



Nyidinghu Iron Ore Project

Detailed Terrestrial Fauna Survey

**Prepared for
Fortescue Metals Group Limited**

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● people ● planet ● professional

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Executive Summary

Fortescue Metals Group Limited commissioned 360 Environmental Pty Ltd to undertake a detailed terrestrial vertebrate fauna assessment to support the environmental approvals process for the Nyidinghu Iron Ore Project. The Nyidinghu Survey Area covers approximately 141,033 ha and is located approximately 60 km north of Newman in the Pilbara bioregion of Western Australia. The proposed development within the Survey Area will include an iron ore mine, rail corridor and associated infrastructure. The purpose of the detailed terrestrial vertebrate assessment was to gain an understanding of the fauna values of the Survey Area and provide baseline information for supporting documents as part of Environmental Impact Assessment (EIA) process required to develop the Project. This report presents the background, methods, results, discussion, and conclusions of the survey undertaken.

Information from database search results and 16 previous studies undertaken within the region were reviewed during the desktop assessment. The desktop assessment identified 353 terrestrial vertebrate fauna taxa recorded within the vicinity of the Survey Area, of which 39 are conservation significant.

The field survey was undertaken by suitably experienced and qualified personnel over two field trips, Trip 1 (May 2021) and Trip 2 (September 2021), and used a variety of detection methods including cage traps, camera traps, opportunistic observations, active searches, and autonomous recording units (bat and bird detectors).

Fauna habitat mapping was undertaken based on a combination of aerial imagery, field observations and fauna habitat assessment data. Nine fauna habitats were mapped within the Survey Area, of which the Rocky Escarpments/Ridges/Mesa (0.36% of the Survey Area) habitat represents the most value to conservation significant fauna, including potential denning habitat for the Northern Quoll (*Dasyurus hallucatus*), roosting habitat for the Ghost Bat (*Macroderma gigas*) and Pilbara Leaf-nosed Bat (*Rhinonictis aurantia* Pilbara form), critical habitat for the Pilbara Olive Python (*Liasis olivaceus barroni*), and nesting habitat for the Peregrine Falcon (*Falco peregrinus*). The Hills/Ranges/Plateaux (8.04% of the Survey Area) provide foraging and dispersal habitat for Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat, and Pilbara Olive Python, as do the Drainage Line/River/Creek (major) (1.15% of the Survey Area) and Drainage Line/River/Creek (minor) (7.40% of the Survey Area) habitats, which also provide potential nesting habitat for the Peregrine Falcon and Grey Falcon (*Falco hypoleucos*), and waterbird and shorebird habitat. Marsh/Lake (low halophytic shrubland) habitat may also be used by waterbirds and shorebirds, as well as the Night Parrot. Dunal (primary/secondary) (0.12% of the Survey Area) and Hummock Grassland (19.81% of the Survey Area) habitats constitute the preferred habitats of the Bilby (*Macrotis lagotis*) and Brush-tailed Mulgara (*Dasycercus blythi*), and Hummock Grassland adjacent the Marsh/Lake (low halophytic shrubland) habitat represents potential nesting habitat for the Night Parrot. The Woodland (open/closed) (59.47% of the Survey Area) and Plain (stony/gibber) (2.03% of the Survey Area) were found to provide the lowest habitat value for conservation significant fauna and the overall fauna assemblage due to European Cattle degradation and comparatively fewer microhabitats. Coondiner Pool, a permanent water source, is an important habitat feature for both birds and the broader fauna assemblage in the context of the Survey Area.

The highest overall species diversity was recorded in the Hummock Grassland habitat, which was found to contain a highly diverse reptile assemblage and high number of unique reptile taxa, and the Drainage Line/River/Creek habitats (both major and minor), which were found to contain a highly diverse bird assemblage and high number of unique bird taxa. Given its small extent within the Survey Area, the Dunal (primary/secondary) habitat was found to contain a comparatively high species diversity, particularly within its reptile assemblage. Two aquatic fauna species were observed in pools within the Weeli Wolli Creek system, an introduced crustacean, the Redclaw (*Cherax quadricarinatus*), and a native fish species, the Spangled Perch (*Leiopotherapon unicolor*).

Four conservation significant fauna taxa were recorded within the Survey Area during the field survey:

- Ghost Bat, Vulnerable
- Western Pebble-mound Mouse (*Pseudomys chapmani*), Priority 4
- Pilbara Leaf-nosed Bat, Vulnerable
- Gane's Blind Snake (*Anilius ganei*), Priority 1.

Seven additional conservation significant taxa have been recorded within the Survey Area prior to the current survey:

- Pacific Swift (Fork-tailed Swift) (*Apus pacificus*), Migratory and Marine
- Grey Falcon, Vulnerable
- Peregrine Falcon, Other specially protected fauna
- Eastern Osprey (*Pandion haliaetus cristatus*), Migratory and Marine
- Australian Painted Snipe (*Rostratula australis*), Endangered and Marine
- Bilby, Vulnerable
- Pilbara Olive Python, Vulnerable.

The post survey results identified eight conservation significant taxa as having a high likelihood of occurrence within the Survey Area:

- Night Parrot (*Pezoporus occidentalis*), Critically Endangered/Endangered
- Princess Parrot (*Polytelis alexandrae*), Priority 4/Vulnerable
- Brush-tailed Mulgara (*Dasyercus blythi*), Priority 4
- Northern Quoll (*Dasyurus hallucatus*), Vulnerable
- Pilbara Barking Gecko (*Underwoodisaurus seorsus*), Priority 2
- Three waterbirds and shorebirds listed as Migratory and Marine.

Six conservation significant taxa conservation significant taxa were assessed as having a medium likelihood of occurrence within the Survey Area, and 14 conservation significant taxa were assessed as having a low likelihood of occurrence within the Survey Area.

Table of Abbreviations

Abbreviation	Description
360 Environmental	360 Environmental Pty Ltd
ARU	Autonomous Recording Unit
BC Act	<i>Biodiversity Conservation Act 2016</i>
BoM	Bureau of Meteorology
CD	Conservation Dependent Fauna
CR	Critically Endangered
DAWE	Department of Agriculture, Water, and the Environment
DBCA	Department of Biodiversity, Conservation and Attractions
EIA	Environmental Impact Assessment
EN	Endangered
EP Act	<i>Environmental Protection Act 1986</i>
EPA	Environmental Protection Authority
EPBC Act	<i>Environment Protection Biodiversity and Conservation Act 1999</i>
Fortescue	Fortescue Metals Group Ltd
GIS	Geographic Information System
ha	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
IBSA	Index of Biodiversity Surveys for Assessments
km	Kilometres
m	Metres
mm	millimetres
MA	Marine
MI	Migratory
OS	Other Specially Protected Fauna
P	Priority
PMST	Protected Matters Search Tool
Project	Nyidinghu Iron Ore Project
Survey Area	The Nyidinghu Survey Area which covers approximately 141,033 ha and encompasses the proposed Nyidinghu iron ore mine, rail corridor and associated infrastructure rail corridor and associated infrastructure.
VU	Vulnerable
WA	Western Australia

Table of Contents

1	Introduction	1
1.1	The Project.....	1
1.2	Scope and Objectives	1
2	Background	3
2.1	Protection of Fauna.....	3
2.2	Existing Environment	4
3	Methods	9
3.1	Desktop Assessment	9
3.2	Field Survey	11
3.3	Species Accumulation Curves	20
3.4	Limitations	20
4	Results	23
4.1	Desktop Assessment	23
4.2	Fauna Habitat	32
4.3	Fauna Assemblage	38
4.4	Conservation Significant Fauna	40
4.5	Species Accumulation Curves	50
5	Discussion	53
5.1	Fauna Habitat	53
5.2	Fauna Assemblage	54
5.3	Conservation Significant Fauna	55
6	Conclusion	62
7	References	64
8	Disclaimer of this Report	69

List of Tables

Table 1: Land systems within the Survey Area	5
Table 2: Hydrographical features in the vicinity of the Survey Area	7
Table 3: Broad vegetation types within the Survey Area	7
Table 4: Database searches	10
Table 5: Likelihood of occurrence criteria	10
Table 6: Field survey scope and timing	11
Table 7: Field team personnel	11
Table 8: Detailed fauna survey (Trip 1) weather conditions	12
Table 9: Detailed and targeted fauna survey (Trip 2) weather conditions	13
Table 10: Trap site effort	15
Table 11: Cage trap effort (Trip 1)	16
Table 12: Cage trap effort (Trip 2)	16
Table 13: Camera trap effort (Trip 1)	17
Table 14: Camera trap effort (Trip 2)	17
Table 15: Ultrasonic call ARU trapping effort	18
Table 16: Audible call ARU trapping effort	18

Table 17: Targeted Bilby search effort	19
Table 18: Limitations and constraints associated with the survey	20
Table 19: Literature review summary	24
Table 20: Fauna habitat extents and descriptions	33
Table 21: Overview of fauna taxa recorded during the field survey	38
Table 22: Number fauna taxa and unique fauna taxa recorded within each habitat type .	38
Table 23: Conservation significant fauna likelihood of occurrence	43

List of Plates

Plate 1: Trap site layout	14
Plate 2: Western Pebble-mound Mouse captured at site Trap09 and a Western Pebble-mound Mouse foot pad (a distinguishing feature).	41
Plate 3: Western Pebble-mound Mouse mound with a clear undulating and conical structure, indicating it has been recently maintained.	42

List of Graphs

Graph 1: Long term and monthly total rainfall, maximum and minimum temperatures for Newman Aero weather station (Station 007176) 12 months before the May 2021 field survey (Bureau of Meteorology, 2021).	4
Graph 2: Bird species accumulation curve	50
Graph 3: Mammal species accumulation curve	51
Graph 4: Reptile and amphibian species accumulation curve	52

List of Figures (Out of text)

Figure 1: Survey Area
Figure 2: IBRA Subregions
Figure 3: Soil Land Systems and Hydrography
Figure 4: Broad Vegetation Types
Figure 5: Conservation and Environmentally Sensitive Areas
Figure 6: Previous Surveys
Figure 7: Survey Effort
Figure 8: DBCA Threatened and Priority Fauna Records
Figure 9: Fauna Habitat and Conservation Significant Fauna Records

List of Appendices

Appendix A Licence and Authorisation
Appendix B Vertebrate Fauna Identified by the Desktop Assessment
Appendix C Database Searches
Appendix D Habitat Assessments
Appendix E Inventory of Fauna Recorded during the Field Survey

1 Introduction

1.1 The Project

Fortescue Metals Group Ltd (Fortescue) commissioned 360 Environmental Pty Ltd (360 Environmental) to undertake a detailed terrestrial vertebrate fauna assessment to support the environmental approvals process for the Nyidinghu Iron Ore Project (the Project). The Nyidinghu Survey Area (the Survey Area) covers approximately 141,033 ha and is located approximately 60 km north of Newman in the Pilbara bioregion of Western Australia (Figure 1). The proposed development within the Survey Area will include an iron ore mine, rail corridor and associated infrastructure. The Nyidinghu iron ore deposit itself is located towards the south of the Survey Area, near Weeli Wolli Creek (see Section 2.2.4).

1.2 Scope and Objectives

The purpose of the detailed terrestrial vertebrate assessment was to gain an understanding of the fauna values of the Survey Area and provide baseline information for supporting documents as part of Environmental Impact Assessment (EIA) process required to develop the Project.

The specific objectives of the assessment were to:

- Undertake a desktop assessment including relevant database searches and a literature review to compile and summarise existing records of fauna within the vicinity of the Survey Area
- Undertake a two-phase detailed terrestrial vertebrate fauna survey using a variety of fauna detection methods including cage traps, pitfall traps, funnel traps, camera traps, autonomous recording units (ARUs), active searching and opportunistic observations
- Undertake a single season targeted conservation significant vertebrate fauna with a particular focus on the following species:
 - Northern Quoll (*Dasyurus hallucatus*)
 - Ghost Bat (*Macroderma gigas*)
 - Pilbara Leaf-nosed Bat (*Rhinionicteris aurantia* Pilbara form)
 - Pilbara Olive Python (*Liasis olivaceus barroni*)
 - Night Parrot (*Pezoporus occidentalis*)
 - Bilby (*Macrotis lagotis*).
- Inspect any pools, if present, within Weeli Wolli Creek and record opportunistic sightings of aquatic fauna
- Compile an inventory of terrestrial vertebrate fauna based on the results of the desktop assessment and field survey
- Define and delineate the main fauna habitats present within the Survey Area
- Produce a fauna assessment report based on the findings of the above

- Supply a geospatial data package prepared in accordance with FMG spatial data standards requirements.

This report presents the background, methods, results, discussion, and conclusions of the survey undertaken to support the above objectives.

2 Background

2.1 Protection of Fauna

Western Australian fauna is formally protected by the following legislative measures:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environmental Protection Act 1986* (WA) (EP Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

In addition to these legislative measures, the WA Department of Biodiversity, Conservation and Attractions (DBCA) priority fauna list provides a non-legislative list of possibly threatened, rare but not threatened or near threatened taxa.

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

Western Australia

- *Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment* (Environmental Protection Authority, 2020)
- *Interim guideline for preliminary surveys of Night Parrot (*Pezoporus occidentalis*) in Western Australia* (Department of Parks and Wildlife, 2017)
- *Guidelines for surveys to detect the presence of bilbies, and assess the importance of habitat in Western Australia* (Department of Biodiversity Conservation and Attractions, 2017b).

Commonwealth

- *EPBC Act referral guideline for the endangered northern quoll *Dasyurus hallucatus*: EPBC Act Policy Statement* (Department of the Environment, 2016)
- *Matters of National Environmental Significance – Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999* (Department of the Environment, 2013)
- *Survey Guidelines for Australia's Threatened Mammals: Guidelines for detecting mammals listed as threatened under the EPBC Act* (Department of Sustainability Environment Water Population and Communities, 2011a)
- *Survey guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the EPBC Act* (Department of the Environment Water Heritage and the Arts, 2010)
- *Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the EPBC Act* (Department of Sustainability Environment Water Population and Communities, 2011b)

- *Survey guidelines for Australia's threatened bats: Guidelines for detecting bats listed as threatened under the EPBC Act (Department of the Environment Water Heritage and the Arts, 1999).*

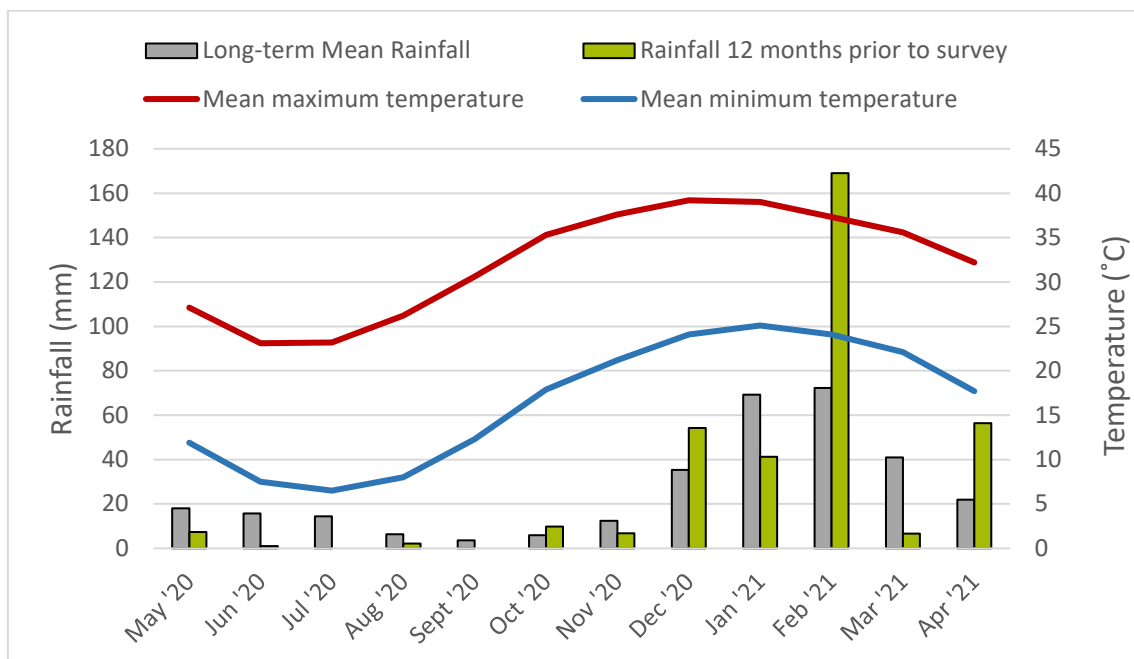
2.2 Existing Environment

2.2.1 Climate

The closest long-term Bureau of Meteorology weather station to the Survey Area with a complete temperature and rainfall dataset is Newman Aero (Station 007176), located approximately 65 km south of the Survey Area. Climate statistics were calculated utilising data from the most current climate normal, which is defined as a 30 year interval (Bureau of Meteorology, 2007), where possible. A climate normal is a period long enough to include year-to-year variations while avoiding the influence of longer-term changes in climate (Bureau of Meteorology, 2007).

