsida	Stylidiaceae R.Br.	Levenhookia pusilla R.Br.	native	
1145	Magnoliopsida	Stylidiaceae R.Br.	Levenhookia stipitata (Benth.) Benth.	native	
1146	Magnoliopsida	Stylidiaceae R.Br.	Stylidium acuminatum (Carlquist) Wege subsp. acuminatum	native	P2
1147	Magnoliopsida	Stylidiaceae R.Br.	Stylidium affine Sond. (<i>Queen Triggerplant</i>)	native	
1148	Magnoliopsida	Stylidiaceae R.Br.	Stylidium amoenum R.Br. (<i>Lovely Triggerplant</i>)	native	
1149	Magnoliopsida	Stylidiaceae R.Br.	Stylidium amoenum R.Br. var. amoenum	native	
1150	Magnoliopsida	Stylidiaceae R.Br.	Stylidium androsaceum Lindl. (<i>Book Triggerplant</i>)	native	
1151	Magnoliopsida	Stylidiaceae R.Br.	Stylidium araeophyllum Wege (<i>Stilt Walker</i>)	native	
1152	Magnoliopsida	Stylidiaceae R.Br.	Stylidium brunonianum Benth. (<i>Pink Fountain Triggerplant</i>)	native	
1153	Magnoliopsida	Stylidiaceae R.Br.	Stylidium calcaratum R.Br. (<i>Book Triggerplant</i>)	native	
1154	Magnoliopsida	Stylidiaceae R.Br.	Stylidium ciliatum Lindl. (<i>Golden Triggerplant</i>)	native	
1155	Magnoliopsida	Stylidiaceae R.Br.	Stylidium crassifolium R.Br. (<i>Thick-leaved Triggerplant</i>)	native	
1156	Magnoliopsida	Stylidiaceae R.Br.	Stylidium dichotomum DC.		
1157	Magnoliopsida	Stylidiaceae R.Br.	Stylidium junceum R.Br. (<i>Little Reed Triggerplant</i>)	native	
1158	Magnoliopsida	Stylidiaceae R.Br.	Stylidium lepidum Benth. (<i>Redcaps</i>)	native	P3
1159	Magnoliopsida	Stylidiaceae R.Br.	Stylidium piliferum R.Br. (<i>Common Butterfly Triggerplant</i>)	native	
1160	Magnoliopsida	Stylidiaceae R.Br.	Stylidium plantagineum Sond. (<i>Plantagenet Triggerplant</i>)	native	
1161	Magnoliopsida	Stylidiaceae R.Br.	Stylidium pulchellum Sond. (<i>Thumbelina Triggerplant</i>)	native	
1162	Magnoliopsida	Stylidiaceae R.Br.	Stylidium repens R.Br. (<i>Matted Triggerplant</i>)	native	
1163	Magnoliopsida	Stylidiaceae R.Br.	Stylidium rhipidium F.L.Erickson & J.H.Willis (<i>Fan Triggerplant</i>)	native	P3
1164	Magnoliopsida	Stylidiaceae R.Br.	Stylidium rhynchocarpum Sond. (<i>Black-beaked Triggerplant</i>)	native	
1165	Magnoliopsida	Stylidiaceae R.Br.	Stylidium scandens R.Br. (<i>Climbing Triggerplant</i>)	native	
1166	Magnoliopsida	Stylidiaceae R.Br.	Stylidium schoenoides DC.	native	
1167	Magnoliopsida	Stylidiaceae R.Br.	Stylidium squamellosum DC.	native	P2
1168	Magnoliopsida	Stylidiaceae R.Br.	Stylidium tenue Sond. subsp. tenue (<i>Little Fountain Triggerplant</i>)	native	
1169	Magnoliopsida	Stylidiaceae R.Br.	Stylidium uniflorum Sond.	native	
1170	Magnoliopsida	Stylidiaceae R.Br.	Stylidium uniflorum Sond. subsp. uniflorum (<i>Pincushion Triggerplant</i>)	native	
1171	Magnoliopsida	Stylidiaceae R.Br.	Stylidium violaceum R.Br. (<i>Violet Triggerplant</i>)	native	
1172	Magnoliopsida	Thymelaeaceae Juss.	Pimelea Gaertn.		
1173	Magnoliopsida	Thymelaeaceae Juss.	Pimelea angustifolia R.Br. (<i>Narrow-leaved Pimelea</i>)	native	

1174	Magnoliopsida	Thymelaeaceae Juss.	Pimelea ciliata Rye subsp. ciliata	native	
1175	Magnoliopsida	Thymelaeaceae Juss.	Pimelea imbricata R.Br.	native	
1176	Magnoliopsida	Thymelaeaceae Juss.	Pimelea imbricata var. piligera (Benth.) Diels	native	
1177	Magnoliopsida	Thymelaeaceae Juss.	Pimelea lehmanniana subsp. nervosa (Meisn.) Rye	native	
1178	Magnoliopsida	Thymelaeaceae Juss.	Pimelea rosea R.Br.	native	
1179	Magnoliopsida	Violaceae Batsch	Pigea debilissima (F.Muell.) P.I.Forst.		
1180	Magnoliopsida	Violaceae Batsch	Pigea floribunda Lindl.		
1181	Marchantiopsida	Aytoniaceae	Asterella P.Beauv.		
1182	Pinopsida	Cupressaceae Gray	Hesperocyparis lusitanica (Mill.) Bartel	alien	
1183	Pteridopsida	Dennstaedtiaceae Lotsy	Pteridium esculentum (G.Forst.) Cockayne subsp. esculentum	native	
1184	Ulvophyceae K.R.Mattox & K.D.Stewart	Trentepohliaceae	Trentepohlia C.Martius		

Conservation status definitions

Threatened species

- CR – Critically Endangered
- EN – Endangered
- VU – Vulnerable
- EX – Extinct
- EW – Extinct in the Wild
- CD – Species of special conservation interest (conservation dependent)
- OS – Species otherwise in need of special protection (other specially protected)
- MI – Migratory
- SP – Specially protected species

Priority species

- P1 – Priority 1: Poorly-known species – known from few locations, none on conservation lands
- P2 – Priority 2: Poorly-known species – known from few locations, some on conservation lands
- P3 – Priority 3: Poorly-known species – known from several locations
- P4 – Priority 4: Rare, Near Threatened and other species in need of monitoring

Dandjoo specific codes

- Parent of conservation listed taxa
- Cons code inherited from parent, X

Read full definitions at <https://bio.wa.gov.au/guide/conservation-status-definitions>

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Further note, precise locations of [conservation listed species](#) are considered sensitive. To protect this information, [obfuscation](#) has been applied to conservation-listed species records. For these species, the true location is ± 10 km from the search area used to generate this species list.

Appendix C

Environmental Management Plan (Revision A)



State Groundwater Investigation Program - Collie Project

Environmental Management Plan

Department of Water and Environmental Regulation

16 May 2025

→ The Power of Commitment



Project name		State Groundwater Investigation Program Collie Project					
Document title		State Groundwater Investigation Program - Collie Project Environmental Management Plan					
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Executive summary

This Environmental Management Plan (EMP) has been prepared by GHD Pty Ltd (GHD) on behalf of the Department of Water and Environmental Regulation (DWER) to support the drilling works for the State Groundwater Investigation Program (SGIP) Collie Project (DWER reference 103124). The objectives of the Project are aimed at characterising the potential water quality impacts to surface water environments and groundwater resources, over nominated investigation areas of the Collie Basin.

This EMP has been prepared in accordance with the Western Australian (WA) Environmental Protection Authority (EPA) Guideline Instructions on how to prepare *Environmental Protection Act 1986* Environmental Management Plans (EPA 2018). The following table summarises the purpose and context of the EMP within the context of the EPA environmental objectives.

Summary of the proposed works	
Proposal title	State Groundwater Investigation Program Collie Project
Proponent name	DWER
Purpose of the document	This EMP outlines specific mitigation measures and management actions to manage the potential impacts on key environmental factors during drilling works in support of the groundwater investigation program in the Collie groundwater area.
Key Environmental factors and objectives	The key environmental factors and associated EPA objectives are: Inland Waters – <i>To maintain hydrological regimes and quality of groundwater and surface water so that environmental values are protected.</i> Flora and Vegetation - <i>To protect flora and vegetation so that biological diversity and ecological integrity are maintained.</i> Fauna - <i>To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.</i> Social Surroundings (Aboriginal Heritage) - <i>To protect social surroundings from significant harm.</i>
Key provisions	Management based provisions that align with established industry practices to avoid and minimise potential environmental impacts.

This EMP is subject to, and must be read in conjunction with, the limitations set out in section 1.3 and the assumptions and qualifications contained throughout the EMP.