The long-term mean minimum temperature for Newman Aero ranges from 6.5 °C (July) to 25.1 °C (January) (1996 to 2021) and the long-term mean maximum temperature ranges from 23.1 °C (June) to 39.2 °C (December) (Graph 1) (Bureau of Meteorology, 2021).

The Newman Aero weather station recorded 354.6 mm of rainfall in the 12 months prior to the survey (May 2020 to April 2021), which is 29.5 mm above the long-term average of 325.1 mm (Graph 1) (Bureau of Meteorology, 2021). In the three months prior to the survey (February to April 2021), 232.0 mm of rainfall was recorded, which is 96.8 mm above the long-term average of 135.2 mm for the same time period (Graph 1) (Bureau of Meteorology, 2021).



Graph 1: Long term and monthly total rainfall, maximum and minimum temperatures for Newman Aero weather station (Station 007176) 12 months before the May 2021 field survey (Bureau of Meteorology, 2021).

2.2.2 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic Regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological, geographical, and geological attributes. These bioregions are subdivided into 419 subregions as part of a refinement of the IBRA framework (Department of the Environment and Energy, 2016). The Survey Area occurs within the Pilbara bioregion and excluding small areas in the Hamersley and Chichester subregions to the south and north respectively the Fortescue (PIL2) subregion accounts for the majority of the Survey Area (Figure 2).

The Fortescue subregion (PIL2) is characterised by alluvial plains and river frontage. The subregion contains extensive salt marshes, mulga-bunch grass and short grass communities in the east, and deeply incised River Gum fringed gorge systems in the west. An extensive calcrete aquifer feeds large numerous permanent springs in the central Fortescue, supporting permanent wetlands with extensive river gum and Cadjebut Melaleuca woodlands (Kendrick, 2003).

2.2.3 Soil Landscapes and Land Systems

Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales, ranging from 1:20,000 to 1:250,000 (Department of Primary Industries and Regional Development, 2018). The Survey Area occurs within 23 land systems (Table 1, Figure 3).

Table 1: Land systems within the Survey Area

Land System		Description (Department of Agriculture and Food WA, 2012)
Name	Code	
Adrian System	284Ad	Stony plains and low silcrete hills supporting hard spinifex grasslands.
Boolgeeda System	284Bg/285Bg	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands.
Calcrete System	284Ca	Low calcrete platforms and plains supporting shrubby hard spinifex grasslands.
Capricorn System	282CP	Rugged sandstone hills, ridges, stony footslopes and interfluves supporting low acacia shrublands or hard spinifex grasslands with scattered shrubs.
Christmas System	284Ch	Stony alluvial plains supporting snakewood and mulga shrublands with sparse tussock grasses.
Coolibah System	284Co	Flood plains with weakly gilgaied clay soils supporting coolibah woodlands with tussock grass understorey.
Cowra System	284Cw	Plains fringing the Marsh land system and supporting snakewood and mulga shrublands with some halophytic undershrubs.
Divide System	284Dv	Gently undulating sandplains with minor dunes, supporting hard spinifex hummock grasslands with numerous shrubs.
Fan System	284Fa	Washplains and gilgai plains supporting groved mulga tall shrublands and minor tussock grasslands.

Land System		Description (Department of Agriculture and Food WA, 2012)
Name	Code	
Fortescue System	284Ft	Alluvial plains and flood plains supporting patchy grassy eucalypt and acacia woodlands and shrublands and tussock grasslands.
Jamindie System	284Jm	Stony hardpan plains and rises supporting groved mulga shrublands, occasionally with spinifex understorey.
Macroy System	283Mc	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex shrubby grasslands.
Marillana System	284Mr	Gravelly plains with large drainage foci and unchannelled drainage tracts supporting snakewood shrublands and grassy mulga shrublands.
Marsh System	284Ms	Lakebeds and flood plains subject to regular inundation, supporting samphire shrublands, saltwater couch grasslands and chenopod shrublands.
McKay System	282Mk	Hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands with acacias and occasional eucalypts.
Narbung System	284Na	Alluvial washplains with prominent internal drainage foci supporting snakewood and mulga shrublands with chenopod low shrubs.
Newman System	282Ne/284Ne/285Ne	Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.
River System	284Ri/285Ri	Narrow, seasonally active flood plains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex.
Robe System	283Ro	Low plateaux, mesas and buttes of limonite supporting soft spinifex and occasionally hard spinifex grasslands.
Rocklea System	282Rk/283Rk	Basalt hills, plateaux, lower slopes, and minor stony plains supporting hard spinifex and occasionally soft spinifex grasslands with scattered shrubs.
Turee System	284Tu	Stony alluvial plains with gilgaied and non-gilgaied surfaces supporting tussock grasslands and grassy shrublands of mulga and snakewood.
Urandy System	284Ur	Stony plains, alluvial plains and drainage lines supporting shrubby soft spinifex grasslands.
Wona System	282Wo	Basalt upland gilgai plains supporting Roebourne Plains grass and Mitchell grass tussock grasslands, minor hard spinifex grasslands or annual grasslands/herbfields.

2.2.4 Hydrography

Hydrographic features intersecting and within the vicinity of the Survey Area have been identified using linear hydrography GIS data (Department of Water and Environmental Regulation, 2018). These features are described in Table 2 and shown in Figure 3.

Table 2: Hydrographical features in the vicinity of the Survey Area

Hydrographical feature	Description
Goodiadarrie Swamp	An area subject to inundation that is part of the Fortescue River system. The Goodiadarrie Swamp intersects the northern portion of the Survey Area.
Weeli Wolli Creek	A major river originating 55 km southwest of the Survey Area. Weeli Wolli Creek flows in a north-easterly direction, intersecting the Survey Area before joining the Goodiadarrie Swamp.
Minor River	A minor river originating 18 km south of the Survey Area and flowing in a northerly direction. It intersects the northern portion of the Survey Area and it joins Goodiadarrie Swamp.
Significant Stream	A significant stream originating 28 km south of the Survey Area and flowing in a north-easterly direction. It intersects the south-eastern portion of the Survey Area before joining the Goodiadarrie Swamp.
Significant Stream	A significant stream originating 51 km south of the Survey Area and flowing in a northerly direction. It intersects the south-eastern portion of the Survey Area before joining the Goodiadarrie Swamp.
Major Tributary	A major tributary of the Fortescue River system. It intersects the central portion of the Survey Area.
Coondiner Pool	A semi-permanent wetland that occurs within the south-eastern portion of the Survey Area and joins the easternmost of the two significant streams that intersect the Survey Area.

2.2.5 Broad Vegetation Associations

Mapping of pre-European broad vegetation within WA was completed on a broad scale (1:1,000,000) by Beard (1976). These vegetation types were later re-assessed by Shepherd et al. (2002), resulting in 819 vegetation associations within WA.

Ten vegetation systems associations are mapped within the Survey Area (Figure 4). Descriptions of these vegetation systems associations and their representation on a sub-regional scale are provided in Table 3.

Table 3: Broad vegetation types within the Survey Area

Broad Vegetation Type	Structure Description	Floristic description
Abydos Plain - Chichester 93	Shrub-steppe	Hummock grassland with scattered shrubs or mallee (<i>Triodia</i> spp. <i>Acacia</i> spp., <i>Grevillea</i> spp., <i>Eucalyptus</i> spp.)
Chichester Plateau 173	Shrub-steppe	Hummock grassland with scattered shrubs or mallee (<i>Triodia</i> spp. <i>Acacia</i> spp., <i>Grevillea</i> spp., <i>Eucalyptus</i> spp.)
Chichester Plateau 175	Grasslands, short bunch-grass savanna	Annual grasses (<i>Enneapogon</i> spp., <i>Aristida</i> spp. etc) on dry plains and salt water grasses (<i>Sporobolus virginicus</i>) on the coast
Fortescue Valley 29	Low woodland, open low woodland, or sparse woodland	Mulga (<i>Acacia aneura</i> and associated species)
Fortescue Valley 82	Low tree-steppe	Hummock grassland with scattered bloodwoods and snappy gum (<i>Triodia</i> spp., <i>Corymbia dichromophloia</i> , <i>Eucalyptus leucophloia</i>)

Broad Vegetation Type	Structure Description	Floristic description
Fortescue Valley 111	Shrub-steppe	Hummock grassland with scattered shrubs or mallee (<i>Triodia</i> spp. <i>Acacia</i> spp., <i>Grevillea</i> spp., <i>Eucalyptus</i> spp.)
Fortescue Valley 157	Grass-steppe	Hummock grassland (<i>Triodia</i> spp.)
Fortescue Valley 562	Low tree-steppe	Hummock grassland with scattered bloodwoods and snappy gum (<i>Triodia</i> spp., <i>Corymbia dichromophloia</i> , <i>Eucalyptus leucophloia</i>)
Fortescue Valley 676	Samphire	<i>Tecticornia</i> spp. communities in saline areas
Hammersley 82	Low tree-steppe	Hummock grassland with scattered bloodwoods and snappy gum (<i>Triodia</i> spp., <i>Corymbia dichromophloia</i> , <i>Eucalyptus leucophloia</i>)

2.2.6 Environmentally Sensitive Areas

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

One ESA occurs within the Survey Area:

- Fortescue Marshes, located in the northern portion of the Survey Area (Department of Water and Environmental Regulation, 2021) (Figure 5).

The nearest ESAs are:

- Karijini National Park, located 25 km west of the Survey Area (Department of Water and Environmental Regulation, 2021)
- Lake McDonald, located 40 km west of Survey Area (Department of Water and Environmental Regulation, 2021).

2.2.7 Conservation Areas

The Survey Area is not identified within a Conservation Area and the nearest conservation areas are shown in Figure 5 and listed below:

- Karijini National Park located 24 km west of the Survey Area and is vested under the Conservation Commission of Western Australia (Department of Biodiversity Conservation and Attractions, 2021a)
- Mungaroona Range Nature Reserve, located 51 km northwest of the Survey Area and is vested under the Conservation Commission of Western Australia (Department of Biodiversity Conservation and Attractions, 2021a).

3 Methods

The detailed and targeted terrestrial vertebrate fauna survey documented within this report were undertaken in accordance with the *Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment* (Environmental Protection Authority, 2020) and with consideration for the relevant EPBC guidelines discussed within Section 2.1.

3.1 Desktop Assessment

3.1.1 Literature Review

Background information regarding the existing environment within the Survey Area and surrounds was compiled prior to the field survey (see Section 2.2). Previous surveys were sourced from the EPA Consultation Hub, the Index of Biodiversity Surveys for Assessments (IBSA) website, internet search engine, or provided directly by Fortescue, were reviewed and summarised. These surveys are listed below and their locations in relation to the current Survey Area are shown in Figure 6:

- *Adele Flora, Fauna and SRE Survey* (360 Environmental Pty Ltd, 2021)
- *Adele West Targeted Flora and Fauna Survey* (360 Environmental Pty Ltd, in review)
- *Cloudbreak Level 2 Terrestrial Vertebrate Fauna Assessment* (ecologia Environment, 2011)
- *Fauna Assessment - Nyidinghu Iron Ore Project* (Bamford Consulting Ecologists, 2012a)
- *Fauna Habitats and Fauna Assemblage of the Proposed FMG Stage A Rail Corridor* (Biota Environmental Sciences, 2004)
- *Flora, Vegetation and Fauna Habitat Assessment at Koodaideri – Native Vegetation Clearing Permit Supporting Report* (Rio Tinto, 2016)
- *Fortescue Marsh Tenement E46/684 Level 1 Targeted Vertebrate Fauna Survey* (Biologic Environmental Survey, 2014)
- *Fortescue Metals Group Cloudbreak Expansion Project – Pre Clearance Night Parrot Survey* (Outback Ecology, 2013)
- *Koodaideri Iron Ore Project Northern Quoll Baseline Long-term Monitoring* (Biota Environmental Sciences, 2018)
- *Level 1 Flora and Fauna Surveys along the Great Northern Highway for Jimblebar Mine Module Transport* (Eco Logical Australia, 2012)
- *Nyidinghu Rail – Terrestrial Vertebrate Fauna and Fauna Habitat Assessment* (Ecoscape (Australia) Pty Ltd, 2012)
- *South Flank Targeted Fauna Survey* (Biologic Environmental Survey, 2016)
- *South Flank Targeted Northern Quoll Survey* (Biologic Environmental Survey, 2013)
- *Southern Flank Vertebrate Fauna Study* (Biologic Environmental Survey, 2011)
- *Targeted Fauna Assessment of the Rail Duplication* (Bamford Consulting Ecologists, 2010)

- *Vegetation and Fauna Habitat Mapping of the Northern Tenement Area, Cloudbreak* (Ecoscape (Australia) Pty Ltd, 2016)
- *Vertebrate Fauna Assessment of the Iron Valley Project Area* (Bamford Consulting Ecologists, 2012b)
- *Yandi Billiards Phase 1 Seasonal Fauna Survey* (Biota Environmental Sciences, 2014)
- *Yandicoogina Expansion Billiard Deposit Fauna Survey* (Biota Environmental Sciences, 2011).

3.1.2 Database Searches

Database searches were undertaken to compile a list of potential fauna, including potential conservation significant fauna, within or surrounding the Survey Area (Table 4). The search areas were chosen based on the search buffer provided by DBCA.

Table 4: Database searches

Database Name	Date Received	Search Area
DBCA Threatened and Priority Fauna database search (Department of Biodiversity Conservation and Attractions, 2021c)	13 July 2021	40 km radial search buffer around a central point within the Survey Area
NatureMap (Department of Biodiversity Conservation and Attractions, 2021b)	23 March 2021	40 km radial search buffer around a central point within the Survey Area
Protected Matters Search Tool (Department of Agriculture Water and the Environment, 2021)	23 March 2021	100 km radial search buffer around a central point within the Survey Area

3.1.3 Conservation Significant Fauna Likelihood of Occurrence

Conservation significant fauna species identified from the desktop assessment were assessed to determine the likelihood of their occurrence within the Survey Area prior to the field survey. The likelihood of occurrence for each taxon was then confirmed or revised post-field survey. The assessment was completed based on the criteria presented in Table 5.

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

Species listed as Marine only under the EPBC Act were not included as conservation significant species because the Marine only listed species identified by the desktop assessment were common and widespread, species listed as Marine only do not constitute matters of national environmental significance (MNES) under the EPBC Act, and the Survey Area does not contain any marine habitat.

Table 5: Likelihood of occurrence criteria

Likelihood	Criteria
Confirmed	Recorded during the field survey.
High	Preferred habitat is present within the Survey Area, the Survey Area is within the taxon's known distribution, and the taxon has been recorded near the Survey Area in the last 15 years. The Survey Area and surrounding habitat is expected to support individuals or populations of the taxon.

Likelihood	Criteria
Medium	The high likelihood of occurrence criteria has not been met, however suitable (not necessarily preferred) habitat occurs within the Survey Area and the Survey Area is within or near the taxon's known distribution. The Survey Area and surrounding habitat may support individuals or populations of the taxon.
Low	No suitable habitat is present within the Survey Area, or the Survey Area is well outside the taxon's known distribution, or the taxon is considered locally or regionally extinct. The Survey Area and surrounding habitat are unlikely to support individuals or populations of the taxon, however individuals may rarely occur as transients or vagrants.

3.2 Field Survey

A two-phase detailed terrestrial vertebrate fauna survey was undertaken in May 2021 (Trip 1) and September 2021 (Trip 2). A targeted conservation significant terrestrial vertebrate fauna survey was undertaken in conjunction with the second phase detailed survey during Trip 2. Table 6 outlines the scope and dates of the field trips and Figure 7 shows total survey effort undertaken over the two trips.

Table 6: Field survey scope and timing

Trip	Scope	Date	Personnel	Person Field Days
1	Detailed terrestrial vertebrate fauna survey	3 – 15 May 2021	Edward Swinhoe Evan Webb Christina Walker Michael Greenham	52
2	Detailed terrestrial vertebrate fauna survey and targeted conservation significant terrestrial vertebrate fauna survey	31 August – 12 September 2021	Evan Webb Dr Michael Lohr Christina Walker Lachlan Crossley	52

3.2.1 Field Personnel

The field survey was undertaken by a team with more than 50 years combined experience conducting surveys of a similar scope throughout WA, and in particular the Pilbara region. Table 7 outlines the team members, their experience conducting similarly scoped work and the relevant field trip.

Table 7: Field team personnel

Personnel	Role	Trips	Years of experience
Evan Webb	Senior zoologist	Trips 1 and 2	5 Years
Dr. Michael Lohr	Principal zoologist	Trip 2	10 Years
Christina Walker	Ecologist/zoologist	Trips 1 and 2	2 Years
Lachlan Crossley	Ecologist	Trip 2	3 years

Personnel	Role	Trips	Years of experience
Edward Swinhoe	Senior zoologist	Trip 1	17 Years
Michael Greenham	Senior zoologist	Trip 1	+20 Years

3.2.2 Licence and Authorisation

The fauna fieldwork was completed under Fauna Taking (Biological Assessment) License – Regulation 27 (BA27000432) and an authorisation to take or disturb threatened species under Section 40 of the BC Act (TFA 2021-0052) (Appendix A).

3.2.3 Weather Conditions

3.2.3.1 Trip 1 – Detailed Fauna Survey

Weather conditions for the detailed fauna survey (Trip 1) are presented in Table 8. Temperature and rainfall data is from Newman Aero weather station (Station 007176) (Bureau of Meteorology, 2021). Minimum temperatures during the survey were above the long-term average minimum temperature for May (11.9°C), and maximum temperatures during the survey were similar to the long-term average maximum temperature for May (27.1°C). A total of 4.4 mm of rainfall was recorded during May 2021, which is similar to the long-term median of 5.2 mm.

Table 8: Detailed fauna survey (Trip 1) weather conditions

Date	Temperature (°C)		Rainfall (mm)
	Min	Max	
03/05/2021	19.0	29.5	0
04/05/2021	20.2	30.4	0
05/05/2021	20.0	28.9	0
06/05/2021	18.2	25.3	0
07/05/2021	19.8	23.9	1.8
08/05/2021	14.5	28.1	0.2
09/05/2021	14.2	28.4	0
10/05/2021	12.2	27.1	0
11/05/2021	12.3	30.1	0
12/05/2021	13.0	30.8	0
13/05/2021	13.2	30.4	0
14/05/2021	15.0	26.9	0
15/05/2021	12.7	25.6	0

3.2.3.2 Trip 2 – Detailed and Targeted Fauna Survey

Weather conditions for the detailed and targeted fauna surveys (Trip 2) are presented in Table 9. Temperature and rainfall data is from Newman Aero weather station (Station 007176) (Bureau of Meteorology, 2021). Temperatures during the survey were below the long-term average minimum temperature (12.3°C) and maximum temperature (30.6°C) for September. A total of 0.0 mm of rainfall was recorded during September 2021, which was equal to the long-term median of 0.0 mm.

Table 9: Detailed and targeted fauna survey (Trip 2) weather conditions

Date	Temperature (°C)		Rainfall (mm)
	Min	Max	
31/08/2021	9.5	32.3	0
01/09/2021	13.0	33.8	0
02/09/2021	18.3	25.6	0
03/09/2021	12.6	22.5	0
04/09/2021	11.3	22.4	0
05/09/2021	9.6	24.8	0
06/09/2021	11.5	27.8	0
07/09/2021	4.5	28.6	0
08/09/2021	4.4	29.3	0
09/09/2021	5.8	31.4	0
10/09/2021	8.7	32.2	0
11/09/2021	13.9	31.5	0
12/09/2021	13.5	30.2	0

3.2.4 Fauna Habitat

Fauna habitat assessments were undertaken throughout the Survey Area to identify fauna habitat (Figure 7). The following information, which has been adapted from the habitat attributes listed in the Technical Guidance (Environmental Protection Authority, 2020), was collected at each habitat assessment site using Fulcrum, a mobile data collection app:

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

Fauna habitat mapping boundaries were delineated over aerial imagery at a scale of approximately 1:5,000 based on field observations and fauna habitat assessment data. Polygons were digitised and produced as electronic mapping data using GIS software.

3.2.5 Trap Sites

Ten trap sites were installed in the Survey Area within areas of suitable and representative habitat. Each trap site consisted of two trap lines spaced roughly 50 m apart to account for the possibility that fauna assemblages can be distributed unevenly within a given habitat. Individual trap lines were roughly 30 m long and comprised a 30 cm tall flywire drift fence passing over five pitfall traps (20 L buckets and 150 mm PVC pipes) with six funnel traps attached to the drift fence in pairs. Five Elliott traps were positioned adjacent to each pitfall trap line during trip 1 (two to five Elliott traps at each pitfall trap line during trip 2), approximately 10 m away from the pitfall trap. A cage trap was installed at either end of the pitfall trap lines (four cages per site) during trip 1. A diagram of the trap site layout is provided in Plate 1.

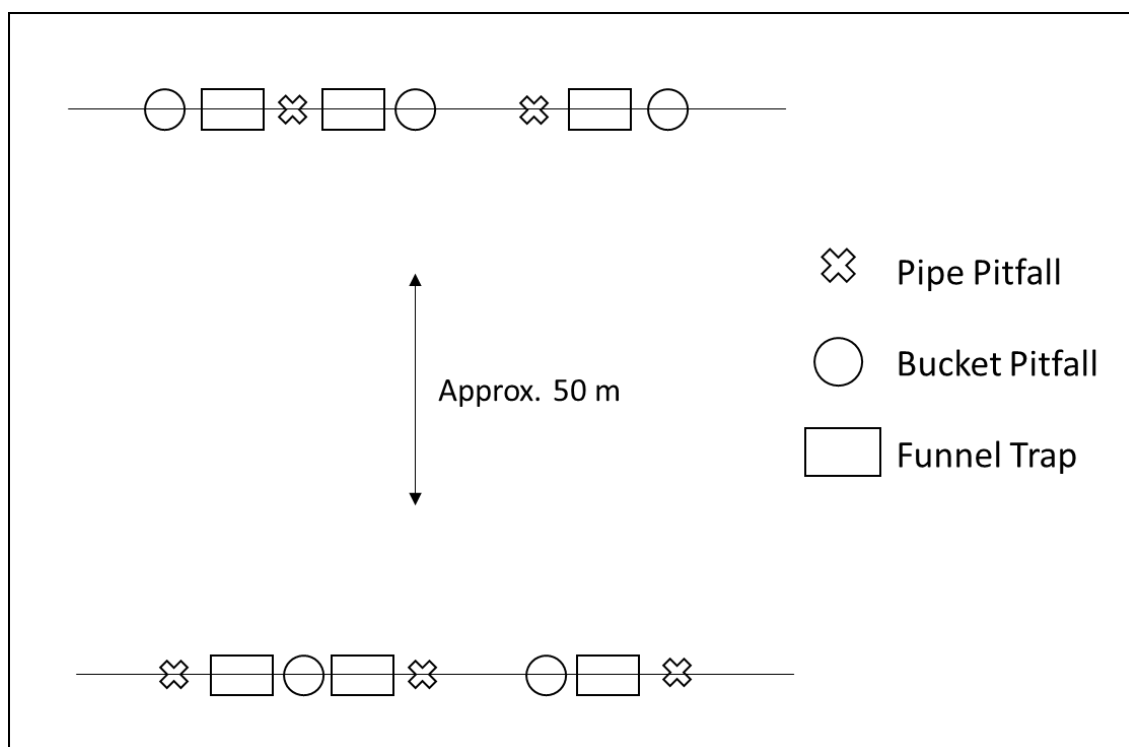


Plate 1: Trap site layout

Trap site selection was based on a review of available literature and aerial imagery undertaken prior to the field survey, which indicated that five broad fauna habitats occurred within the Survey Area. Two trap sites (i.e. four replicate trap lines) were intended to be installed in each habitat type, however additional fauna habitats were split out after the field survey. Trap site locations are shown in Figure 7 and total trapping effort for each trap site and habitat type is shown in Table 10.

Table 10: Trap site effort

Fauna Habitat	Site Name	Trip ¹	Number of Nights Open	Total Pitfall Trap Nights	Total Funnel Trap Nights ²	Total Elliott Trap Nights
Hummock Grassland	Trap01	1	7	70	84	70
		2	7	70	70	70
Drainage Line/River/Creek (minor)	Trap02	1	7	70	84	70
		2	7	70	84	70
Woodland (open/closed)	Trap03	1	7	70	84	70
		2	7	70	80	28
Hummock Grassland	Trap04	1	7	70	84	70
		2	7	70	84	65
Woodland (open/closed)	Trap05	1	7	70	84	70
		2	7	70	84	28
Drainage Line/River/Creek (major)	Trap06	1	7	70	84	70
		2	7	70	84	28
Woodland (open/closed)	Trap07	1	7	70	84	70
		2	7	70	84	28
Dunal (primary/secondary)	Trap08	1	7	70	84	70
		2	7	70	84	28
Hills/Ranges/Plateaux	Trap09	1	7	70	84	70
		2	7	70	84	70
Plain (stony/gibber)	Trap10	1	7	70	84	70
		2	7	70	84	28
Total			140	1400	1662	1143

3.2.6 Cage Traps

During Trip 1, cage traps were deployed near each trap site as part of the detailed fauna survey. Cages were baited with universal bait (rolled oats and peanut butter), sardines and bacon. During Trip 2, two cage trap lines (Cage01 and Cage02) were placed in potential Northern Quoll habitat to target the species. Each trap line was active for seven nights and consisted of 20

¹ Trip 1 – May 2021, Trip 2 – September 2021

² Funnel traps were not always set up on the same day as the pitfall traps

Sheffield wire cage traps, spaced 25 - 50 m apart, baited with universal bait and sardines. Bait was replenished on days 3 and 5.

Cage trap effort is shown in Table 11 (Trip 1) and Table 12 (Trip 2) and site locations are shown in Figure 7.

Table 11: Cage trap effort (Trip 1)

Fauna Habitat	Nearest Trap Site	Number of Cage Traps	Total Cage Trap Nights
Hummock Grassland	Trap01	4	28
Drainage Line/River/Creek (minor)	Trap02	4	28
Woodland (open/closed)	Trap03	4	28
Hummock Grassland	Trap04	4	28
Woodland (open/closed)	Trap05	4	28
Drainage Line/River/Creek (major)	Trap06	4	28
Woodland (open/closed)	Trap07	4	28
Dunal	Trap08	2	14
Hills/Ranges/Plateaux	Trap09	4	28
Plain (stony/gibber)	Trap10	4	28
Total		20	266

Table 12: Cage trap effort (Trip 2)

Fauna Habitat	Site Name	Number of Cage Traps	Total Cage Trap Nights
Hills/Ranges/Plateaux	Cage01	20	140
Drainage Line/River/Creek (minor)	Cage02	20	140
Total		40	280

3.2.7 Camera Traps

During Trip 1, motion sensitive camera traps were deployed near each trap site as part of the detailed fauna survey. Cameras were baited with universal bait (rolled oats and peanut butter) and sardines. During Trip 2, five remote camera trap lines (Cam01 – Cam05) were placed in potential Northern Quoll habitat to target the species. Each trap line was active for four to five nights and consisted of ten camera traps, each spaced approximately 50 m apart, baited with universal bait and sardines or sardines on their own.

Cage trap effort is shown in Table 13 (Trip 1) and Table 14 (Trip 2) and site locations are shown in Figure 7.

Table 13: Camera trap effort (Trip 1)

Fauna Habitat	Nearest Trap Site	Number of Camera Traps	Total Camera Trap Days and Nights
Hummock Grassland	Trap01	2	14
Drainage Line/River/Creek (minor)	Trap02	2	14
Woodland (open/closed)	Trap03	2	14
Hummock Grassland	Trap04	2	14
Woodland (open/closed)	Trap05	2	14
Drainage Line/River/Creek (major)	Trap06	2	14
Woodland (open/closed)	Trap07	2	14
Dunal	Trap08	2	14
Hills/Ranges/Plateaux	Trap09	2	14
Plain (stony/gibber)	Trap10	2	14
Total		20	140

Table 14: Camera trap effort (Trip 2)

Fauna Habitat	Site Name	Number of Camera Traps	Total Camera Trap Days and Nights
Rocky Escarpments/Ridges/Mesa	Cam01	10	50
Drainage Line/River/Creek (major)	Cam02	10	50
Drainage Line/River/Creek (major)	Cam03	10	40
Drainage Line/River/Creek (minor)	Cam04	10	40
Drainage Line/River/Creek (minor)	Cam05	10	40
Total		50	220

3.2.8 Acoustic Bat Surveys

Song Meter SM4BAT ultrasonic autonomous recording units (ARUs) were used to target bats with a particular focus on two conservation significant taxa, the Pilbara Leaf-nosed Bat and Ghost Bat. During Trip 1, ultrasonic ARUs were moved around the Survey Area opportunistically to inform future targeted survey efforts. During Trip 2, ultrasonic ARUs were deployed in habitats likely to be used by conservation significant bats, such as water sources or rocky areas that contain caves or rocky overhangs, for a minimum of four nights at each location. ARU recordings were analysed by Robert Bullen from Bat Call WA. Non-conservation significant bat species were simply recorded as present or absent at each location, whereas the abundance conservation significant bat calls was noted for species.

Table 15 shows the total survey effort for ultrasonic ARUs and locations are shown in Figure 7.

Table 15: Ultrasonic call ARU trapping effort

Fauna Habitat	Trap Site	Trip	Ultrasonic ARU Recording Nights
Hummock Grassland	East of Trap01	1	12
Drainage Line/River/Creek (minor)	North of Trap09	1	4
Hummock Grassland	West of Trap04	1	6
Drainage Line/River/Creek (minor)	Trap06	1	9
Hummock Grassland	North of Trap01	1	8
Woodland (open/closed)	Trap03	1	2
Drainage Line/River/Creek (minor)	Trap02	1	2
Plain (stony/gibber)	Trap10	1	3
Rocky Escarpments/Ridges/Mesa	Bat01	2	5
Hills/Ranges/Plateaux	Bat02	2	5
Rocky Escarpments/Ridges/Mesa	Bat03	2	8
Drainage Line/River/Creek (major)	Bat04	2	6
Hills/Ranges/Plateaux	Bat05	2	4
Drainage Line/River/Creek (major)	Bat06	2	5
Drainage Line/River/Creek (minor)	Bat07	2	4
Drainage Line/River/Creek (major)	Bat08	2	4
Total			87

3.2.9 Acoustic Night Parrot Surveys

Song Meter SM4BAT acoustic autonomous recording units (ARUs) were used to target Night Parrot (*Pezoporus occidentalis*). During Trip 1, acoustic ARUs were moved around the Survey Area opportunistically to inform future targeted survey efforts. During Trip 2, acoustic ARUs were deployed in habitats likely to be used by Night Parrot, such as water sources or old growth spinifex, for a minimum of six nights at each location. ARU recordings were analysed by Robert Bullen from Bat Call WA.

Table 16 shows the total survey effort for acoustic ARUs, and locations are shown in Figure 7.

Table 16: Audible call ARU trapping effort

Fauna Habitat	Trap Site	Trip	Audible ARU Recording Nights
Hummock Grassland	Trap01	1	4
Hummock Grassland	West of Trap04	1	2
Hummock Grassland	Trap04	1	2
Hills/Ranges/Plateaux	South of Trap10	1	3
Woodland (open/closed)	Trap08	1	2
Hummock Grassland	East of Trap04	1	3
Woodland (open/closed)	South of Trap05	1	3

Fauna Habitat	Trap Site	Trip	Audible ARU Recording Nights
Hummock Grassland	West of Trap04	1	1
Hummock Grassland	Bird01	2	8
Hummock Grassland	Bird02	2	8
Drainage Line/River/Creek (minor)	Bird03	2	8
Hummock Grassland	Bird04	2	7
Hummock Grassland	Bird05	2	6
Total			57

3.2.10 Bilby Search Plots

Eight targeted bilby searches were undertaken at sites Bilby01 to Bilby08. Searches consisted of systematically traversing a 2 ha plot with transects spaced approximately 20 m apart in order to identify evidence of bilbies such as burrows, diggings, scats and tracks, if present.

Table 16 shows the total survey effort for acoustic ARUs, and locations are shown in Figure 7.

Table 17: Targeted Bilby search effort

Fauna Habitat	Trap Site	Trip	Search area (ha)
Hummock Grassland	Bilby01	2	2
Hummock Grassland	Bilby02	2	2
Hummock Grassland	Bilby03	2	2
Hummock Grassland	Bilby04	2	2
Plain (stony/gibber)	Bilby05	2	2
Dunal (primary/secondary)	Bilby06	2	2
Hills/Ranges/Plateaux	Bilby07	2	2
Hummock Grassland	Bilby08	2	2
Total			16 ha

3.2.11 Opportunistic Observations

Opportunistic observations of fauna were recorded throughout the Survey Area, including primary evidence (direct sightings, calls) and secondary evidence (tracks, scats, diggings, remains, etc.).