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1. Introduction

1.1 Purpose

DWER engaged GHD to provide hydrogeological services to support the SGIP. The investigation requires the drilling of groundwater bores, monitoring the flow of surface water features and includes limited clearing of native vegetation to support the establishment of monitoring bores. This EMP will support the ground and surface water investigations and address potential environmental impacts associated with the drilling and monitoring works.

This EMP will detail:

- Identification of environmental impacts (Section 2)
- Environmental Laws and standards that apply to the Project (Section 5.1)
- Responsibilities for implementation (Section 5.2)
- Roles and responsibilities of all personnel during the pre-enabling works and investigation works (Section 5.2)
- Management plans (Section 6)
- Monitoring (Section 7.1)

1.2 Background

The Collie Basin is situated 150 km south of Perth, WA and contains large resources of both groundwater and coal. It is locally divided east-west into the Premier and Cardiff Sub-basins. Groundwater resources have been dewatered in proximity to mining operations to support dry coal mining conditions. The abstracted groundwater from the mine site dewatering is primarily used in coal-fired power generation at the Muja, Collie, and Bluewaters power stations. Other uses include supplementing local rivers and pools.

Annual groundwater abstraction has exceeded recharge for more than 30 years from the dewatering activities, resulting in a loss of aquifer storage and a decline in groundwater levels across much of the Basin. Rivers and streams that previously received groundwater discharge became losing streams, especially in the Premier Sub-basin. DWER manages the State's water resources and has been working with the mining and power generation industry to assess and manage operational impacts. Conceptual uncertainties in the current conceptual understanding have been identified as a key risk for the tail end of mining operation, closure, and the post-mining period. These conceptual uncertainties are now the focal point for the Collie SGIP.

1.3 Scope and limitations

This report has been prepared by GHD for Department of Water and Environmental Regulation and may only be used and relied on by Department of Water and Environmental Regulation for the purpose agreed between GHD and Department of Water and Environmental Regulation.

GHD otherwise disclaims responsibility to any person other than Department of Water and Environmental Regulation 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.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

1.4 Proposed works

The following investigative site works have been proposed for the Collie SGIP:

- Drilling and installation of 24 monitoring bores on 14 pads
- Installation of three surface water monitoring sites

- Undertaking of infiltration tests (number to be determined)
- Sediment sampling from the Collie Town Discharge site.

These works are required to monitor ground and surface water connectivity and confirm water quality. The bores will be available for ongoing monitoring, whereas the surface water monitoring sites will be decommissioned at the conclusion of the Collie SGIP.

The drill pads will be selected to avoid environmental impacts as much as practicable and will only be cited in uncleared areas should there be no suitable alternatives.

This EMP for the proposed works has been based upon the desktop assessment and the relevant Environmental Factors of the project area. Appendix A, Figure 1, maps the investigative area and Appendix A, Figure 2 maps proposed and existing bore locations.

1.5 Environmental factors

The environmental factors identified as relevant to the proposed works are:

- Inland Waters
- Flora and Vegetation
- Fauna
- Social Surroundings

The proposed investigative activities and potential environmental impacts related to these factors are detailed in Table 1.

Table 1 Environmental factors managed under this EMP

Key Environmental Factor	
Inland Waters	
Key values	– Wetlands located in proximity to drilling locations. – Surface water bodies being monitored.
Activities	– Construction of up to 14 pads to undertake drilling for installation of monitoring bores. – Installation of surface water monitoring equipment within Cardiff Town Pool and Chicken Creek. – Infiltration sampling at or near inland water courses (proposed locations: Chicken Creek, Collie River South Branch, Collie River East Branch).
Potential impacts	– Dust emissions affecting water quality and clarity. – Increased turbidity of surface waters during construction resulting from dust generation and storm water runoff. – Leaks / spills of hydrocarbons during drilling.
Flora and Vegetation	
Key values	– Native vegetation including Jarrah and Marri woodlands which are located in or around the proposed drilling pads.
Activities	– Degradation of native vegetation cover to facilitate access to and within the drilling pads to allow for the construction of the bores. – Stepping/driving on flora and vegetation when undertaking initial bore audit and scoping of proposed drill sites where there are no existing access tracks or drill pads.
Potential impacts	– Clearing of vegetation causing a reduction in tree cover, loss of habitat for significant flora species. – Smothering of vegetation by dust generated from the proposed clearing activities resulting in reduced vegetation health.
Fauna	
Key values	– Fauna habitat existing within vegetation surrounding proposed drilling pads. – Clearing of vegetation may reduce habitat for terrestrial or aquatic fauna including:

Key Environmental Factor	
	• Chuditch • Black Cockatoos • Phascogale
Activities	– Clearing of fauna habitat to allow for the proposed works. – Presence of access roads and infrastructure and vehicle movements. – Mobilisation of drilling equipment during the proposed works. – Accessing existing bores for monitoring purposes.
Potential impacts	– Noise and vibration emissions disrupting native fauna. – Smothering of native vegetation providing fauna habitat by dust generated from the activities (i.e., clearing, drilling, excavation and placement of fill). – Disturbing fauna which may have used existing infrastructure.
Social Surroundings	
Key values	– Presence of Environmentally Sensitive Areas (ESAs) including tributaries of the Collie River in proximity to drilling locations. – Any cultural protocols negotiated between DWER and Traditional Owners. – Sensitive receptors in proximity to the proposed drilling locations.
Activities	– Clearing, drilling, excavation and placement of drill cuttings. – Movement of vehicles within and surrounding the drill pads. – Deployment of surface water monitoring equipment. – Cultural protocols as agreed between DWER and traditional owners will be adhered to.
Potential impacts	– Noise, vibration and dust emissions affecting sensitive receptors or ESA during the works. – Disturbance of Aboriginal Heritage sites or artifacts. – Visual impact affecting sensitive receptors including dwellings.

**Flora and Vegetation Survey and/or Fauna Survey of the drilling pads or access roads, to be undertaken should clearing be required.*

1.6 Rationale and approach

The rationale and approach for this outcome-based EMP uses existing knowledge of the area to inform management actions. The management actions have been selected to maintain environmental quality for the proposed activities and risks, and will be amended if/and when survey data is collected. Table 2 will be updated to describe the outcomes from any studies which may need to be undertaken. This approach complies with the relevant DWER policy and guidelines.

Table 2 Surveys

Key environmental factor	Report (Author Year)	Survey description	Survey findings
Inland Waters	TBC	Surveys of the waterways in proximity to the sites (if required)	TBC
Flora and Vegetation	TBC	Surveys of flora and vegetation in areas where clearing may occur and impacts may be found.	TBC
Fauna	TBC	Surveys of fauna habitat in areas where clearing may occur and impacts may be found.	TBC
Social Surroundings (Dust, Noise and Aboriginal Heritage)	TBC	Surveys of areas where clearing may occur and impacts to sensitive receptors may be found.	TBC

1.6.1 Key assumptions and uncertainties

The surveys listed in Table 2 will be undertaken prior to any relevant disturbing works to provide certainty for the associated management measures provided in this EMP. All necessary approvals will be granted prior to any disturbing works.

Every effort will be made to avoid direct impacts to native vegetation, however, should native vegetation clearing be required for the works a clearing permit under Part V of the *Environmental Protection Act 1986* (EP Act) will be obtained from DWER prior to clearing.

1.6.2 Management approach

This EMP adopts a management hierarchy following the prioritisation of management provisions on a risk basis and outlines monitoring and reporting procedures to provide for continuous improvement, consistent with an adaptive management approach.

1.6.3 Rationale for choice provisions

Management-based provisions align with established industry practices for avoidance and minimisation of environmental impacts. The overall management approach is to avoid disturbance of key environmental values as far as practicable. Where avoidance is unachievable, the management approach is to minimise and reduce disturbance of key environmental values.

The management provisions have considered the direct, indirect and cumulative impacts from the proposed works as well as the expected intensity and duration of these impacts. Recommendations from technical studies have also been considered and included.

2. Regional Environmental Information

2.1 Environmental Setting

Regional environmental setting information is included in Table 3.

Table 3 *Environmental Setting*

Regional Characteristics	Description
Topography	- Topography ranges from 250 m AHD (Australian Height Datum) along its south-western and south-eastern margins to 160 m AHD in the northwest of the basin. - The basin is gently undulating with wide, flat valleys and ridges. There are also some lateritic capped escarpments (GHD, 2010).
Soil Landscape	- Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales, ranging from 1:20,000 to 1:250,000. - The Collie Basin is located in the Coalfields System which is described as gently undulating plain over coal basins, in the south of the Western Darling Range. Sandy gravel, deep sand and non-saline wet soils. Jarrah-marri-paperbark woodland (DPIRD, 2022). - The Collie Basin is also located in the Darling Plateau System which is described as lateritic plateau. Duplex sandy gravels, loamy gravels and wet soils. Jarrah-marri-wandoo forest and woodland (DPIRD, 2022).
Geology	- The stratigraphy consists of the Tertiary Naina Formation, which overlies the Permian interbedded sequences of coal seams, sandstone, mudstone and siltstone in the Collie Group, underlain by the glacial tills and argillaceous clays of the Stockton Group, which is in turn underlain by Archean crystalline (granite) basement (PSM, 2020). - The Nakina formation contains reworked Permian palynomorphs and an assemblage of Cretaceous miospores, acritarchs and algal cysts, probably Barremian (~125.77 Ma) to early Aptian (~113 Ma) in age (Le Blanc Smith, 1993).

Regional Characteristics	Description
	Appendix A, Figure 3 maps regional geology
Acid Sulphate Soils (ASS)	- The Collie Basin has been recognised as a source of Acid Mine Drainage (AMD). - The groundwater within the Basin is naturally acidic. This acidity has been attributed to the presence of sulphide-bearing materials as well as the limited buffering capacity of the coal measures successions within which the groundwater is stored (PSM, 2024).
Hydrology	- The Collie Basin is located within the designated Collie River South Catchment of the Upper Collie River Basin, and within the proclaimed Upper Collie Surface Water Area, within the Collie River Irrigation District (DoW, 2009) - The Basin is drained by two major tributaries of the Collie River; the Collie River South Branch (located within the Cardiff Sub-basin) and the Collie River East Branch (located within the Premier Sub-basin). These tributaries flow in a north-westerly direction toward the Wellington Reservoir (Moncrieff, 1996). - The main mechanisms of natural groundwater discharge within the Collie Basin are via baseflow to the Collie River and its tributaries and via evapotranspiration, while the major source of recharge for the water table aquifer (in the Collie Group) is from rainfall. - Appendix A, Figure 4 maps regional hydrology
Hydrogeology	- The Nakina Formation consists of poorly consolidated sandstone with clayey interbeds and is not considered a major aquifer unit within the Collie Basin (PSM, 2020). - The Collie group is the predominant aquifer system for the Collie Basin. It is a multilayered aquifer consisting of interbedded sandstone, clay, mudstone, shale, and coal seams (PSM, 2020). - The Stockton Group (as distinct from the Stockton Ridge which is formed of crystalline basement), is comprised of siltstone and mudstone and is interpreted to form the bottom of the Collie Group flow system (PSM, 2020).
Groundwater Users	Groundwater has historically been abstracted from bores for mine dewatering and power generation at power plants
Ecological Constraints	- The Groundwater Dependent Ecosystems (GDE) Atlas (BoM, 2025) identified a high potential GDE associated with the Collie River, Collie River South Branch, Collie River East Branch and Chicken Creek. - The GDE Atlas (BoM, 2025) identified that there is a low to high potential for a terrestrial GDE in the Collie Basin, with higher potential situated in closer proximity to rivers and waterlines.
Historic Heritage Constraints	- A search of the Heritage Council WA - Local Heritage Survey database indicated that the Collie Basin intersects 110 Historic Heritage Places listed by the local government authority (DPLH, 2025a). - A search of the Heritage Council WA - State Register database indicated that the Collie basin intersects seven Historic Heritage Places listed by the Heritage Council (DPLH, 2025b).
Potentially Sensitive Environments	The DWER Environmentally Sensitive Area (ESA) database maps six instances of declared rare flora within the Collie Basin (DWER, 2021a).
Contaminated Sites	The DWER contaminated sites database does not map any contaminated sites within the Collie Basin (DWER, 2025).
Aboriginal Cultural Heritage	- The Aboriginal Cultural Heritage Inquiry System (ACHIS) was utilised to determine the presence of sites within the Collie Basin (DPLH, 2025c): - Registered site IDs: 602, 603, 4699, 4734, 4791, 4793, 4794, 4797, 4802, 4807, 5126, 5127, 15329, 15330, 15331, 15332, 16713, 18734 and 31944. - Lodged site IDs: 4469, 4579, 4604, 4792, 4796, 4800, 5123, 5129, 5304, 5308, 5699, 5700, 5702, 15335, 16003, 21265, 32961, 36239 and 36324. - Historic site IDs: 601, 4735, 4736, 4737, 4795, 4798, 4799, 4801, 5124, 5125, 5128, 5303, 5305, 5306, 5307, 5355, 15333 and 32445.

3. EMP provisions

This section identifies the management provisions and reporting requirements the proponent will implement via this EMP. The next sections include objectives, actions and targets for each key environmental factor.

3.1 Inland Waters

All disturbance during construction is to occur within the approved clearing areas for each drill pad. All hydrocarbons and hazardous materials will be safely stored in bunded areas to prevent release to surface water and soil contamination. Refuelling will also be undertaken either offsite or in bunded areas. Hydrology at the proposal location is mapped on Appendix A, Figure 4.

No construction will occur if there is a significant rainfall event predicted to occur, with a high risk of flooding to prevent contamination of surface water with sediment, hydrocarbons or hazardous materials. Management provisions to minimise impacts to Inland Waters are provided in Table 4.

Table 4 Inland Waters - management provisions

EPA Objective: To maintain hydrological regimes and quality of groundwater and surface water so that environmental values are protected.			
EMP Objective: To minimise indirect impacts to inland water bodies, as far as practicable			
Key environmental values: Geomorphic Wetlands including conservation wetlands.			
Key impacts and risks: Ground disturbing activities resulting in emissions affecting water quality and clarity			
Management action	Management target	Monitoring	Reporting
– Inspection of all machines and hoses conducted each day before use, to confirm their integrity, to reduce the risk of a spill. Any equipment failing inspection will be removed from use until repaired. – Refuelling and repairs/servicing will be undertaken in a designated and bunded area. – Any soil contaminated by hydrocarbons will be disposed of at an appropriately licenced waste disposal facility. – In the event of extreme weather conditions works will cease and the need to additional erosion and sediment control will be assessed and where required, implemented. – Vehicles and equipment access limited to designated roads/access tracks and cleared areas. – Vehicle speed limits will be imposed and enforced on nominated routes. – Dust suppression, including use of water carts on access roads and during placement of fill to be implemented during proposed works as required. – Open ground stockpiles and other potential dust generating areas must be managed to minimise dust. Open ground stockpiles must not exceed 2 m in height. – Handling of materials likely to cause dust emissions must cease during adverse weather conditions.	– Minimise the sediment mobilisation in the estuary. – Minimise dust emissions / erosion entering inland waterbodies. – Erosion and sediment controls installed and maintained as per management actions. – No incidents of significant environmentally hazardous materials released into the river. – Management of ASS (if identified)	– Ongoing during activities visual monitoring of dust levels by the works supervisor or representative. – Ongoing during pad construction and visual monitoring. – Daily visual inspections of any soil stockpiles. – Spill response materials checked weekly and replenished as required. – Daily monitoring of weather conditions and dust by construction supervisor or representative.	– Post works environmental report. – Incident reporting – Induction records.

– Erosion and sediment control measures will be applied to prevent erosion of exposed areas and sediment discharge to adjacent areas. – Hydrocarbon storage in accordance with Australian Standard (AS) 1940:2017 and Water Quality Protection Note (WQPN) 56 (DWER 2018). – Emergency management procedures for the recovery of contaminated soils in the event of accidental release. – A Spill Response Procedure will be prepared and implemented to ensure spills are contained and impacted areas remediated. – Appropriate spill response materials (i.e. spill kits) will be always maintained on-site. – Staff trained in the use of spill response materials. – All contaminated material generated from spill response will be disposed offsite at an appropriately licensed waste facility. – All site personnel to be inducted on environmental responsibilities.			
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3.2 Flora and Vegetation

Ongoing monitoring is required for the flora and vegetation key factor to manage construction risks and provide updated information. Management provisions for flora and vegetation are outlined in Table 5.