3.2.12 Active Searches

Timed active searches were undertaken at each trap site, cage trap line and camera trap line for a minimum duration of one person hour. An additional active search (Active01) was undertaken in closed Mulga woodland south of Coondiner Pool (Figure 7). These searches included raking leaf litter, peeling bark, splitting dead wood, and flipping rocks in search of evidence of fauna. Additional untimed active searches were undertaken opportunistically in microhabitats likely to contain fauna.

3.2.13 Bird Surveys

Unbounded bird surveys were undertaken in conjunction with active searches at each at each trap site, cage trap line and camera trap line for a minimum duration of one person hour.

3.2.14 Spotlighting

Two nights of spotlighting were undertaken during Trip 2. Spotlighting was undertaken from both vehicle and on foot and comprised approximately eight person hours per night. Vehicle spotlighting involved driving at a slow pace and on foot spotlighting involved traversing Drainage Line/River/Creek, Hills/Ranges/Plateaux and Rocky Escarpments/Ridges/Mesa habitats. Spotlighting GPS tracks are shown in Figure 7.

3.2.15 Weeli Wollie Creek

Pools within Weeli Wollie Creek were visually inspected from land and, if observed, fauna taxa present were recorded.

3.2.16 Identification and Taxonomy

Terrestrial vertebrate fauna taxa were identified in the field and released on site. Data captured by ARUs was analysed by bat specialist Robert Bullen from Bat Call WA. Taxonomy and nomenclature in this report follows the WA Museum checklist 2021 (Western Australian Museum, 2021) where relevant.

3.3 Species Accumulation Curves

Species accumulation curves for vertebrate fauna groups were plotted using the open source software R (R Core Team, 2021) to demonstrate the adequacy of survey effort at sampling locations within the Survey Area. The treatments comprised Sobs (Mao Tao), to reflect the observed number of species (based on the total number of species recorded), and richness estimators (Chao, Jackknife 1, Jackknife 2 and Bootstrap) to predict the total number of fauna taxa that could potentially be recorded (Clarke and Gorley, 2006).

3.4 Limitations

Limitations and constraints of the fauna survey are detailed in Table 18.

Table 18: Limitations and constraints associated with the survey

Variable	Constraint (Yes/Partial/No)	Potential Constraints on Survey Outcomes
Availability of data and information	No	All data required to complete the scope of works, including regional and local contextual information and similar surveys previously undertaken nearby, was available.
Competency and experience	No	The fauna field survey was undertaken by a team with extensive experience in undertaking similar scopes of work within the bioregion: <ul style="list-style-type: none"> • Senior Zoologist Edward Swinhoe – 17 years' experience • Senior Zoologist Michael Greenham – +20 years' experience • Principal Zoologist Dr Michael Lohr – 10 years' experience • Senior Zoologist Evan Webb – 5 years' experience • Ecologist/zoologist Poppy Walker – 2 years' experience • Ecologist Lachlan Crossley – 3 years' experience.

Variable	Constraint (Yes/Partial/No)	Potential Constraints on Survey Outcomes
		ARU data analysis was undertaken by specialist Robert Bullen of Bat Call WA.
Scope of the survey	No	The two-phase detailed and targeted vertebrate fauna survey was undertaken in accordance with the <i>Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i> (Environmental Protection Authority, 2020) where possible and practicable. All vertebrate fauna groups were adequately sampled.
Timing, weather and season	No	<p>The recommended primary survey periods for the Eremaean Climatic Region as per the <i>Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i> (Environmental Protection Authority, 2020) are:</p> <ul style="list-style-type: none"> • Reptiles – September to April • Mammals – no preferred time • Amphibians and birds – immediately after rain events. <p>Additionally, targeted Northern Quoll surveys should be undertaken between April and September (inclusive) (Department of the Environment, 2016).</p> <p>Two field trips were undertaken during the field survey, comprising a post wet season survey during Trip 1 (May 2021), and a dry season survey during Trip 2 (September 2021). A major rain event of 54.4 mm was recorded by Newman Aero weather station on 14 April 2021 (Bureau of Meteorology, 2021), less than three weeks before Trip 1, therefore surveys were undertaken during the recommended survey periods for all groups of vertebrate terrestrial fauna taxa.</p>
Disturbance	No	Areas of disturbance associated with cattle grazing and trampling, clearing for tracks and drill pads, infrastructure, weeds, fire scars, and litter were recorded but were not a constraint on the results of the survey.
Proportion of fauna identified, recorded and/or collected	No	All vertebrate fauna taxa recorded during the survey were able to be identified with a high level of confidence. No specimens were collected.
Adequacy of survey intensity	Partial	<p>The <i>Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i> (Environmental Protection Authority, 2020) recommends two trap sites per habitat type. Trap site selection was based on a review of available literature and aerial imagery undertaken prior to the field survey, which indicated that five broad fauna habitats occurred within the Survey Area. Two trap sites were intended to be installed in each habitat type, however additional fauna habitats were split out after the field survey. It was not possible to install pitfall trap sites in the Rocky Escarpments/Ridges/Mesa habitat due to the steep surfaces and rocky substrates, however alternative trapping methods such as cage traps and camera traps were used instead. No trap sites were installed in the Marsh/Lake (low halophytic shrubland) habitat due to access limitations during Trip 1 (May 2021) (see Access Problems below). Survey effort during Trip 2 (September 2021) focused on the Hummock Grassland fringing the Marsh/Lake (low halophytic shrubland) rather than the Marsh/Lake (low halophytic shrubland) itself because the fringing Hummock Grassland is the preferred nesting habitat of the Night Parrot and the Marsh/Lake (low halophytic shrubland) habitat was completely dry at the time.</p>

Variable	Constraint (Yes/Partial/No)	Potential Constraints on Survey Outcomes
		Given the large extent of the Survey Area it was not feasible to systematically survey it in its entirety. Additional fauna taxa would likely be recorded with additional survey effort.
Access problems	Partial	The majority of the Survey Area was accessed by helicopter, vehicle and on foot. During Trip 1, the helicopter was only available for three of the thirteen field days due to mechanical issues, therefore trap site locations were restricted to areas accessible by road.
Problems with data and analysis	Partial	<p>Species accumulation curves are useful in demonstrating survey adequacy at trap sites, but do not necessarily reflect survey adequacy across the entire Survey Area due to the sampling approach, which consisted of clustered sampling locations, and the broad, highly variable landscape within the Survey Area. However, given the availability of existing data and information, and the purpose of the report which is to identify fauna values to inform the EIA process rather than to provide an exhaustive inventory of fauna taxa within the Survey Area, this is not considered a major limitation on the survey outcomes.</p> <p>Targeted survey effort for conservation significant fauna was concentrated in preferred habitats for conservation significant fauna, as opposed to consistent survey effort throughout the Survey Area. This may introduce a bias towards recording conservation significant taxa in preferred habitat only and underrepresent the use of non-preferred habitat, however this is not considered a limitation on the survey outcomes.</p>

4 Results

4.1 Desktop Assessment

The desktop assessment identified 353 terrestrial vertebrate fauna taxa recorded within the vicinity of the Survey Area, of which 39 are conservation significant. The inventory of fauna taxa identified during the desktop assessment is presented in Appendix B and is summarised as:

- 180 birds, of which 23 are conservation significant
- 52 mammals, of which 10 are conservation significant
- 112 reptiles, of which six are conservation significant
- Nine amphibians, none of which are conservation significant.

Key findings of the literature review are summarized below in Table 19. Database search results are presented in Figure 8 and Appendix C.

As stated in Section 3.1.3, species listed as Marine only under the EPBC Act were not included as conservation significant species because the Marine listed species identified by the desktop assessment were common and widespread, species listed as Marine only do not constitute MNES under the EPBC Act, and the Survey Area does not contain any marine habitat.

Table 19: Literature review summary

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Adele Flora, Fauna and SRE Survey</i> (360 Environmental Pty Ltd, 2021)	15 km north of Survey Area	November 2020	<ul style="list-style-type: none"> • Desktop assessment • Single-phase detailed fauna survey. 	<ul style="list-style-type: none"> • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Hills/Ranges /Plateaux • Rocky Escarpments/ Ridges/Mesa • Drainage Line (Major) • Drainage Line (Minor) • Plain (stony/gibber) • Cleared.
<i>Adele West Targeted Flora and Fauna Survey</i> (360 Environmental Pty Ltd, in review)	15 km north of Survey Area	August 2021	<ul style="list-style-type: none"> • Desktop assessment • Targeted vertebrate fauna component for conservation significant species. 	<ul style="list-style-type: none"> • Northern Quoll (<i>Dasyurus halucatus</i>) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Hills/Ranges /Plateaux • Rocky Escarpments/ Ridges/Mesa • Drainage Line/River/Creek (major and minor) • Plain (stony/gibber) • Cleared.
<i>Cloudbreak Level 2 Terrestrial Vertebrate Fauna Assessment</i> (ecologia Environment, 2011)	Overlaps the Survey Area	October 2010	<ul style="list-style-type: none"> • Desktop assessment • Level 2 terrestrial vertebrate fauna survey. 	<ul style="list-style-type: none"> • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> • Spinifex-covered rocky hills • Rocky escarpments • Snakewood and Mulga woodland • Low halophytic shrubland within the Fortescue Marsh • Hummock grassland on fringe of Fortescue Marsh • Creeklines with Eucalypt woodland.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Fauna Assessment - Nyidinghu Iron Ore Project</i> (Bamford Consulting Ecologists, 2012a)	Overlaps the Survey Area	April, June 2011	<ul style="list-style-type: none"> • Desktop review • Two-phase detailed field survey. 	<ul style="list-style-type: none"> • Pilbara Olive Python (<i>Liasis olivaceus barroni</i>) • Fork-tailed Swift (<i>Apus pacificus</i>) • Eastern Great Egret (<i>Ardea alba</i>) (conservation status has since been downgraded) • Peregrine Falcon (<i>Falco peregrinus</i>) • Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> • Shrubs and spinifex on red sand-dunes • Open woodland of eucalyptus over buffel grass on rocky loam • Open low shrubland of mixed acacia over spinifex on rocky/gravelly slope • Open low shrubland of mixed acacia over spinifex on red sandy loam • Mulga over buffel grass on red clayey-loam.
<i>Fauna Habitats and Fauna Assemblage of the Proposed FMG Stage A Rail Corridor</i> (Biota Environmental Sciences, 2004)	Overlaps the Survey Area	March/April 2004	<ul style="list-style-type: none"> • Desktop Survey • Level 2 terrestrial vertebrate fauna survey. 	<ul style="list-style-type: none"> • Short-tailed Mouse (<i>Leggadina lakedownensis</i>) • Northern Quoll (<i>Dasyurus hallucatus</i>) • Bush Stone-curlew (<i>Burhinus grallarius</i>) (conservation status has since been downgraded) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • <i>Ctenotus</i> affin. <i>uber johnstonei</i> (undescribed species). 	<ul style="list-style-type: none"> • Fortescue Marshes • Linear Sand Dunes • Cracking Clays.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Flora, Vegetation and Fauna Habitat Assessment at Koodaideri – Native Vegetation Clearing Permit Supporting Report</i> (Rio Tinto, 2016)	2 km south of the Survey Area	May 2016	<ul style="list-style-type: none"> • Desktop review • Reconnaissance survey. 	<ul style="list-style-type: none"> • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Rocky/stony hills and slopes • Stony plains • Floodplains • Breakaways • Gorge/gullies • Major drainage • Minor drainage.
<i>Fortescue Marsh Tenement E46/684 Level 1 Targeted Vertebrate Fauna Survey</i> (Biologic Environmental Survey, 2014)	Overlaps the Survey Area	August – September 2014	<ul style="list-style-type: none"> • Desktop review • Level 1 field survey. 	<ul style="list-style-type: none"> • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> • Mulga Woodlands • Stony/Sand Plains • Fortescue Marsh Samphire.
<i>Fortescue Metals Group Cloudbreak Expansion Project – Pre Clearance Night Parrot Survey</i> (Outback Ecology, 2013)	7 km north of the Survey Area	January/February 2013	Targeted survey - Night Parrot (<i>Pezoporus occidentalis</i>)	<ul style="list-style-type: none"> • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Bush Stone-curlew (<i>Burhinus grallarius</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> • N/A.
<i>Koodaideri Iron Ore Project Northern Quoll Baseline Long-term Monitoring</i> (Biota Environmental Sciences, 2018)	6 km south of the Survey Area	March 2016 – June 2018	Long-term motion cameras	<ul style="list-style-type: none"> • Northern Quoll (<i>Dasyurus hallucatus</i>). 	<ul style="list-style-type: none"> • NA.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Level 1 Flora and Fauna Surveys along the Great Northern Highway for Jimblebar Mine Module Transport</i> (Eco Logical Australia, 2012)	60 km south of the Survey Area	August 2011	<ul style="list-style-type: none"> • Desktop review • Level 1 terrestrial fauna survey. 	<ul style="list-style-type: none"> • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Pebble plain • Riverine • Cleared.
<i>Nyidinghu Rail – Terrestrial Vertebrate Fauna and Fauna Habitat Assessment</i> (Ecoscape (Australia) Pty Ltd, 2012)	Overlaps the Survey Area	October 2011	<ul style="list-style-type: none"> • Desktop survey • Level 1 reconnaissance surveys • Targeted survey for conservation significant species. 	<ul style="list-style-type: none"> • <i>Ardea alba</i> (Eastern Great Egret) • Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Fortescue River valley floor • Open shrubland/open woodland over spinifex grassland on slopes • Creek lines/drainage lines.
<i>South Flank Targeted Fauna Survey</i> (Biologic Environmental Survey, 2016)	35 km south of the Survey Area	November – December 2015	<ul style="list-style-type: none"> • Targeted survey for Northern Quoll, Pilbara Olive Python, Northern Brushtail Possum - transects, cameras. 	<ul style="list-style-type: none"> • No conservation significant fauna recorded. 	<ul style="list-style-type: none"> • Gorge/Gully • Major Drainage Line.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>South Flank Targeted Northern Quoll Survey</i> (Biologic Environmental Survey, 2013)	38 km south of the Survey Area	June and July 2012	<ul style="list-style-type: none"> • Desktop review • Reconnaissance survey • Targeted survey for Northern Quoll. 	<ul style="list-style-type: none"> • Northern Quoll (<i>Dasyurus hallucatus</i>) • Ghost Bat (<i>Macroderma gigas</i>) • Pilbara Olive Python (<i>Liasis olivaceus barroni</i>). 	<ul style="list-style-type: none"> • Coolibah-Lignum • Gorge/Gully • Hilltop/Slope • Major Drainage Line • Mixed Shrub and Spinifex, Gravelly Plain • Mulga • Sandy Areas • Valley.
<i>Southern Flank Vertebrate Fauna Study</i> (Biologic Environmental Survey, 2011)	38 km south of the Survey Area	April and August – September 2010	<ul style="list-style-type: none"> • Desktop review • Two-season detailed fauna survey - trapping, opportunistic searches, targeted fauna survey techniques, motion-sensitive cameras, hair traps. 	<ul style="list-style-type: none"> • Northern Quoll (<i>Dasyurus hallucatus</i>) • Ghost Bat (<i>Macroderma gigas</i>) • Pilbara Leaf-nosed Bat (<i>Rhinionictis aurantia</i> Pilbara form) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) • Falco peregrinus (Peregrine Falcon) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) • Pilbara Barking Gecko (<i>Underwoodisaurus seorsus</i>) • Gane's Blind Snake (<i>Ramphotyphlops ganei</i>) (now <i>Anilius ganei</i>). 	<ul style="list-style-type: none"> • Mulga • Major Drainage Line • Hilltop/Slopes • Gorge/Gully • Valley • Sandy Areas • Mixed Shrub and Spinifex on Gravelly Plain • Coolibah-Lignum.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Targeted Fauna Assessment of the Rail Duplication</i> (Bamford Consulting Ecologists, 2010)	Overlaps the Survey Area	November 2010, December 2010	<ul style="list-style-type: none"> • Desktop review • Two-phase detailed field survey. 	<ul style="list-style-type: none"> • <i>Dasyercus cristicauda</i> (Crest-tailed Mulgara) (now Brush-tailed Mulgara (<i>Dasyercus blythi</i>)) • <i>Macrotis lagotis</i> (Bilby) • Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> • Granite outcrops, breakaways and boulder piles • Spinifex grasslands on low stony rises • Low trees/shrubs over Spinifex grasslands on sandplain • Acacia dominated vegetation • Clayey plains • Open riparian (Eucalypt) woodland.
<i>Vegetation and Fauna Habitat Mapping of the Northern Tenement Area, Cloudbreak</i> (Ecoscape (Australia) Pty Ltd, 2016)	Overlaps the Survey Area	June – July 2016	<ul style="list-style-type: none"> • Level 1 fauna habitat mapping reconnaissance survey • Targeted fauna components for Northern Quoll, Pilbara Leaf-nosed Bat and Ghost Bat. 	<ul style="list-style-type: none"> • Northern Quoll (<i>Dasyurus halucatus</i>) • Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) • Pilbara Leaf-nosed Bat (<i>Rhinonicteris aurantia</i> Pilbara form) • Ghost Bat (<i>Macroderma gigas</i>). 	<ul style="list-style-type: none"> • Drainage line/River/Creek (Major) • Drainage line/River/Creek (Minor) • Hills/Ranges/Plateaux • Plain (stony/gibber) • Rocky Escarpments (Ridges/Mesa/Cliffs/Outcrops/Breakaways) • Woodland (Open/Closed).