Table 5 *Flora and Vegetation – management provisions*

EPA Objective: To protect flora and vegetation so that biological diversity and ecological integrity are maintained.			
EMP Objective: To minimise direct and indirect impacts (dust) to surrounding native vegetation, as far as practicable.			
Key environmental values: Native vegetation including significant vegetation.			
Key impacts and risks: Clearing of vegetation prior to the proposed works.			
Management action	Management target	Monitoring	Reporting
– Disturbance Footprint uses existing cleared areas where practicable. – Avoid impact to native vegetation in good or better condition, where practicable. – Clearing of native vegetation will be limited to the area required for drilling. – All clearing boundaries to be clearly marked and checked prior to clearing activities. – Exclusion fencing will be installed at the Site to prevent un-authorized clearing and access through areas of native vegetation outside the clearing footprints. – All unauthorised clearing or damage of native vegetation will be immediately reported to the drilling supervisor. – All access tracks will use existing cleared areas, where practicable. – Mature trees will be retained as far as practicable.	– Minimise clearing of native vegetation and flora.	–	– Post works environmental report. – Induction records.

– All plant and machinery will be inspected prior to entry at the work site and be confirmed to be clean and free of vegetation and soil material. – Declared Plants within the construction site will be treated according to their Control Codes and DWER advice. – Weeds within the Site will be treated according to the weed control management. – Topsoil will be assessed for suitability for revegetation / landscaping and harvested with the intention of re-use wherever practical. – Any applications of herbicide will be undertaken by a qualified professional and in a manner that avoids impact to adjacent native vegetation.			
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3.3 Fauna

Ongoing monitoring is required for the fauna key factor to manage construction risks and provide updated information to include in the fauna register and other reports listed in Table 6. If there are any fauna injuries or deaths as a result of works, DWER shall be informed as soon as practicable and an incident form completed and submitted. Management provisions to minimise impacts to terrestrial fauna are provided in Table 6.

Table 6 *Terrestrial Fauna – management provisions*

EPA Objective: To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.			
EMP Objective: To minimise direct and indirect impacts to surrounding fauna and fauna habitat, as far as practicable			
Key environmental values: Conservation significant fauna and habitats			
Key impacts and risks: Noise and vibration emissions disrupting native fauna. Smothering of fauna habitat by dust generated from the proposed works activities (i.e. clearing, drilling), resulting in reduced vegetation health.			
Management action	Management target	Monitoring	Reporting
– Proposed works carried out in accordance with Australian Standard 2436-2010 Guide to Noise and Vibration Control on Construction (AS 2436-2010). – Ensure all mobile plant/equipment is fitted with appropriate noise suppression equipment to reduce noise levels as far as is practicable. – Speed limits to be designated and followed on site by all personnel and contractors. – Vehicles and equipment access limited to designated roads/access tracks and cleared areas. – All injured native fauna and any mortalities will be recorded. – Open excavations/trenches will be inspected twice daily, i.e. at dawn and prior to sunset. Entrapped fauna will be removed and relocated to surrounding vegetation.	– Minimise disturbance to native fauna from noise and vibration during the proposed works. – No incidents of conservation significant fauna injury or death. – No incidents of fauna injury or death from entrapment. – No repeated scavenging by feral or native fauna (> 1 week).	– Clearing monitored by a suitably qualified professional. – Native fauna encounters (including all fauna injuries and deaths) recorded. – Daily monitoring of steep sided excavations and trenches. – Weekly inspection of food/water storage areas – Fauna food or water scavenging (observation, scats, container tampering) recorded.	– Implement and maintain a Fauna Register (including encounters, injuries and deaths and food scavenging evidence). – Report all conservation significant fauna occurrences resulting in injury or death to the Department of Biodiversity, Conservation and Attractions (DBCA).

– If excavations/trenches are left open overnight, ramps will be established to permit native fauna to escape – All excavations/trenches to be backfilled as soon as practicable – If injured/sick animals are encountered, a suitably qualified environmental professional will be called to care for the animal (this person must hold a permit and have access to a care facility). – Food wastes and water to be appropriately contained so as not to attract feral or native fauna (i.e. lidded bins) – All staff and contractors to attend induction which will include prohibition on littering and feeding any fauna. – All site personnel to be inducted on environmental responsibilities.			– Post works environmental report. – Compliance Assessment Report – Induction records.
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3.4 Social Surroundings

Dust management is essential, and generation of dust must be kept to a minimum. Compliance with the National Environment Protection Measures (NEPM) must be achieved. The level of dust control relates proportionally to the specific activity and weather conditions encountered. A dust monitoring program in accordance with *DWER's Draft guideline for the management of dust* (DWER, 2021b) is to be implemented.

The Contractor shall keep noise levels to a minimum and levels will not exceed limits indicated in *AS 2436 - 2010 Guide to noise and vibration control on construction, demolition and maintenance sites* (Standards Australia 2010), *Environmental Protection (Noise) Regulations* and occupational noise exposure will be in compliance with legislative requirements. Vibration is to be managed so that it does not exceed DIN4150 levels.

The Project will involve ground disturbing activities and may include clearing vegetation (i.e. collection of topsoil and drilling) which have the potential to disturb Aboriginal Heritage sites. Management provisions to minimise impacts to social surroundings (Dust, Noise and Aboriginal Heritage) are provided in Table 7.

Table 7 Social Surroundings – management provisions

EPA Objective: To protect social surroundings from significant harm.			
EMP Objective: To minimise direct and indirect impacts to sensitive receptors			
Key environmental values: Adjacent sensitive receptors and sites of Aboriginal heritage.			
Key impacts and risks: – Noise, vibration, and dust emissions affecting sensitive receptors during the proposed works. – Clearing and drilling potentially impacting Aboriginal heritage			
Management action	Management target	Monitoring	Reporting
– Proposed works carried out in accordance with Australian Standard 2436-2010 <i>Guide to Noise and Vibration Control on Construction</i> (AS 2436-2010). – Equipment used is the quietest reasonably available. – Identification of sensitive receptors surrounding the site to plan the location of noise generating activities accordingly, where practicable. – Ensure all mobile plant/equipment is fitted with appropriate noise suppression	– Minimise noise and vibration reaching sensitive receptors during the proposed works. – No repetitive / sustained complaints by sensitive receptors	– Compliance with noise and vibration management actions. – Daily monitoring of weather conditions and dust by supervisor or representative. – During earthwork activities visual monitoring of dust levels by the construction	– Establish complaints register for dust, noise and vibration complaints. – Compliance Assessment Report – Incident reporting – Induction records.

equipment to reduce noise levels as far as is practicable. – Switch off noisy equipment when not in use. – Arrange routes for mobile plant to limit reversing required and reduce reverse alarm use. – Personnel to park in designated parking areas, which should be located away from sensitive receptors. – Construction activities (including materials transport) will be limited between 0700 and 1900 Monday to Saturday, excluding public holidays (standard work hours). – Cease handling of materials during adverse wind conditions or if complaints are received from sensitive receptors. – All site personnel to be inducted on environmental responsibilities. – Vehicles and equipment access limited to designated roads/access tracks and cleared areas. – Vehicle speed limits will be imposed and enforced on nominated routes. – Dust suppression, including use of water carts or dust suppressants to be implemented as required. – Open ground stockpiles and other potential dust generating areas must be managed to minimise dust. – Nearby sensitive receptors should be notified if the proposed works might generate dust to a level that may impact them. – All site personnel to be inducted on environmental responsibilities. – Heritage monitors will be engaged for initial ground disturbing construction works – Aboriginal heritage monitoring will be undertaken in accordance with required guidelines – Should any Aboriginal artefacts be discovered during construction, all works will cease until the find is investigated. – If skeletal material is uncovered during construction activities, works will cease in the immediate areas, and the discovery reported to the Police until the material has been investigated.	regarding dust emissions. – Minimise dust emissions reaching sensitive receptors during proposed works.	supervisor or representative. – Dust Management Plan	
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4. Contingency response

A Contingency and Emergency Response Plan will be prepared. The purpose of the contingency plan is to identify unexpected situations that could occur during the works, and the specify procedures that can be implemented to manage such situations and prevent adverse impacts to human health. Any incident that may have a negative impact on the environment, is appropriately reported, managed and rectified. An incident is defined as any

occurrence that threatens the safety of an individual or an individual is injured and/or any exceedance of health and/or environmental limits, criteria, standards, specification requirements or laws.

4.1 Control of dust

Contingency measures shall be implemented when dust levels are found to exceed acceptable levels (based either on site observations, measurements made during monitoring or received complaints). Where unacceptable dust levels are considered to have been generated, dust shall be suppressed by:

- Additional water cart water sprays;
- Use of proprietary products;
- Changing protocols (i.e., avoidance of dust inducing works on windy days)

4.2 Control of noise and vibration

Contingency measures shall be implemented when noise levels are found to be unacceptable. Unacceptable noise levels shall initially be reduced by:

- Modifying the location of equipment
- Modifying the operation of the equipment
- Modifying the type of equipment used

If additional measures are required, operations shall be further modified to achieve acceptable noise levels. Modifications may include:

- Installing additional noise suppression features on equipment (e.g. encapsulation of engine chambers, silencers)

4.3 Control of weeds and disease

Contingency measures shall be implemented when there is found to be an introduction or spread of weeds/disease into the site area (based on either site observations, measurements or surveys made during monitoring or received complaints). Where weeds are considered to have been introduced to the site area due to construction works, weeds shall be managed by:

- Modifying equipment inspection and cleaning procedures (increasing frequency of cleaning).
- Inspections of cleaned equipment to be logged.

5. Occupational health and safety

Occupational health and safety will be the responsibility of the drilling Contractor during activities including the preparation of plans and hazard assessments. The information presented in this section is a guide for the relevant legislation, however the Contractor is to undertake an independent review to ensure all risks and statutory requirements have been addressed.

5.1 Applicable legislation / guidance

A summary of key relevant environmental legislation and guidance, which applies to the drilling works, is presented in Table 8.

Table 8 Legislation / guidance

Type	Document
Act	– Environmental Protection and Biodiversity Conservation Act 1999 – Environmental Protection Act 1986

Type	Document
	– <i>Native Title Act 1993</i> – <i>Aboriginal Heritage Act 1972</i> – <i>Biodiversity Conservation Act 2016</i> – <i>Planning and Development Act 2005</i> – <i>Rights in Water and Irrigation Act 1914</i>
Guidelines Bulletins	– Western Australian Environmental Protection Authority, Environmental Guidance for Planning and Development, Guidance Statement No. 33, May 2008 – DoH (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia. May 2009 – Department of Environment Regulation (2014) Assessment and management of contaminated sites, December 2014. – DER Contaminated Sites Management Series Guidelines (where still enacted) – Western Australian Environmental Protection Authority, Environmental Assessment Guideline for Environmental factors and objectives, EAG 8, June 2013 – Department of Water and Environment Regulation, Landfill Waste Classification and Waste Definitions 1996, as amended December 2019 – Western Australian Department of Environment and Conservation, A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities, January 2011 – Western Australian Environmental Protection Authority, Environmental Protection Bulletin No. 11 Consultation on Conditions Recommended by the EPA, June 2010 Western Australian Environmental Protection Authority, Environmental Protection Bulletin No. 16 - Minor or preliminary works and investigation work, December 2011
Regulations	– National Environment Protection Council, National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 No. 1, April 2013 – National Environment Protection Council, National Environment Protection (Ambient Air Quality) Measure Variation, July 2003 – Government of Western Australia, Environmental Protection (Noise) Regulations 1997, May 2014 – WorkSafe - Occupational Safety and Health Regulations 1996 – Environmental Protection (Controlled Waste) Regulations 2004
Code of Practice	– National Occupational Health and Safety Commission, Code of Practice for the Safe Removal of Asbestos, 2nd Edition [NOHSC:2002(2005)] – National Occupational Health and Safety Commission, Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)] – National Occupational Health and Safety Commission, Code of Practice for the Safe Removal of Asbestos, 2nd Edition [NOHSC:2002(2005)]
Standards	– Standards Australia, AS 2436 - 2010 Guide to noise and vibration control on construction, demolition and maintenance sites, May 2010 – Standards Australia, AS 1319 - 1994 Safety signs for the occupational environment, April 1994 – Standards Australia, AS 1940 - 2004 Storage and Handling of Flammable and Combustible Liquids, October 2004

5.2 Roles and responsibilities

Roles and responsibilities for the purposes of this EMP are outlined in Table 9.

The Principal and Superintendent (or appropriately qualified and experienced representative of the Superintendent) will review and incorporate the requirements of the EMP into any additional documents. The Principal and Superintendent will have authority to dictate works, including any necessary stoppages for environmental reasons if and when the situation requires. All construction personnel and sub-contractors shall undergo an induction, which includes information on the importance of protecting native vegetation and avoiding impacts. The induction will include information on the responsibilities for protecting the environmental value of the priority areas during construction works.

Table 9 Roles and responsibilities

Role	Contact	Responsibility
Principal		Responsible for appointment of relevant organisations to undertake the works, stakeholder management, ensuring review and amendment (where deemed necessary) of the EMP is undertaken. Responsible for providing access for works to be undertaken, communicate with onsite occupants (visitors) the details of the planned works (where required).
Environmental Consultant		The environmental consultant contracted by the Principal and considered a delegated authority.
Drilling Contractor	TBC by DWER	The Company contracted to carry out relevant site works as outlined. The Contractor is responsible for all measures required to protect the environment during the contracted activities.

6. Adaptive management and review

An adaptive management approach aims to reduce impacts by embedding a cycle of monitoring, reporting and implementing change, where required. This document applies the principles of adaptive management through monitoring, corrective actions and implementing changes.

6.1 Environmental monitoring and corrective actions

Internal monitoring of the environmental aspects outlined in this EMP will occur following the proposed works. Any non-conformances or incidents within this EMP will be investigated, rectified, or mitigated as soon as possible to ensure minimal ongoing environmental harm. Relevant procedures will be amended/updated as necessary and inductions and other workforce communication will be undertaken in a timely manner to minimise the risk of reoccurrences.

6.2 Review

This EMP is intended to be dynamic and may be updated to reflect changes in management practices and the natural environment with time. This will also allow flexibility to adopt new technologies/management measures. Amendments to management actions and targets will be completed as required. This will include revision of management actions which don't achieve the desired outcomes, monitoring to track the outcomes from management actions, legislation updates or improvements to practices achieving a greater environmental outcome.

6.3 Reporting

Site personnel are responsible for reporting incidents (Including unexpected finds and complaints). Any incidents or complaints shall be reported to DWER within 48 hours of occurrence. Contingency procedures and management strategies shall be in place to prevent the occurrence of controllable incidents and to reduce the impacts on people, property or the environment, should an incident occur. Management measures shall also be implemented to prevent the reoccurrence of such incidents for the remainder of the construction works.

The environmental performance of the works and the identification of corrective actions will be assessed by DWER prior to and throughout the Construction works. All documents pertaining to environmental management are required to be maintained through a system of document control.

The post works environmental report is to be provided within one (1) month of completion of works and should include, but not be limited to the following:

- Total area of vegetation cleared (including GPS locations of the extent)
- Details of any incidents and/or non-conformances

- Corrective actions take in relation to any incidents and/or non-conformances.

Reporting requirements will be undertaken in accordance with Section 3 of this EMP. If a significant nonconformance with this EMP occurs, the regulator will be notified of the non-compliance and outcomes of the subsequent investigation.

DRAFT

7. Adaptive management and review of the EMP

An adaptive management approach aims to reduce impacts by embedding a cycle of monitoring, reporting and implementing change, where required. This document applies the principles of adaptive management through monitoring, corrective actions and implementing changes.

7.1 Environmental monitoring and corrective actions

Internal monitoring of the environmental aspects outlined in this EMP will occur throughout the proposed works. Any non-conformances or incidents within this EMP will be investigated, rectified, or mitigated as soon as possible to ensure minimal ongoing environmental harm. Relevant procedures will be amended/updated as necessary and inductions and other workforce communication will be undertaken in a timely manner to minimise the risk of re-occurrences.

7.2 EMP review

This EMP is intended to be dynamic and may be updated to reflect changes in management practices and the natural environment with time. This will also allow flexibility to adopt new technologies/management measures.

Amendments to management actions and targets will be completed as required. This will include revision of management actions which don't achieve the desired outcomes, monitoring to track the outcomes from management actions, legislation updates or improvements to practices achieving a greater environmental outcome.

7.3 Incident reporting

7.3.1 Environmental incidents / non-compliance

Environmental incidences and non-compliances will be identified and recorded as soon as possible by the relevant responsible persons. Incidents will be mitigated or rectified where possible within 48 hours of being identified. Non-conformances to this plan will be reported to the construction supervisor or equivalent within 48 hours of identification.

7.3.2 Reporting

The environmental performance of the proposed works and the identification of corrective actions will be assessed by DWER prior to and throughout the proposed works. All documents pertaining to environmental management are required to be maintained through a system of document control.

The post works environmental report is to be provided within one (1) month of completion of works and should include, but not be limited to the following:

- Total area of vegetation cleared (if relevant)
- Details of any incidents and/or non-conformances
- Corrective actions taken in relation to any incidents and/or non-conformances.

Reporting requirements will be undertaken in accordance with Section 3 of this EMP. If a significant non-conformance with this plan occurs, the regulator will be notified of the non-compliance and subsequent investigation.