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<p><i>Vertebrate Fauna Assessment of the Iron Valley Project Area</i> (Bamford Consulting Ecologists, 2012b)</p>	<p><10 km South East of Survey Area</p>	<p>May and September 2011</p>	<ul style="list-style-type: none"> Detailed fauna survey. 	<ul style="list-style-type: none"> Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) Crest-tailed Mulgara (<i>Dasyercus cristicauda</i>) (now Brush-tailed Mulgara (<i>Dasyercus blythi</i>)) Rufuous-crowned Emu-wren (<i>Stipiturus ruficeps</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> Drainage lines Plains Rocky hills.

Report	Distance to current Survey Area	Survey timing	Survey scope	Recorded conservation significant fauna	Fauna habitats
<i>Yandi Billiards Phase 1 Seasonal Fauna Survey</i> (Biota Environmental Sciences, 2014)	1 < km from Survey Area	March 2014	<ul style="list-style-type: none"> Detailed fauna and SRE survey. 	<ul style="list-style-type: none"> Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) Australian Bustard (<i>Ardeotis australis</i>) (conservation status has since been downgraded) Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) Crest-tailed Mulgara (<i>Dasyercus cristicauda</i>) (now Brush-tailed Mulgara (<i>Dasyercus blythi</i>)) Pilbara Olive Python (<i>Liasis olivaceus barroni</i>) Fork-tailed Swift (<i>Apus pacificus</i>) Star Finch (<i>Neochmia ruficauda subclarascens</i>) (conservation status has since been downgraded). 	<ul style="list-style-type: none"> Alluvial plain Disturbance Floodout plain Hilltops and slopes Major drainage line Minor alluvial fans Mulga woodland Pediment slope.
<i>Yandicoogina Expansion Billiard Deposit Fauna Survey</i> (Biota Environmental Sciences, 2011)	<10 km South West of Survey Area	July 2008	<ul style="list-style-type: none"> Detailed fauna and SRE survey. 	<ul style="list-style-type: none"> Rainbow Bee-eater (<i>Merops ornatus</i>) (conservation status has since been downgraded) Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>). 	<ul style="list-style-type: none"> Major drainage line Minor drainage line Plain Low stony hill slope.



4.2 Fauna Habitat



Nine broad fauna habitats (excluding cleared areas) were identified and mapped within the Survey Area. Habitat condition varied throughout the Survey Area, with the most common disturbance being cattle grazing and trampling. Other disturbances included clearing for tracks and drill pads, infrastructure, weeds, fire scars, and litter.

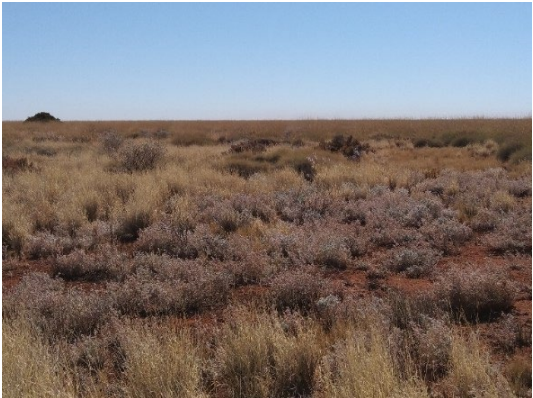

Descriptions, extents, and representative photos for fauna habitats within the Survey Area are provided below in Table 20. Fauna habitat extents have been rounded to the nearest hectare. Fauna habitat mapping is displayed in Figure 9 and habitat assessment site sheets are presented in Appendix D.


Table 20: Fauna habitat extents and descriptions

Fauna Habitat	Area, Proportion of the Survey Area	Sites	Habitat Description	Representative Photo
Woodland (open/closed)	83,869 ha, 59.47%	Trap07, Trap05	Predominantly comprises banded Mulga (<i>Acacia ?aptaneura</i>) woodland, with Mulga bands separated by bare patches due to surface water flow. Large continuous patches of Mulga woodland occurred in drainage areas, such as south of Coondiner Pool. The most abundant microhabitats were woody debris and peeling bark, which provide important shelter and refuge primarily for small reptiles. Severe cattle degradation was widespread throughout most of this habitat, particularly north of the Mount Newman Railway. This habitat is not critical for conservation significant fauna taxa, particularly given the widespread cattle degradation, although some species such as the Bilby may use it on occasion.	
Hummock Grassland	27,945 ha, 19.81%	Trap01, Trap04, Bilby01, Bilby02, Bilby03, Bilby04, Bilby08, Bird01, Bird02, Bird04, Bird05	<i>Triodia</i> hummock grassland on primarily red sand and sandy loam plain with a sparse overstorey of mixed shrubs dominated by <i>Acacia</i> spp. and scattered <i>Corymbia</i> sp. Abundant <i>Triodia</i> hummocks found within this habitat type provide an important source of shelter, refuge and nesting opportunities for small fauna taxa including birds, mammals, and reptiles. The sandy substrate is suitable for digging and burrowing. Some cattle degradation was observed, particularly north of the Mount Newman Railway which bisects the Survey Area from east to west. Conservation significant fauna taxa such as the Bilby and Brush-tailed Mulgara may use this habitat.	

Fauna Habitat	Area, Proportion of the Survey Area	Sites	Habitat Description	Representative Photo
Hills/Ranges/Plateaux	11,344 ha, 8.04%	Bat05, Bilby07, Trap09	<p>Rocky ironstone hills and slopes with rocky outcropping and thin soils over shallow bedrock. Vegetation consists primarily of open <i>Acacia</i> shrublands over <i>Triodia</i> hummock grasslands. Microhabitats include <i>Triodia</i> hummocks which provide shelter for a variety of species and rocky outcrops which provide abundant crevices for small fauna species. Hummocks were generally small, possibly due to a combination of burning or shallow soils. Stony slopes within this habitat will be used by the Western Pebble-mound Mouse.</p>	
Drainage Line/River/Creek (minor)	10,434 ha, 7.40%	Bird03, Cam04, Trap02, Bat07, Cage02	<p>Areas of drainage consisting of narrow individual channels or, in some cases, lacking surface channelling altogether. Dense overstorey vegetation made up primarily of tall <i>Acacia</i> spp., with <i>Eucalyptus</i> sp. and <i>Corymbia</i> sp. Ground cover is typically <i>Triodia</i> hummock grassland or tussock grassland on substrates ranging from sand to sandy clay, with an assortment of river stones. Most minor drainage lines lack permanent or semi-permanent pooling of water. Large, hollow-bearing Eucalypts were occasionally observed within this habitat. The overstorey vegetation provides valuable nesting and foraging habitat for birds and may be used by conservation significant taxa such as the Grey Falcon and Peregrine Falcon. Key microhabitats include woody debris, leaf litter, peeling bark, hollow trees and logs, and hummock grasslands provide refuge, shelter, and foraging opportunities for a wide variety of fauna taxa.</p>	

Fauna Habitat	Area, Proportion of the Survey Area	Sites	Habitat Description	Representative Photo
Plain (stony/gibber)	2,869 ha, 2.03%	Bilby05, Trap10, Bat08	<p>Stony plain, usually with a sparse overstorey of mixed shrubs dominated by <i>Acacia</i> spp. over <i>Triodia</i> hummock grassland. <i>Triodia</i> hummocks found within this habitat type provide an important source of shelter, refuge and nesting opportunities for small fauna taxa including birds, mammals, and reptiles. The conservation significant Western Pebble-mound Mouse was recorded within this habitat, however, it is more typically found in stony slopes rather than plains. Bilbies may also use this habitat.</p>	
Drainage Line/River/Creek (major)	1,618 ha, 1.15%	Cam02, Cam03, Cam05, Bat06, Trap06	<p>Areas of drainage often consisting of multiple braided channels or broad individual channels. Dense overstorey vegetation made up primarily of <i>Eucalyptus</i> sp. and <i>Corymbia</i> sp., and occasionally <i>Melaleuca</i> sp. Ground cover is typically <i>Triodia</i> hummock grassland or tussock grassland on substrates ranging from sand to sandy clay, with an assortment of river stones. Often contains permanent or semi-permanent pooling of water, which is critical habitat for the Pilbara Olive Python. Water pools were observed within Weeli Wolli Creek during Trip 1 (May 2021) and had dried up during Trip 2 (September 2021), however open water was still present during Trip 2 due to discharge from the Iron Valley mine. Large, hollow-bearing Eucalypts were relatively abundant within this habitat. The overstorey vegetation provides valuable nesting and foraging habitat for birds and may be used by conservation significant taxa such as the Grey Falcon and Peregrine Falcon. Key microhabitats include woody debris, leaf litter, peeling bark, hollow</p>	

Fauna Habitat	Area, Proportion of the Survey Area	Sites	Habitat Description	Representative Photo
			trees and logs, and hummocks grasslands provide refuge, shelter, and foraging opportunities for a wide variety for fauna taxa.	
Marsh/Lake (low halophytic shrubland)	1,462 ha, 1.04%	-	Broad, open marsh consisting of samphire and <i>Triodia</i> dominated halophytic shrubland. Generally dry, cracking clays in the winter when rainfall is low and becoming seasonally inundated after large rainfall events in the summer. These marshes/lakes may occasionally inundate and provide habitat for wetland-dependent taxa, including migratory birds. This habitat was extensively degraded by European Cattle in many areas. The conservation significant Short-tailed Mouse is known to occupy similar habitats. This habitat forms part of the broader Fortescue Marsh, a Nationally Important Wetland.	
Rocky Escarpments/Ridges/Mesa	513 ha, 0.36%	Cage01, Bat01, Bat02, Bat03, Cam01	This habitat forms part of the broader Hills/Ranges/Plateaux habitat, however has been mapped separately as it comprises escarpments and breakaways with abundant crevices, overhangs, cavities and caves. This habitat is in excellent condition as it is inaccessible to most forms of disturbance and provides critical habitat for conservation significant fauna taxa; it provides denning habitat for Northern Quolls and may be used for roosting by Ghost Bats and Pilbara Leaf-nosed Bats.	

Fauna Habitat	Area, Proportion of the Survey Area	Sites	Habitat Description	Representative Photo
Dunal (primary/secondary)	162 ha, 0.12%	Bilby06, Trap08	Open <i>Triodia</i> grasslands and low, open <i>Acacia</i> shrublands on a soft sandy substrate which is preferred habitat for many burrowing taxa. Landform consists of alternating dunes and swales. Key microhabitats include hummocks and burrows. Cattle degradation was observed, particularly in the swales. Conservation significant fauna taxa such as the Bilby and Brush-tailed Mulgara may use this habitat.	
Cleared	817 ha, 0.58%	-	Areas that have been cleared and do not contain vegetation. These areas generally do not provide substantial habitat value to fauna taxa.	N/A
Total	141,033 ha, 100.00%			

4.3 Fauna Assemblage

The terrestrial vertebrate fauna surveys yielded 164 fauna species from 60 families, summarised in Table 21. A full inventory of fauna taxa recorded during the field survey is provided in Appendix E.

Table 21: Overview of fauna taxa recorded during the field survey

Fauna Group	Number of Species	Number of Families
Birds	75	37
Mammals	31	13
Reptiles	57	9
Amphibians	1	1
Total	164	60

An overview of number of fauna taxa and unique fauna taxa recorded within each habitat type is provided in Table 22. Survey effort was not consistent within each habitat type, which will affect the number of taxa recorded. The Marsh/Lake (low halophytic shrubland) has been omitted from the table because no species were recorded within this habitat type due to low sampling effort. No trap sites were installed in the Marsh/Lake habitat due to access limitations during Trip 1 (May 2021). Survey effort during Trip 2 (September 2021) focused on the Hummock Grassland fringing the Marsh/Lake rather than the Marsh/Lake itself because the fringing Hummock Grassland is the preferred nesting habitat of the Night Parrot.

Table 22: Number fauna taxa and unique³ fauna taxa recorded within each habitat type

Fauna Habitat	Birds (Unique Birds)	Mammals (Unique Mammals)	Reptiles (Unique Reptiles)	Amphibians (Unique Amphibians)	Total Species (Unique Species)
Woodland (open/closed)	26 (3)	14 (1)	22 (4)	0 (0)	62 (8)
Hummock Grassland	29 (2)	20 (2)	30 (12)	0 (0)	79 (16)
Hills/Ranges/Plateaux	10 (2)	14 (1)	10 (2)	0 (0)	34 (5)
Drainage Line/River/Creek (minor)	46 (17)	17 (0)	16 (0)	0 (0)	79 (17)
Plain (stony/gibber)	5 (0)	8 (0)	5 (1)	0 (0)	18 (1)
Drainage Line/River/Creek (major)	28 (12)	17 (0)	17 (3)	1 (1)	63 (15)
Rocky Escarpments/Ridges/Mesa	1 (0)	5 (0)	2 (0)	0 (0)	8 (0)
Dunal (primary/secondary)	5 (0)	9 (0)	17 (4)	0 (0)	31 (4)
Cleared	13 (0)	6 (1)	5 (1)	0 (0)	24 (2)

³ Fauna taxa that were only recorded within one habitat type

4.3.1 Birds

A total of 75 avian species from 37 families were recorded within the Survey Area. The most recorded taxa were the Magpie-lark (*Grallina cyanoleuca*), Willie Wagtail (*Rhipidura leucophrys*), and Zebra Finch (*Taeniopygia guttata*). The most diverse families were Meliphagidae with seven taxa recorded, and Columbidae with four taxa recorded.

4.3.2 Mammals

A total of twelve native non-volant (non-flying) mammal species from three families were recorded within the Survey Area. The most recorded native mammal taxon was the Sandy Inland Mouse (*Psuedomys hermannsbergensis*). The most diverse non-volant mammal family was Muridae, comprising six taxa.

A total of twelve volant mammal taxa (bats) from five families were recorded within the Survey Area. The most frequently recorded taxa were the Finlayson's Cave Bat (*Vespadelus finlaysoni*), Little Broad-nosed Bat (*Scotorepens greyii*) and Gould's Wattled Bat (*Chalinolobus gouldii*). The most diverse family was Vespertilionidae, comprising four taxa.

Six introduced mammal taxa were recorded. Direct sightings and evidence of European Cattle (*Bos taurus*), Cat (*Felis catus*), Camel (*Camelus dromedarius*), Rabbit (*Oryctolagus cuniculus*) and House Mouse (*Mus musculus*) and Dog/Dingo (*Canis familiaris*) were widespread throughout the Survey Area.

4.3.3 Reptiles and Amphibians

A total of 57 reptile species from nine families were recorded throughout the Survey Area. The most recorded taxon was the Central Military Dragon (*Ctenophorus isolepsis*), followed by the Leopard Ctenotus (*Ctenotus pantherinus*). The most diverse reptile family was Scincidae with 21 taxa, followed by Elapidae and Diplodactylidae with six taxa each.

One amphibian species from one family was recorded throughout the Survey Area. This was the Sheep Frog (*Cyclorana maini*).

4.3.4 Weeli Wolli Creek

- Two aquatic fauna species were observed in pools within the Weeli Wolli Creek system, an introduced crustacean, the Redclaw (*Cherax quadricarinatus*), and a native fish species, the Spangled Perch (*Leiopotherapon unicolor*).

4.4 Conservation Significant Fauna

Four conservation significant fauna taxa were recorded within the Survey Area during the field survey:

- Ghost Bat (*Macroderma gigas*), Vulnerable under the BC Act and EPBC Act – Three calls were recorded by ARU at site Bat01 during Trip 2 (September 2021) in Rocky Escarpments/Ridges/Mesa habitat (Figure 9)
- Western Pebble-mound Mouse (*Pseudomys chapmani*), Priority 4 by DBCA – Four individuals were captured at site Trap09 during Trip 2 (September 2021) in Hills/Ranges/Plateaux habitat (Figure 9; Plate 2) and a Western Pebble-mound Mouse mound with a clear undulating and conical structure, indicating it has been recently maintained and is therefore active or recently active, was recorded in Plain (stony/gibber) habitat (Figure 9; Plate 3)
- Pilbara Leaf-nosed Bat (*Rhinoicteris aurantia* Pilbara form), Vulnerable under the BC Act and EPBC Act – Two calls were recorded by ARU at site Bat07 in Drainage Line/River/Creek (minor) habitat during Trip 2 (September 2021) (Figure 9)
- Gane's Blind Snake (*Anilius ganei*), Priority 1 by DBCA – One individual was captured at site Trap01 during Trip 1 (May 2021) in Hummock Grassland (Figure 9).

Seven additional conservation significant taxa have been recorded within the Survey Area prior to the current survey:

- Pacific Swift (Fork-tailed Swift) (*Apus pacificus*), Migratory and Marine under the EPBC Act (Bamford Consulting Ecologists, 2012a)
- Grey Falcon (*Falco hypoleucos*), Vulnerable under the BC Act and EPBC Act (Department of Biodiversity Conservation and Attractions, 2021c)
- Peregrine Falcon (*Falco peregrinus*), Other specially protected fauna by DBCA (Department of Biodiversity Conservation and Attractions, 2021c)
- Eastern Osprey (*Pandion haliaetus cristatus*), Migratory and Marine under the EPBC Act (Department of Biodiversity Conservation and Attractions, 2021c)
- Australian Painted Snipe (*Rostratula australis*), Endangered under the BC Act and EPBC Act and Marine under the EPBC Act (Department of Biodiversity Conservation and Attractions, 2021b)
- Bilby (*Macrotis lagotis*), Vulnerable under the BC Act and EPBC Act (Department of Biodiversity Conservation and Attractions, 2021c)
- Pilbara Olive Python (*Liasis olivaceus barroni*), Vulnerable under the BC Act and EPBC Act (Bamford Consulting Ecologists, 2012a).

The post survey results identified eight conservation significant taxa as having a high likelihood of occurrence within the Survey Area:

- Night Parrot (*Pezoporus occidentalis*), Critically Endangered under the BC Act and Endangered under the EPBC Act
- Princess Parrot (*Polytelis alexandrae*), Priority 4 by DBCA and Vulnerable under the EPBC Act
- Brush-tailed Mulgara (*Dasyercus blythi*), Priority 4 by DBCA
- Northern Quoll (*Dasyurus hallucatus*), Vulnerable under the BC Act and EPBC Act
- Pilbara Barking Gecko (*Underwoodisaurus seorsus*), Priority 2 by DBCA
- Three waterbirds and shorebirds listed as Migratory and Marine under the EPBC Act.

Six conservation significant taxa were assessed as having a medium likelihood of occurrence within the Survey Area, and 14 conservation significant taxa were assessed as having a low likelihood of occurrence within the Survey Area. Further detail regarding recorded and potential conservation significant fauna is provided below in Table 23.



Plate 2: Western Pebble-mound Mouse captured at site Trap09 and a Western Pebble-mound Mouse foot pad (a distinguishing feature).



Plate 3: Western Pebble-mound Mouse mound with a clear undulating and conical structure, indicating it has been recently maintained.

Table 23: Conservation significant fauna likelihood of occurrence

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Birds						
Apodidae	<i>Apus pacificus</i>	Pacific Swift (Fork-tailed Swift)	MI	MI, MA	Recorded	Recorded flying over the Survey Area in 2012 (Bamford Consulting Ecologists, 2012a) and recorded within 1 km of the Survey Area near Koodaideri in 2017 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (any low to very high airspace over varied habitat) (Pizzey and Knight, 2013).
Charadriidae	<i>Charadrius veredus</i>	Oriental Plover	MI	MI, MA	High	Recorded approximately 20 km northeast of the Survey Area in 2017 (Department of Biodiversity Conservation and Attractions, 2021b). Potentially suitable habitat is present within the Survey Area (grasslands and thinly vegetated plains, preferring open areas) (Pizzey and Knight, 2013).
Falconidae	<i>Falco hypoleucos</i>	Grey Falcon	VU	VU	Recorded	Recorded within the northern portion of the Survey Area in 2010 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (open plains with treed watercourses) (Pizzey and Knight, 2013).
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon	OS	-	Recorded	Multiple records within the central portion of the Survey Area from 2007 and 2011 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (cliff faces preferred for nesting, commonly uses stick nests built by other birds) (Pizzey and Knight, 2013).
Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow	MI	MI, MA	Low	No nearby records identified from the database searches or literature. Only returned by PMST which searches by modelled distribution, not actual records. No preferred habitat within the Survey Area (generally coastal) (Pizzey and Knight, 2013).

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Laridae	<i>Gelochelidon nilotica</i>	Gull-billed Tern	MI	MI, MA	High	Recorded within 1 km of the Survey Area near Koodaideri in 2017 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitats present within the Survey Area (temporary salt marsh, open floodplains) (Morcombe, 2017).
Maluridae	<i>Malurus leucopterus edouardi</i>	Barrow Island Black and White Fairywren	VU	VU	Low	Outside taxon distribution (Barrow Island) (Menkhorst <i>et al.</i> , 2017).
Maluridae	<i>Malurus leucopterus leucopterus</i>	Dirk Hartog Island Black and White Fairywren	VU	VU	Low	Outside taxon distribution (Dirk Hartog Island) (Menkhorst <i>et al.</i> , 2017).
Meliphagidae	<i>Grantiella picta</i>	Painted Honeyeater	-	VU	Low	Outside taxon distribution (Eastern states) (Menkhorst <i>et al.</i> , 2017).
Motacillidae	<i>Motacilla cinerea</i>	Grey Wagtail	MI	MI, MA	Low	Recorded within 2 km of the northern portion of the Survey Area in 2012 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is limited within the Survey Area (fresh sandy or rocky streams) and general occurrence is between Broome-Darwin (Menkhorst <i>et al.</i> , 2017).
Motacillidae	<i>Motacilla tschutschensis</i>	Yellow Wagtail	MI	MI, MA	Low	No nearby records identified from the database searches or literature. Only returned by PMST which searches by modelled distribution, not actual records. Suitable habitat is present within the Survey Area (swamp margins, saltmarshes, ploughed land) (Pizzey and Knight, 2013).
Pandionidae	<i>Pandion haliaetus cristatus</i>	Eastern Osprey	MI	MI, MA	Recorded	Recently recorded within the Survey Area, near Weeli Wolli Creek in 2011 and in the northern portion of the Survey Area in 2012 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (inland waterbodies) (Pizzey and Knight, 2013).

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Psittaculidae	<i>Pezoporus occidentalis</i>	Night Parrot	CR	EN	High	Recorded approximately 6 km from the northern portion of the Survey Area in 2005 (Department of Biodiversity Conservation and Attractions, 2021c), and a population was recently confirmed to exist near the Cloudbreak iron ore mine (Fortescue Metals Group Limited, 2021). Suitable habitat is present within the Survey Area (long unburnt spinifex and samphire shrublands bordering salt lakes) (Morcombe, 2017).
Psittaculidae	<i>Polytelis alexandrae</i>	Princess Parrot	P4	VU	High	Recorded less than 20 km south of the Survey Area in 2012 (Department of Biodiversity Conservation and Attractions, 2021b). Suitable habitat is present within the Survey Area (spinifex around salt lakes) (Pizzey and Knight, 2013).
Rostratulidae	<i>Rostratula australis</i>	Australian Painted Snipe	EN	EN, MA	Recorded	Recorded within the Survey Area at Coondiner Pool in 2012 (Department of Biodiversity Conservation and Attractions, 2021b). Limited suitable habitat in the Survey Area (well vegetated wetlands) (Pizzey and Knight, 2013).
Scolopacidae	<i>Actitis hypoleucos</i>	Common Sandpiper	MI	MI, MA	Medium	Recorded approximately 25 km east of the Survey Area in 2018 (Department of Biodiversity Conservation and Attractions, 2021b). Suitable habitat is present within the Survey Area (wetlands, river pools) (Pizzey and Knight, 2013).
Scolopacidae	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	MI	MI, MA	Medium	Recorded approximately 20 km east of the Survey Area in 2003 (Department of Biodiversity Conservation and Attractions, 2021b). Suitable habitats present in the Survey Area after rainfall (wetlands, swamps, lakes, floodwaters) (Pizzey and Knight, 2013).
Scolopacidae	<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	CR, MI, MA	Low	No nearby records identified from the database searches or literature. Only returned by PMST which searches by modelled distribution, not actual records. Suitable habitat is present within the Survey Area (floodwaters, flooded saltbush surrounds of inland lakes) (Pizzey and Knight, 2013).

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Scolopacidae	<i>Calidris melanotos</i>	Pectoral Sandpiper	MI	MI, MA	Low	No nearby records identified from the database searches or literature. Only returned by PMST which searches by modelled distribution, not actual records. Suitable habitat is present within the Survey Area (permanent and temporary wetlands with fringing vegetation) (Pizzey and Knight, 2013).
Scolopacidae	<i>Calidris subminuta</i>	Long-toed Stint	MI	MI, MA	Medium	Recorded near the northern portion of the Survey Area in 2013 (Outback Ecology, 2013). Suitable habitats are present within the survey area (vegetated wetlands, shallow lakes with muddy edges) (Pizzey and Knight, 2013).
Scolopacidae	<i>Tringa glareola</i>	Wood Sandpiper	MI	MI, MA	Medium	Recorded approximately 10 km north of the central portion of the Survey Area in 2009 (Department of Biodiversity Conservation and Attractions, 2021c). No preferred habitat within the Survey Area (freshwater wetlands with woodlands) (Pizzey and Knight, 2013).
Scolopacidae	<i>Tringa nebularia</i>	Common Greenshank	MI	MI, MA	High	Recorded approximately 10 km north of the central portion of the Survey Area in 2009 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (permanent and temporary wetlands, lakes, mud and clay floodplains) (Pizzey and Knight, 2013).
Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	MI	MI, MA	Medium	Two records approximately 10 km north of the central portion of the Survey Area from 2017 (Department of Biodiversity Conservation and Attractions, 2021c). Limited suitable habitat is present within the Survey Area (shallow freshwater, dry grasslands) (Pizzey and Knight, 2013).

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Mammals						
Dasyuridae	<i>Dasyercus blythi</i>	Brush-tailed Mulgara, Ampurta	P4	-	High	Recorded approximately 3 km south of the Survey Area near Weeli Wollie Creek in 2014 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitats found within the Survey Area (sand dunes with spinifex) (Dyck, Gynther and Baker, 2013).
Dasyuridae	<i>Dasyercus cristicauda</i>	Crest-tailed Mulgara	P4	-	Low	Outside taxon distribution. The Crest-tailed Mulgara was considered the same species as the Brush-tailed Mulgara until 2005. The only nearby record of the Crest-tailed Mulgara was recorded prior to splitting by Biota Environmental Sciences (2004) and would now be identified as a Brush-tailed Mulgara.
Dasyuridae	<i>Dasyurus geoffroii</i>	Western Quoll, Chuditch	VU	VU	Low	Outside taxon distribution, nearby NatureMap record is likely erroneous and is under review (Department of Biodiversity Conservation and Attractions, 2021b).
Dasyuridae	<i>Dasyurus hallucatus</i>	Northern Quoll	EN	EN	High	A total of 230 records have occurred within 20 km of the Survey Area, nearly all of which have been recorded since 2010 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (rocky escarpments, ranges, gorges) (Dyck, Gynther and Baker, 2013).
Megadermatidae	<i>Macroderma gigas</i>	Ghost Bat	VU	VU	Recorded	Recorded within the Survey Area during the current survey. Suitable habitat is present within the Survey Area (rocky ranges, roost caves, old mine shafts). May use all habitats within Survey Area for hunting (Dyck, Gynther and Baker, 2013).
Muridae	<i>Leggadina lakedownensis</i>	Short-tailed Mouse	P4	-	Medium	Two records approximately 20 km northeast of the Survey Area from 2004 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (stony hummock grassland, clay soils) (Dyck, Gynther and Baker, 2013).

Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Muridae	<i>Pseudomys chapmani</i>	Western Pebble-mound Mouse	P4	-	Recorded	Recorded within the Survey Area during the current survey. Suitable habitat is present within the Survey Area (stony hillsides with hummock grasslands) (Dyck, Gynther and Baker, 2013).
Muridae	<i>Zyomys pedunculatus</i>	Central Rock-rat	CR	CR	Low	Outside taxon distribution (confined to central Australia) (Dyck, Gynther and Baker, 2013).
Rhinycteridae	<i>Rhinycteris aurantia</i> Pilbara form	Pilbara Leaf-nosed Bat	VU	VU	Recorded	Recorded within the Survey Area during the current survey. Suitable habitat is present within the Survey Area (rocky escarpments, ranges, gorges). May use all habitats within Survey Area for hunting (Dyck, Gynther and Baker, 2013).
Thylacomyidae	<i>Macrotis lagotis</i>	Bilby, Dalgyte	VU	VU	Recorded	Recorded within the Survey Area in 1997, at least 28 records near the northern portion of the Survey Area including records from 2017 within 5 km of the Survey Area (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (Mitchell Grass and stony downs country of cracking clays, desert sandplains and dune fields) (Dyck, Gynther and Baker, 2013).
Reptiles						
Agamidae	<i>Pogona minor minima</i>	Dwarf Bearded Dragon	VU	-	Low	Outside known distribution (Houtman Abrolhos Island) (Wilson and Swan, 2017).
Carphodactylidae	<i>Underwoodisaurus seorsus</i>	Pilbara Barking Gecko	P2	-	High	One record approximately 40 km southwest of Survey Area (Biologic Environmental Survey, 2011). Suitable habitats found within the Survey Area (stony slopes/hilltops of the Hamersley Range) (Wilson and Swan, 2017).

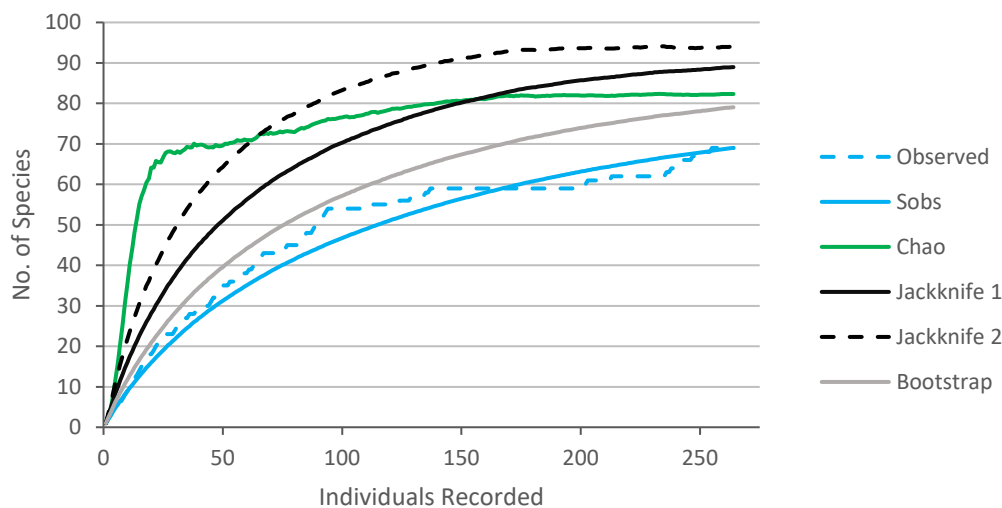
Family	Scientific Name	Common Name	Conservation Status		Likelihood of Occurrence	Justification
			State	Federal		
Pythonidae	<i>Liasis olivaceus barroni</i>	Pilbara Olive Python	VU	VU	Recorded	Species has been anecdotally reported to occur within the Survey Area by Marillana Station personnel (Bamford Consulting Ecologists, 2012a), and 15 records occurred within 10 km of the Survey Area since 2010 (Department of Biodiversity Conservation and Attractions, 2021c). Suitable habitat is present within the Survey Area (watercourses and permanent waterbodies in rocky areas) (Wilson and Swan, 2017).
Scincidae	<i>Ctenotus uber johnstonei</i>	Spotted Ctenotus	P2	-	Low	The Priority subspecies <i>C. uber johnstonei</i> is known to occur near Balgo, on the boundary of the Great Sandy Desert and Tanami Desert in the northeast interior of WA. An undescribed subspecies of <i>C. uber</i> currently known as <i>C. affin. uber johnstonei</i> has been recorded in plains surrounding the Fortescue Marsh (Biota Environmental Sciences, 2004).
Scincidae	<i>Liopholis kintorei</i>	Great Desert Skink	VU	VU	Low	No nearby records identified from the database searches or literature. Only returned by PMST which searches by modelled distribution, not actual records. Suitable habitat is present within the Survey Area (arid sandflats, clay-based/loamy soils with spinifex) (Wilson and Swan, 2017).
Typhlopidae	<i>Anilius ganei</i>	Gane's Blind Snake	P1	-	Recorded	Recorded within the Survey Area during the current survey. Suitable habitats found within the Survey area (sand dunes associated with moist gorges/gullies) (Wilson and Swan, 2017).