8. Conclusion

This EMP has been prepared for the drilling of groundwater bores on behalf of DWER for works to complete the State Groundwater Investigation for the Collie groundwater area. The EMP has taken into consideration the results from relevant studies to identify the key environmental factors relevant to the proposed works, namely:

- Inland Waters
- Flora and Vegetation
- Fauna
- Social Surroundings (Aboriginal Heritage)

The overall management approach is to avoid disturbance of key environmental values as far as practicable. Where avoidance is unachievable, the management approach is to minimise and reduce disturbance of key environmental values.

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Appendix D

ACHIS Desktop Search



Search Criteria

3 Aboriginal Cultural Heritage (ACH) Register in Shapefile - GHDPProposedDrillPads with 150m buffer

Disclaimer

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

Likewise, from 8 June 2015 the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DEMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at <https://www.wa.gov.au/organisation/departments-and-cabinet/south-west-native-title-settlement>.

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Terminology

ID: ACH on the Register is assigned a unique ID by the Department of Planning, Lands and Heritage using the format: ACH-00000001. For ACH on the former Register the ID numbers remain unchanged and use the new format. For example the ACH ID of the place Swan River was previously '3536' and is now 'ACH-00003536'.

Access and Restrictions:

- **Boundary Reliable (Yes/No):** Indicates whether to the best knowledge of the Department, the location and extent of the ACH boundary is considered reliable.
- **Boundary Restricted = No:** Represents the actual location of the ACH as understood by the Department..
- **Boundary Restricted = Yes:** To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km²) provides a general indication of where the ACH is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- **Culturally Sensitive = No:** Availability of information that the Department of Planning, Lands and Heritage holds in relation to the ACH is not restricted in any way.
- **Culturally Sensitive = Yes:** Some of the information that the Department of Planning, Lands and Heritage holds in relation to the ACH is restricted if it is considered culturally sensitive information. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the people who provided the information. To request access please contact via <https://achknowledge.dplh.wa.gov.au/ach-enquiry-form>.
- **Culturally Sensitive Nature:**
 - **No Gender / Initiation Restrictions:** *Anyone* can view the information.
 - **Men only:** Only *males* can view restricted information.
 - **Women only:** Only *females* can view restricted information.

Status:

- **Register:** Aboriginal cultural heritage places that are assessed as meeting Section 5 of the *Aboriginal Heritage Act 1972*.
- **Lodged:** Information which has been received in relation to an Aboriginal cultural heritage place, but is yet to be assessed under Section 5 of the *Aboriginal Heritage Act 1972*.
- **Historic:** Aboriginal heritage places assessed as not meeting the criteria of Section 5 of the *Aboriginal Heritage Act 1972*. Includes places that no longer exist as a result of land use activities with existing approvals.

Place Type: The type of Aboriginal cultural heritage place. For example an artefact scatter place or engravings place.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place.

Coordinates

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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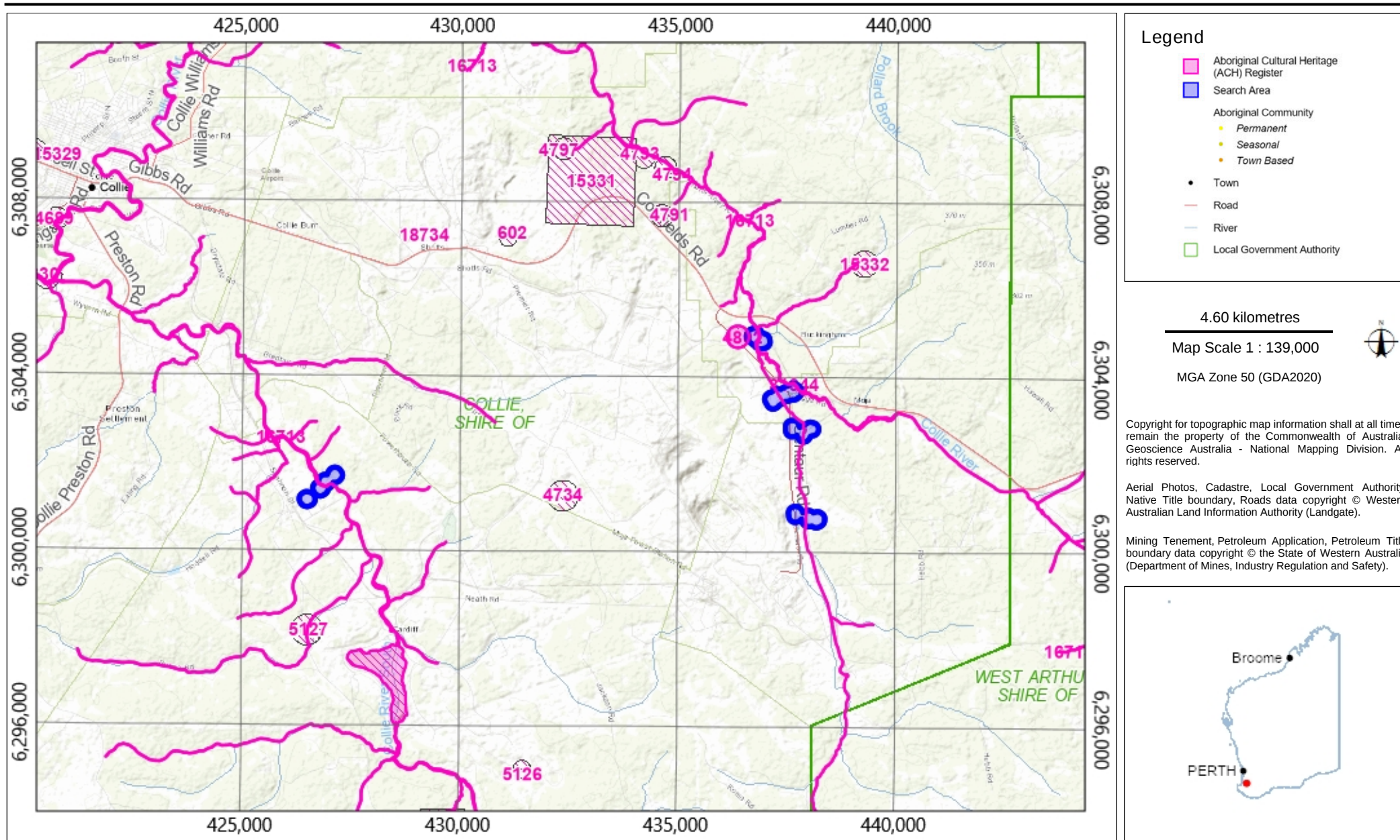
ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
4802	SHOTTS 12	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	S01939
16713	Collie River Waugal	No	Yes	No	No Gender / Initiation Restrictions	Register	Creation / Dreaming Narrative; Landscape / Seascape Feature; Water Source	*Registered Knowledge Holder names available from DPLH	
31944	Collie Ochre Deposit	No	Yes	No	No Gender / Initiation Restrictions	Register	Ochre	*Registered Knowledge Holder names available from DPLH	



Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Register

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Search Criteria

No Aboriginal Cultural Heritage (ACH) Lodged in Shapefile - GHDPProposedDrillPads with 150m buffer

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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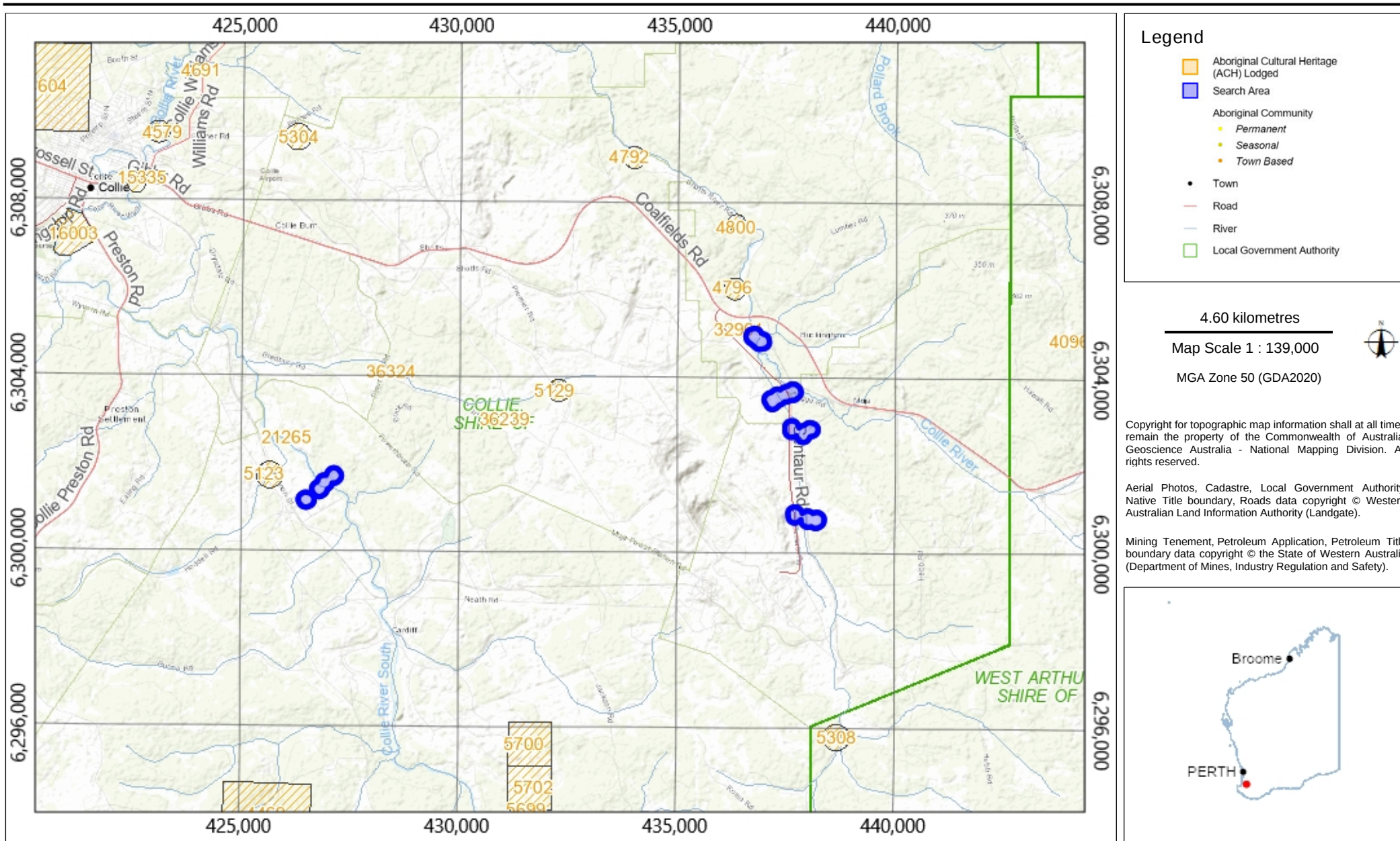
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Aboriginal Cultural Heritage Inquiry System

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Search Criteria

No Aboriginal Cultural Heritage (ACH) Historic in Shapefile - GHDPProposedDrillPads with 150m buffer

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Aboriginal Cultural Heritage Inquiry System

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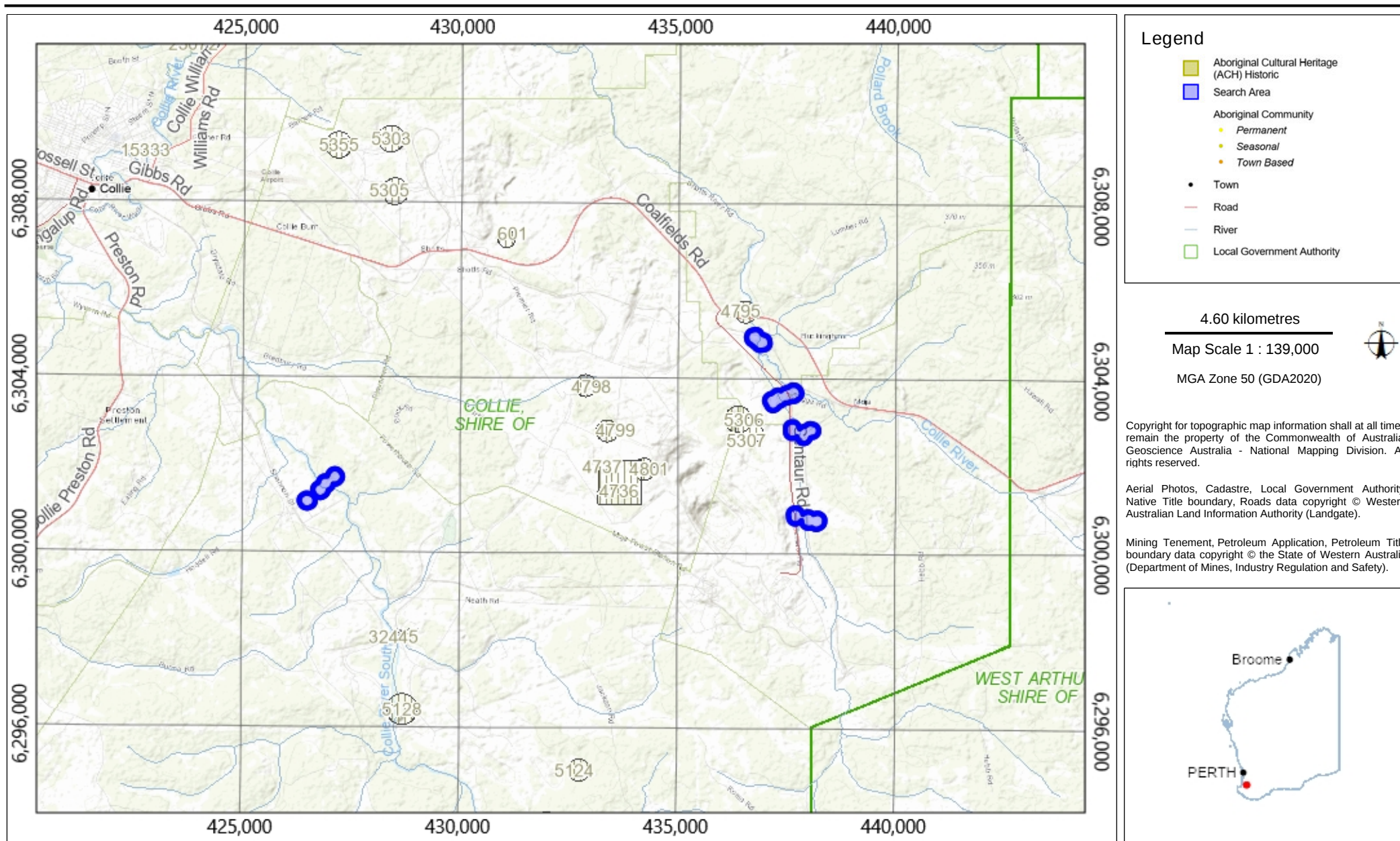
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Search Criteria

17 Heritage Surveys containing 17 Survey Areas in Shapefile - GHDPProposedDrillPads with 150m buffer

Disclaimer

Heritage Surveys have been mapped using information from the reports and / or other relevant data sources. Heritage Surveys consisting of small discrete areas may not be visible except at large scales. Reports shown may not be held at the Department of Planning, Lands and Heritage (DPLH). Please consult report holder for more information. Refer to <https://www.wa.gov.au/organisation/departments-and-agencies/planning-lands-and-heritage/aboriginal-heritage> for information on requesting reports held by DPLH.

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Access

Some reports are restricted.

Spatial Accuracy

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

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

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List of Heritage Surveys

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Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
19309	14996	Ethnographic survey of Griffin Coal Mining Tenements (Chicken Creek option 2 and Ewington options 1 and 2), Collie, Western Australia	Goode, Brad			Ethnographic	Griffin Coal Mining Tenements (Chicken Creek Option 2 and Ewington Options 1 and 2), Collie as shown in Fig. 1.1, 1.2	Good	Field and Desktop
20751	14119	Report on an ethnographic survey of the proposed Collie River Pools Pipeline	O'Connor, R			Ethnographic	Proposed Collie River Pools Pipeline. The project encompasses a 4.2km long pipeline following the existing track along the eastern bank of the Collie River South, with five spurs running to five separate river pools. One of the spurs is approximately 150m	Good	Field and Desktop
20918	13924	Report of an archaeological survey at proposed pipeline along Collie River-South	Harris, Jacqueline.			Archaeological	Proposed Pipeline along Collie River South. The pipeline is located 2km south of the junction of Collie River South and Muja Powerhouse Road and extends for some 4km. The project area included a 20m easement either side of a track following and adjacent to	Unreliable	Field and Desktop
21575	15203	Report on an archaeological and ethnographic survey of the proposed salt water diversion location and pipeline route at Collie, Western Australia.	Australian Interaction Consultants			Archaeological/ Ethnographic	Proposed salt water diversion location and pipeline route at Collie as shown in figs. 2-4	Unreliable	Field and Desktop
21964	16494	Report on an archaeological survey of Proposed Caol Mining at Buckingham, Western Australia	Australian Interaction Consultants			Archaeological	The survey was conducted in a section of the proposed Buckingham coal mine extension, over a four kilometre by four kilometre project area, some of which is located in the area of previous mining activities.	Indeterminate	Field and Desktop
23435	15849	Report on an Ethnographic Consultation of the Proposed Buckingham Coal Mine at Collie, Western Australia	Australian Interaction Consultants			Ethnographic	Proposed Buckingham Coal Mine project area, near existing Muja open cut mine in catchment of Chicken Creek and Collie River East Branch, Collie Basin.	Good	Field and Desktop