4.5 Species Accumulation Curves

4.5.1 Birds

The species accumulation curve for birds in the Survey Area was based on birds observed across Trip 1 (May 2021) and Trip 2 (September 2021). The Sobs curve appears to be leveling off and approaching an asymptote (Graph 2), suggesting that further survey effort would have yielded relatively few additional taxa. All richness curves were greater than the Sobs curve, indicating that the observed species richness was lower than what was predicted by the analysis.

Estimated species richness for the Survey Area ranged from 79 to 94, with an observed value of 69 taxa. Richness estimators indicated that the surveys were approximately 73.4% (Jackknife 2) to 87.3% (Bootstrap) adequate in recording the full complement of bird taxa present during the field survey at sampling locations within the Survey Area.

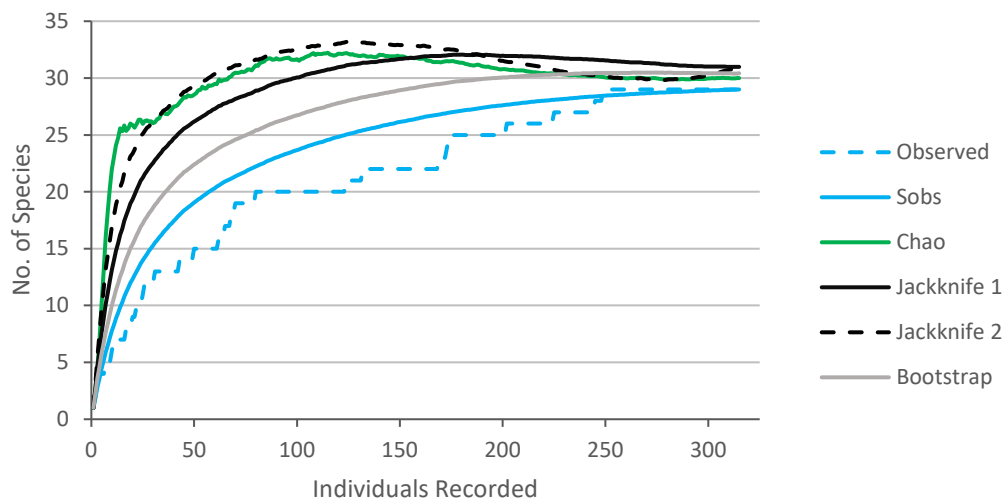


Graph 2: Bird species accumulation curve

4.5.2 Mammals

The species accumulation curve for mammals in the Survey Area was based on mammals observed across Trip 1 (May 2021) and Trip 2 (September 2021). The Sobs curve appears to be leveling off and approaching an asymptote (Graph 3), suggesting that further survey effort would have yielded relatively few additional taxa. All richness curves were greater than the Sobs curve, indicating that the observed species richness was lower than what was predicted by the analysis.

Estimated species richness for the Survey Area ranged from 29 to 31, with an observed value of 29 taxa. Richness estimators indicated that the surveys were approximately 93.5% (Jackknife 2) to 96.7% (Chao) adequate in recording the full complement of mammal taxa present during the field survey at sampling locations within the Survey Area.

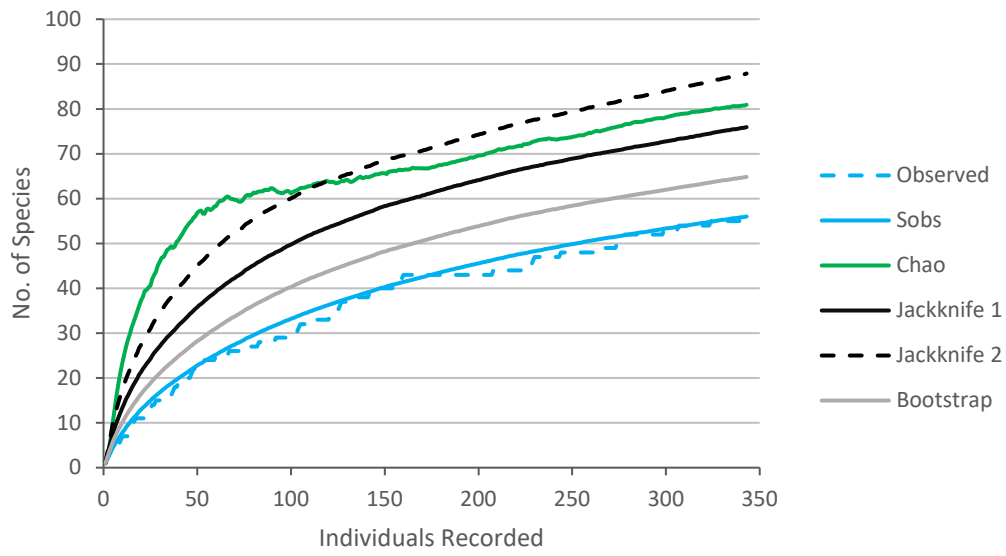


Graph 3: Mammal species accumulation curve

4.5.3 Reptiles and Amphibians

The species accumulation curve for reptiles and amphibians in the Survey Area was based on reptile captures and observations across Trip 1 (May 2021) and Trip 2 (September 2021). The Sobs curve steadily increases and does not appear to be approaching an asymptote (Graph 4), suggesting that further survey effort would have yielded additional fauna taxa. All richness curves were greater than the Sobs curve, indicating that the observed species richness was lower than what was predicted by the analysis.

Estimated species richness for the Survey Area ranged from 64 to 88, with an observed value of 56 taxa. Richness estimators indicated that the surveys were approximately 63.7% (Jackknife 2) to 86.4% (Bootstrap) adequate in recording the full complement of reptile and amphibian taxa present during the field survey at sampling locations within the Survey Area.



Graph 4: Reptile and amphibian species accumulation curve

5 Discussion

5.1 Fauna Habitat

The nine broad fauna habitats identified within the Survey Area are typical of the Pilbara bioregion and consistent with habitats identified by previous studies in the region (Biota Environmental Sciences, 2004, 2018; Bamford Consulting Ecologists, 2010, 2012; ecologia Environment, 2011; Biologic Environmental Survey, 2011, 2013, 2014, 2016; Eco Logical Australia, 2012; Ecoscape (Australia) Pty Ltd, 2012, 2016; Outback Ecology, 2013; Rio Tinto, 2016; 360 Environmental Pty Ltd, 2021, in review). Nearly all identified fauna habitats extend outside the Survey Area to form larger ecosystems, however the extents of the Dunal (primary/secondary) habitats are very limited within the Survey Area and surrounds.

Of the habitats within the Survey Area, the Rocky Escarpments/Ridges/Mesa habitat provides the most value for conservation significant fauna and is valuable for the overall fauna assemblage. It forms part of the broader Hills/Ranges/Plateaux habitat; however, was mapped separately due to the presence of microhabitats such as crevices, overhangs, cavities, and caves. These microhabitats have the potential to be used for denning by the Northern Quoll, may be used as roosting habitat by the Pilbara Leaf-nosed Bat and Ghost Bat, and provide critical habitat for the Pilbara Olive Python, particularly when adjacent habitats likely to contain semi-permanent pools such as Drainage Line/River/Creek (major) habitat. The Rocky Escarpments/Ridges/Mesa habitat is also the preferred nesting habitat for the Peregrine Falcon. The broader Hills/Ranges/Plateaux habitat constitutes foraging and dispersal habitat for a variety of taxa including the Northern Quoll, Pilbara Leaf-nosed Bat, Ghost Bat, and Pilbara Olive Python and contains stony slopes preferred by the Western Pebble-mound Mouse.

The Drainage Line/River/Creek (major) and Drainage Line/River/Creek (minor) habitats provide substantial value for conservation significant fauna and the overall fauna assemblage due to their role as ecological linkages. The habitats provide continuous corridors of vegetation cover that enable fauna to disperse across the landscape. Seasonal inundation and pooling can occur, particularly in the Drainage Line/River/Creek (major) habitats, and such pooling is likely to be used by the Pilbara Olive Python. These habitats constitute foraging and dispersal habitat for the Northern Quoll, foraging habitat for the Pilbara Leaf-nosed Bat and Ghost Bat, and potential nesting habitat for the Grey Falcon and Peregrine Falcon, both of which use refurbished nests of other raptors or corvids (Pizzey and Knight, 2013). Drainage Line/River/Creek habitats will also be used by waterbirds and shorebirds, particularly Coondiner Pool, a semi-permanent water source, is an important habitat feature for both birds and the broader fauna assemblage in the context of the Survey Area.

As stated above, the Dunal (primary/secondary) is very limited in extent within the Survey Area and surrounds. The habitat provides shelter and sandy substrates suitable for burrowing. It is potentially core habitat for conservation significant taxa such as the Bilby and Brush-tailed Mulgara. The Dunal (primary/secondary) habitats occur within broader Hummock Grasslands on red sandplains, which may also be used by the Bilby and Brush-tailed Mulgara. The Dunal (primary/secondary) and Hummock Grasslands are likely to be occupied by a similar fauna assemblage, although the Dunal (primary/secondary) habitat is of higher value and likely to be

occupied by a greater number of taxa relative to its extent. The Hummock Grassland fringing the Marsh/Lake (low halophytic shrubland) consisted of much larger, older *Triodia* hummocks than observed elsewhere in the Survey Area and constituted the preferred nesting habitat of the Night Parrot.

The Marsh/Lake (low halophytic shrubland) habitat within the Survey Area comprises the southern margins of the Fortescue Marsh, which is recognised as a nationally important wetland and Important Bird Area, and is considered a potential Ramsar site (Trainor, Knuckey and Firth, 2016). The habitat was not accessed during Trip 1 (May 2021) due to access limitations and was completely dry during Trip 2 (September 2021). While the Marsh/Lake (low halophytic shrubland) present within the Survey Area may occasionally inundate and provide potential habitat for waterbirds and shorebirds, it will generally be drier and provide less habitat value than central areas of the marsh. The habitat may also be used by the Night Parrot and the Short-tailed Mouse, however was extensively degraded by cattle.

The Woodland (open/closed) habitat contains abundant peeling bark and woody debris, which is likely to provide ample habitat opportunities for small reptiles, however the understory vegetation was mostly sparse and degraded by cattle.

The Plain (stony/gibber) habitat contains fewer microhabitat opportunities and provides less value to conservation significant fauna taxa and the overall fauna assemblage than the other habitats discussed above, however it may be used by the Western Pebble-mound Mouse as it contains suitably sized pebbles.

5.2 Fauna Assemblage

The inventory of fauna taxa recorded during the field survey is typical for the Pilbara bioregion and consistent with the database search results and previous studies conducted in the region (Biota Environmental Sciences, 2004, 2018; Bamford Consulting Ecologists, 2010, 2012; ecologia Environment, 2011; Biologic Environmental Survey, 2011, 2013, 2014, 2016; Eco Logical Australia, 2012; Ecoscape (Australia) Pty Ltd, 2012, 2016; Outback Ecology, 2013; Rio Tinto, 2016; 360 Environmental Pty Ltd, 2021, in review).

The Survey Area is expansive and encompasses a variety of fauna habitats, and it is therefore expected that the fauna assemblage within the Survey Area will be diverse and variable throughout the landscape. The highest overall species diversity was recorded in the Hummock Grassland habitat, which was found to contain a highly diverse reptile assemblage and high number of unique reptile taxa, and the Drainage Line/River/Creek habitats (both major and minor), which were found to contain a highly diverse bird assemblage and high number of unique bird taxa. High species diversity was also recorded within the Woodland (open/closed) habitat, however this habitat also covered the greatest extent within the Survey Area, therefore survey effort within this habitat was higher than in most other habitats. The Woodland (open/closed) habitat also contained a comparatively low number of unique species when compared to other habitats with similar species diversity. Moderate species diversity and low numbers of unique species were recorded within the Hills/Ranges/Plateaux and Rocky Escarpments/Ridges/Mesa habitats (which are likely to share the same fauna communities), however this may be a product of survey effort due to the impracticalities of installing pitfall

traps in rocky substrates and accessing sheer rockfaces. Given its small extent within the Survey Area, the Dunal (primary/secondary) habitat was found to contain a comparatively high species diversity, particularly within its reptile assemblage. The Plain (stony/gibber) habitat was found to contain the most depauperate communities within the Survey Area, with both low species diversity and numbers of unique species.

The species accumulation curves for birds and mammals were approaching an asymptote, suggesting that while further trapping effort would have yielded additional taxa, most of the bird and mammal taxa present at sampling locations during the field survey had been recorded. The species accumulation curve for reptiles and amphibians was not approaching an asymptote, and species richness indicators suggested that only 63.7% to 86.4% of the reptile and amphibian taxa present at sampling locations during the field survey had been recorded. Despite this, the fauna assemblage recorded during the fauna survey is similar to those recorded by other comparable studies and considered to be a representative subset of the overall assemblage that occurs within the Survey Area. Given the expanse of the Survey Area and variety of fauna habitats, it is not possible or feasible to record an exhaustive inventory of fauna taxa within the Survey Area.

5.2.1 Weeli Wolli Creek

The introduced crayfish species Redclaw (*Cherax quadricarinatus*) were observed in large numbers within Weeli Wolli Creek, with live individuals observed in pools and desiccated remains such as shells widespread in dry areas of the creek. The species is extremely detrimental to waterways outside its native range as it eats a wide variety of prey and outcompetes native aquatic fauna such as fish and turtles (Department of Primary Industries and Regional Development, 2020). It is virtually impossible to eradicate as it reproduces rapidly, tolerates a wide variety of habitats, and can move between water bodies (Department of Primary Industries and Regional Development, 2020). The only other aquatic fauna taxon observed within Weeli Wolli Creek during the field survey was the native Spangled Perch (*Leiopotherapon unicolor*), a widespread and abundant freshwater fish species (Bray and Thompson, 2021).

5.3 Conservation Significant Fauna

5.3.1 Birds

5.3.1.1 Pacific Swift (*Apus pacificus*)

The Pacific Swift (also called Fork-tailed Swift) is a non-breeding visitor to all states and territories of Australia and is found throughout WA with a preference for coastal areas (Higgins, 1999). The Pacific Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. The Pacific Swift occupies a large airspace range over varied habitats, ranging from rainforests to semi-deserts (Morcombe, 2003). Although the taxon has been recorded in the airspace above the Survey Area (Bamford Consulting Ecologists, 2012a), it will not be reliant on terrestrial habitats within the Survey Area.

5.3.1.2 Grey Falcon (*Falco hypoleucos*)

The Grey Falcon is an elusive and endemic bird of the arid interior (Schoenjahn, Pavey and Walter, 2019). It is distributed sparsely over Australia's arid and semi-arid zones and is absent from Cape York Peninsula, south of the Great Dividing Range in Victoria, and south of 26°S in WA (Johnstone and Storr, 1998; BirdLife International, 2016). The Grey Falcon is restricted largely to areas with high average temperatures and average annual rainfall of less than 500 mm. It favours lightly timbered and untimbered lowland plains that are crossed by tree lined watercourses, but frequents other habitats, including grassland and sand dune habitats (Johnstone and Storr, 1998; BirdLife International, 2016).

The Grey Falcon typically uses refurbished nests built by other raptors or corvids in eucalypt lined drainage lines and waterholes (Pizzey and Knight, 2013) and may therefore use the Drainage Line/River/Creek habitat for breeding, and all habitats for hunting. The regional population is unlikely to be dependent on habitats within the Survey Area as these habitats occur more widely in the region outside the Survey Area. The Grey Falcon was not recorded during the current survey, however was previously recorded within the Survey Area in 2010 (Department of Biodiversity Conservation and Attractions, 2021c).

5.3.1.3 Peregrine Falcon (*Falco peregrinus*)

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

The Peregrine Falcon typically nests on cliff ledges or in refurbished nests built by other raptors or corvids (Pizzey and Knight, 2013) and may therefore use the Rocky Escarpments/Ridges/Mesa and Drainage Line/River/Creek habitats for breeding, and all habitats for hunting. The regional population is unlikely to be dependent on habitats within the Survey Area as these habitats occur more widely in the region outside the Survey Area. The Peregrine Falcon was not recorded during the current survey, however has been recorded multiple times within the Survey Area between 2007 and 2011 (Department of Biodiversity Conservation and Attractions, 2021c).