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Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
23753	16501	An Aboriginal Heritage Survey of the Muja / Chicken Creek Mine Expansion of Areas A, B & C: Collie WA	Goode, Brad			Archaeological/ Ethnographic	Muja/Chicken Creek Mine Expansion of Areas A, B & C: Collie	Good	Field and Desktop
23754	15755	Report on an Archaeological Survey of Muja / Chicken Creek Areas A, B & C East of Collie	Harris, Jacqueline.			Archaeological/ Ethnographic	Muja/Chicken Creek Mine Expansion of Areas A, B & C: Collie	Good	Field and Desktop
27825	17408	Heritage Survey of the Chicken Creek 5 North and E12/10 Proposed Development Areas Premier Coal, Collie, Western Australia	Ballot, Elmien			Archaeological	Premier Coal is located in the south-west of Western Australia in the Collie Coal Basin, approximately 200km south of Perth and 10km southeast of Collie.	Good	Field and Desktop
28844	19879	Collie River Salinity Diversion System : Aboriginal Heritage Study	Kellogg Brown and Root Pty Ltd			Archaeological/ Ethnographic	Pipeline approx. 10km in length. From the township of Muja to NW of Buckingham approximately 15km E of Collie		Field and Desktop
102073	14371	Western Australia Regional Forest Agreement Aboriginal Consultation Project. Vol.2. Nov.1997.	Centre for Social Research.	1997		Ethnographic	Regional Forest Agreement Aboriginal Consultation Project as shown in Figure 1.	Unreliable	Field only
102074	14226	Western Australia Regional Forest Agreement Aboriginal Consultation Project. Vol.1. Nov.1997.	Centre for Social Research.	1996		Ethnographic	Regional Forest Agreement Aboriginal Consultation Project as shown in Figure 1.	Unreliable	Field only
104079	13397	Bunbury-Wellington Regional Planning Study: Working Paper no.6, Aboriginal Heritage and Planning Survey. [Open] Released for Public Comment July 1992.	Dept of Planning and Urban Development.	1992		Ethnographic	The survey area consists of the Bunbury-Wellington Region, as shown in Figure 1. Please Note - This study did not constitute a comprehensive 'site identification', 'site avoidance' or 'work area/programme clearance' survey of the area shown in figure 1, a	Very Good	Field and Desktop
104236	13301	Survey for Aboriginal Sites Griffin Coal Mining Leases Collie Area: Interim Report. Dec 1979.	Novak, V.			Archaeological	The survey area consists of a sample of Griffin coal mining leases, as shown Appendix 2.	Good	Field and Desktop
104241	13444	A Survey for Aboriginal Sites: Griffin Coal Mining Leases - Collie Area.	Novak, V.			Archaeological	The survey area consists of a sample of Griffin coal mining leases, as shown Appendix 2.	Good	Field and Desktop



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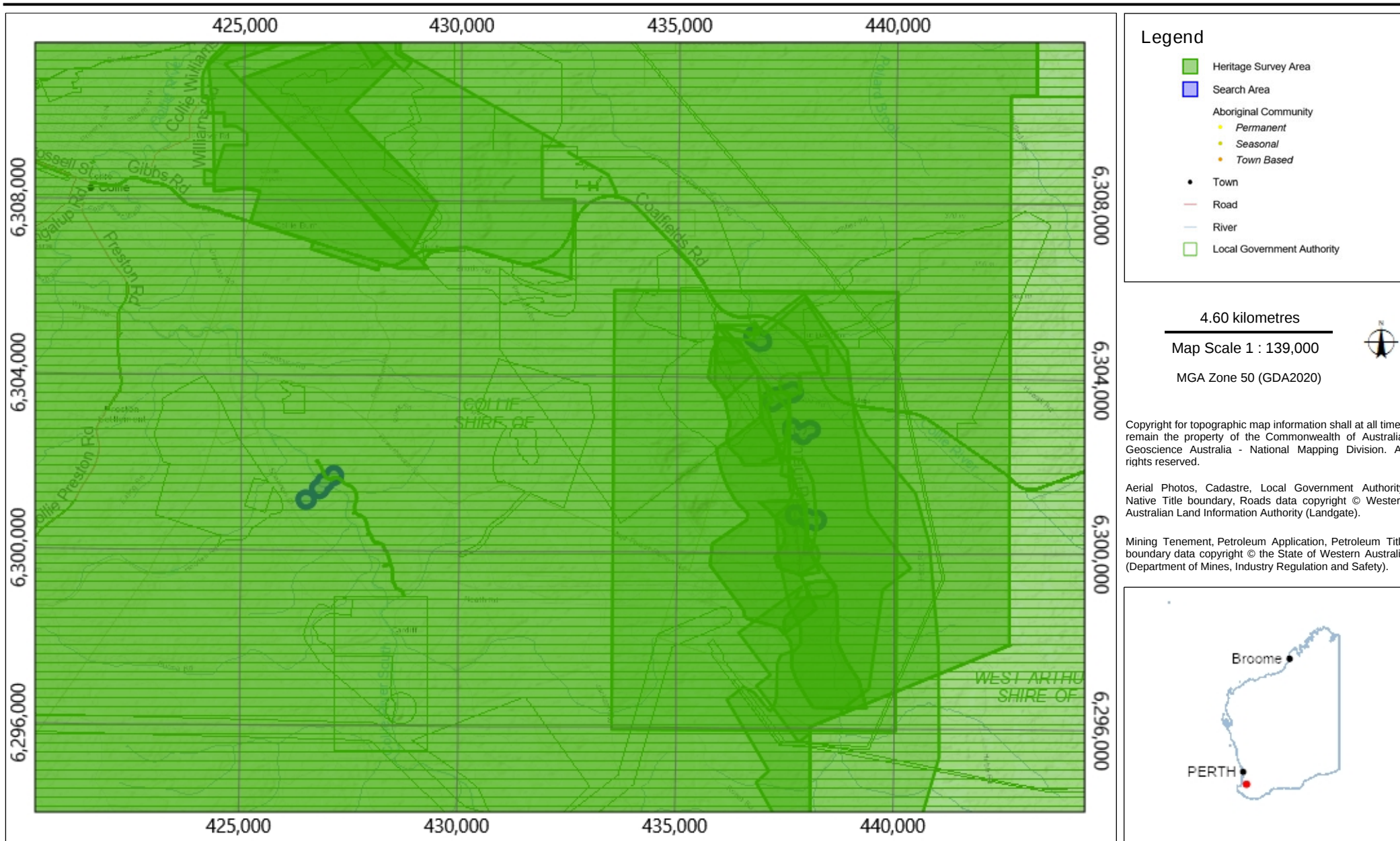
Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
104608	13272	Bunbury-Wellington Regional Planning Study: Aboriginal Heritage & Planning Survey : working paper no. 6	McDonald, E	1990		Ethnographic	The survey area consists of the Bunbury-Wellington Region, as shown in Figure 1. Please Note - This study did not constitute a comprehensive 'site identification', 'site avoidance' or 'work area/programme clearance' survey of the area shown in figure 1, a	Very Good	Field and Desktop
105712	14011	Report of an archaeological survey at proposed mining development at Ewington 1, Ewington 2 & Chicken Creek 3, Collie	Harris, Jacqueline.			Archaeological	Proposed mining development at Ewington 1, Ewington 2 & Chicken Creek 3, Collie. The areas measure approximately 1km x 1.65km, 6.5km x 2km and 2km x 0.5km respectively as shown in Figs. 2 and 3	Good	Field and Desktop



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Map of Heritage Survey Areas

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Appendix E

Site photos

Site Photographs



Photo 1 **Drill pad S2_GHD Photo 1**



Photo 2 **Drill pad S2_GHD Photo 2**



Photo 3 **Drill pad S4_GHD Photo 1**



Photo 4 **Drill pad S4_GHD Photo 2**



Photo 5 **Drill pad S6_GHD**



Photo 6 **Drill pad S7_GHD Photo 1**



Photo 7 **Drill pad S7_GHD Photo 2**



Photo 8 **Drill pad S12_GHD Photo 1**



Photo 9 ***Drill pad S12_GHD Photo 2***



Photo 10 ***Drill pad S12.5_GHD Photo 1***



Photo 11 ***Drill pad S12.5_GHD Photo 2***



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