5.3.1.4 Eastern Osprey (*Pandion haliaetus cristatus*)

The Eastern Osprey is considered to be moderately common in Australia (Olsen, 1998). The species is most abundant in northern Australia, where high population densities occur in remote areas (Johnstone and Storr, 1998). They require extensive areas of open fresh, brackish or saline water for foraging (Marchant and Higgins, 1993). They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia (Olsen, 1995; Johnstone and Storr, 1998). They frequent a variety of wetland habitats including inshore waters, reefs, bays, coastal cliffs, beaches, estuaries, mangrove swamps, broad rivers, reservoirs and large lakes and waterholes (Olsen, 1995; Johnstone and Storr, 1998).

The Eastern Osprey is known to use inland riverways for hunting and foraging, therefore it is possible that the taxon may occur along the Drainage Line/River/Creek (major) habitat within the Survey Area. It may also use the Marsh/Lake (low halophytic shrubland) habitat. The regional

population is unlikely to be dependent on habitats within the Survey Area as these habitats occur more widely in the region outside the Survey Area. The Eastern Osprey was not recorded during the current survey, however the species was recorded within the Survey Area near Weeli Wolli Creek in 2011 and in the northern portion of the Survey Area in 2012 (Department of Biodiversity Conservation and Attractions, 2021c).

5.3.1.5 Night Parrot (*Pezoporus occidentalis*)

The Night Parrot is a highly elusive nocturnal ground dwelling parrot that is endemic to Australia (Department of Parks and Wildlife, 2017). Although the exact distribution of the night parrot is not well described, the broad habitat requirements include areas of old-growth spinifex (*Triodia* grasslands) and/or chenopod shrublands (Garnett, Szabo and Dutson, 2011; Department of Parks and Wildlife, 2017).

The Hummock Grasslands habitat fringing the Marsh/Lake (low halophytic shrubland) constitutes the preferred nesting habitat of the species, and the species may also use the Marsh/Lake (low halophytic shrubland) habitat itself. The species has been confirmed to occur in similar habitats nearby, having been recorded 6 km from the northern portion of the Survey Area in 2005 (Department of Biodiversity Conservation and Attractions, 2021c). Furthermore, one definitive and several possible Night Parrot calls were recently recorded near the Cloudbreak iron ore mine (Fortescue Metals Group Limited, 2021).

5.3.1.6 Princess Parrot (*Polytelis alexandrae*)

The Princess Parrot is a slim to medium-sized parrot that inhabits sand dunes and sand flats in the arid zone of western and central Australia (Higgins, 1999). It occurs in open savanna woodlands and shrublands that usually consist of scattered stands of *Eucalyptus* and *Casuarina* with mixed shrubs and *Triodia* hummock grasslands, often near salt lakes (Morcombe, 2003; Garnett, Szabo and Dutson, 2011; Pizzey and Knight, 2013).

The Princess Parrot was recorded less than 20 km south of the Survey Area in 2012 (Department of Biodiversity Conservation and Attractions, 2021b) and is most likely to use the Hummock Grasslands and Dunal (primary/secondary) habitats within the Survey Area.

5.3.1.7 Waterbirds and Shorebirds

No conservation significant waterbirds or shorebirds were recorded during the current surveys, however the Australian Painted Snipe (*Rostratula australis*) was recorded at Coondiner Pool (Figure 3) in 2012 (Department of Biodiversity Conservation and Attractions, 2021b). Eight additional species were identified during the desktop assessment as having a medium to high likelihood of occurring in the Survey Area: The Oriental Plover (*Charadrius veredus*), Gull-billed Tern (*Gelochelidon nilotica*), Common Sandpiper (*Actitis hypoleucos*), Sharp-tailed Sandpiper (*Calidris acuminata*), Long-toed Stint (*Calidris subminuta*), Wood Sandpiper (*Tringa glareola*), Common Greenshank (*Tringa nebularia*), and Glossy Ibis (*Plegadis falcinellus*).

Coondiner Pool is likely to be a hotspot for conservation significant waterbirds and shorebirds within the Survey Area. The other habitats within the Survey Area that are likely to be used by conservation significant waterbirds and shorebirds include the Marsh/Lake (low halophytic shrubland), Drainage Line/River/Creek (major) and Drainage Line/River/Creek (minor) habitats, which occur more widely outside the Survey Area. Conservation significant waterbird and shorebird populations that use these habitat types are unlikely to depend solely on the habitats within the Survey Area.

The Marsh/Lake (low halophytic shrubland) habitat comprises a portion of the Fortescue Marsh, which is an Important Bird Area (Trainor, Knuckey and Firth, 2016). However, it occurs on the southern margin of the marsh and is likely to be drier and less valuable to waterbirds and shorebirds than central areas of the marsh. It was also observed to be extensively degraded by cattle.

5.3.2 Mammals

5.3.2.1 Brush-tailed Mulgara (*Dasyercus blythi*)

The overall population of the Brush-tailed Mulgara fluctuates in response to seasonal conditions (Woinarski, Burbidge and Harrison, 2014). Its distribution is bound broadly by the Tanami Desert in the north, the Simpson Desert in the east, the Great Victoria Desert in the south and the Carnarvon, Murchison and Pilbara regions in the west (Woinarski, Burbidge and Harrison, 2014). It is associated with hummock spinifex grasslands, but also uses other vegetation types (often sandplains, grasslands, and woodlands) when mixed with or adjacent to hummock grasslands. It is mainly nocturnal and shelters during the day in burrow systems. The diet of the Brush-tailed Mulgara comprises a broad range of invertebrates and small vertebrates (Woinarski, Burbidge and Harrison, 2014).

Three records of the species occur approximately four km south of the Survey Area, near Weeli Wolli Creek, in 2014 (Department of Biodiversity Conservation and Attractions, 2021c). The species is most likely to use Hummock Grasslands and Dunal (primary/secondary) habitats within the Survey Area.

5.3.2.2 Northern Quoll (*Dasyurus hallucatus*)

The Northern Quoll is a medium-sized carnivorous, nocturnal marsupial that favours rocky areas, taking refuge in rock crevices and using gullies and drainage lines. They have a relatively large home-range size of up to 150 ha for males and 35 ha for females, and males can move up to 1.85 km between den sites in one night (Oakwood, 2000; Department of the Environment, 2016). Northern Quolls reproduce once a year, averaging seven young per litter (Department of the Environment, 2016). They have a short life span, with the females typically only surviving one or two years while the males die off annually following intense physical exertion during the breeding season (Department of the Environment, 2016). The species can be locally common, but its former range has retracted considerably (Van Dyck and Strahan, 2008).

The species is known to occur within the region; a total of 230 records have occurred within 20 km of the Survey Area, the majority of which were recorded in rocky habitats of the Hamersley Range, near Koodaideri, however no records occur within the Survey Area itself (Department of Biodiversity Conservation and Attractions, 2021c). Despite substantial survey effort targeting the species in preferred habitat during the current survey, the species was not recorded. It is therefore likely that, if the species does occur within the Survey Area, it only occurs as transient individuals or a low-density population. The Rocky Escarpments/Ridges/Mesa constitute potential breeding habitat, and Hills/Ranges/Plateaux and Drainage Line/River/Creek habitats constitute potential dispersal and foraging habitat.

5.3.2.3 Ghost Bat (*Macroderma gigas*)

The Ghost Bat is patchily distributed in small colonies in three areas of northern Australia, including the Pilbara and Kimberley in Western Australia, the Top End in the Northern Territory and the northeast of Queensland. The species requires undisturbed roost caves or mineshafts, usually complex systems with several openings (Van Dyck and Strahan, 2008). The species eats large insects, geckoes, frogs, small birds, and mammals including other bats. The kills are made on the ground or in the air and then taken to a feeding perch, which is usually a rocky overhang or small cave (Van Dyck and Strahan, 2008).

The Ghost Bat was recorded by ARU within Escarpments/Ridges/Mesa habitat in the northern portion of the Survey Area. The Rocky Escarpments/Ridges/Mesa habitat constitutes critical habitat for the species, as it provides caves and overhangs suitable for roosting. All other habitats within the Survey Area may be used for foraging and dispersal.

5.3.2.4 Short-tailed Mouse (*Leggadina lakedownensis*)

The Short-tailed Mouse has a broad distribution across much of northern Australia and occurs in a range of habitat types. This includes spinifex and *Acacia* on seasonally inundated sandy-clay soils as well as sandy soils and cracking clays to build burrows which they shelter in during the day (Van Dyck and Strahan, 2008). Pilbara populations can also occur in stony hummock grassland (Van Dyck and Strahan, 2008). It is generally rare with scattered populations, and very little is known of its biology and, according to (Van Dyck and Strahan, 2008).

The taxon was not detected during the field surveys, and the nearest records of the species occurred approximately 20 km northeast of the Survey Area in 2004 (Department of Biodiversity Conservation and Attractions, 2021c), however, given that it occurs in small, scattered populations, lack of detection does not rule out its presence. The Plain (stony/gibber), Plain (cracking clays), and Hummock Grassland habitats constitute suitable habitat for the species.

5.3.2.5 Western Pebble-mound Mouse (*Pseudomys chapmani*)

The Western Pebble-mound Mouse is endemic to the Pilbara, where it builds pebble mounds from small stones. Pebble mounds are restricted to suitable-class stones and are usually found on gentle slopes and spurs that are often vegetated by hard spinifex (Ford and Johnson, 2007; Van Dyck and Strahan, 2008). Active mounds are characterized by the conical shape of the mound with clear, distinct entrance holes (Anstee, 1996). Pebble mounds constructed by the Western Pebble-mound Mouse are found throughout the Pilbara, however studies have shown that not all mounds in an area are occupied by a Pebble-mound Mouse at any one time (Anstee, 1996).

Four individuals were captured at site Trap09 during Trip 2 (September 2021) of the current survey in Hills/Ranges/Plateaux habitat. An active or recently active pebble mound was found in Plain (stony/gibber) habitat adjacent Hills/Ranges/Plateaux habitat near site Trap10 during the same trip. The taxon is most likely to use Hills/Ranges/Plateaux and adjacent Plain (stony/gibber) habitats within the Survey Area. These habitats occur more widely in the region outside the Survey Area.

5.3.2.6 Pilbara Leaf-nosed Bat (*Rhinionictoris aurantia* Pilbara form)

The Pilbara Leaf-nosed Bat was originally considered to be the same species as the Orange Leaf-nosed Bat, which occurs in the Kimberley, Northern Territory, and northwest Queensland. It is now considered to be a separate form based on morphology and genetic data, however formal reclassification has not yet been undertaken (Cramer *et al.*, 2016). The taxon is restricted to areas with suitable day roosts, which are typically deep caves that retain humidity or disused underground mines (Cramer *et al.*, 2016).

Two Pilbara Leaf-nosed Bat calls were recorded on a single night at site Bat07, which was located at Coondiner Pool. Coondiner Pool is more than 20 km from the nearest Rocky Escarpments/Ridges/Mesa habitat (which is used as roosting habitat by the species), and approximately 53 km from the nearest known Pilbara Leaf-nosed Bat roost (R Bullen 2021, pers. comm., 24 September). This highlights the importance of Coondiner Pool as a resource for fauna within the region.

Despite substantial survey effort targeting the species in Rocky Escarpments/Ridges/Mesa, Hills/Ranges/Plateaux and Drainage Line/River/Creek habitats during the current survey, the species was not recorded near these habitats. It is therefore likely that the species does not roost within the Survey Area and the calls recorded at Coondiner were from an individual that had flown in from outside the Survey Area.

5.3.2.7 Bilby, Dalgte (*Macrotis lagotis*)

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

While the taxon was not detected during the field surveys, 28 records of the species have occurred within or near the northern portion of the Survey Area (Department of Biodiversity Conservation and Attractions, 2021c). No records of the species occur near the southern portion of the Survey Area. A variety of habitats within the Survey Area are suitable for the species, primarily Hummock Grassland and Dunal (primary/secondary) habitats due to the predominantly sandy substrates which are suitable for burrowing and may also occur in the Woodland (open/closed) and Marsh/Lake (low halophytic shrubland) habitats.

5.3.3 Reptiles

5.3.3.1 Pilbara Barking Gecko

The Pilbara Barking Gecko is purplish-black to reddish-brown in colour with many small, scattered, white or yellow tubercles and a black or brown carrot-shaped tail. It is known to shelter under rocks and other cover on arid rocky slopes and in gorges with sparse tree cover and spinifex (*Triodia* spp.) the dominant ground cover (Cogger, 2014). It is known from the Hammersley Range in the Pilbara region, from north of Tom Price to southeast of Newman (Wilson and Swan, 2013).

Although the species was not recorded during the current survey, the species was recorded approximately 40 km southwest of Survey Area in 2011 (Biologic Environmental Survey, 2011). This species may use the Rocky Escarpments/Ridges/Mesa and Hills/Ranges/Plateaux habitats within the Survey Area.

5.3.3.2 Pilbara Olive Python (*Liasis olivaceus barroni*)

The Pilbara Olive Python is a large python that occurs in the ranges of the Pilbara, typically in escarpments and gorges where water is present. It generally shelters under rock piles, or under spinifex and often basks on top of rocks (Pearson, 1993; 2003). It is threatened due to its relatively small distribution, low population densities and may be affected by habitat disturbances such as grazing and fire. This species is known to frequent water bodies where it ambushes prey (Pearson, 1993) and is extremely difficult to detect. During a systematic survey of a large series of quadrats in the Pilbara, the species was only recorded in one quadrat (Doughty *et al.*, 2011). The species is known to have large home ranges, particularly for an ambush predator where Pearson *et al.* (2003) recorded an individual with a home range of roughly 450 ha.

While the Pilbara Olive Python was not recorded during the current survey, it has been anecdotally reported to occur within the Survey Area by Marillana Station personnel (Bamford Consulting Ecologists, 2012a) and has been recorded multiple times within 10 km of the Survey Area since 2010 (Department of Biodiversity Conservation and Attractions, 2021c). The species is likely to occur as a low-density population within Drainage Line/River/Creek (major) habitat and adjacent Rocky Escarpments/Ridges/Mesa and Hills/Ranges/Plateaux habitats within the Survey Area.

5.3.3.3 Gane's Blind Snake (*Anilius ganei*)

Gane's Blind Snake, like other blind snakes, is a burrowing, worm-like snake that feeds mostly on the larvae and pupae of ants and termites (Cogger, 2014). It is known to occur in areas between Newman and Pannawonica, and is possibly associated with moist gorges and gullies (Wilson and Swan, 2013).

An individual was captured in a pitfall trap at site Trap01 during Trip 1 (May 2021). The record occurred within Hummock Grassland habitat in a valley between Hills/Ranges/Plateaux habitat. This is consistent with the possible habitat association described by Wilson and Swan (2013). The taxon is most likely to use Hummock Grassland and Drainage Line/River/Creek habitats adjacent or intersecting Hills/Ranges/Plateaux, as these habitats are sheltered and likely to retain some soil moisture.

6 Conclusion

The key findings of the detailed terrestrial vertebrate fauna assessment were:

- Nine fauna habitats were mapped within the Survey Area, of which the Rocky Escarpments/Ridges/Mesa (0.36% of the Survey Area) habitat represents the most value to conservation significant fauna, including potential denning habitat for the Northern Quoll (*Dasyurus hallucatus*), roosting habitat for the Ghost Bat (*Macroderma gigas*) and Pilbara Leaf-nosed Bat (*Rhinonictis aurantia* Pilbara form), critical habitat for the Pilbara Olive Python (*Liasis olivaceus barroni*), and nesting habitat for the Peregrine Falcon (*Falco peregrinus*).
- The Hills/Ranges/Plateaux (8.04% of the Survey Area) provide foraging and dispersal habitat for Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat, and Pilbara Olive Python, as do the Drainage Line/River/Creek (major) (1.15% of the Survey Area) and Drainage Line/River/Creek (minor) (7.40% of the Survey Area) habitats, which also provide potential nesting habitat for the Peregrine Falcon and Grey Falcon (*Falco hypoleucos*), and waterbird and shorebird habitat. Marsh/Lake (low halophytic shrubland) habitat may also be used by waterbirds and shorebirds, as well as the Night Parrot.
- Dunal (primary/secondary) (0.12% of the Survey Area) and Hummock Grassland (19.81% of the Survey Area) habitats constitute the preferred habitats of the Bilby (*Macrotis lagotis*) and Brush-tailed Mulgara (*Dasyercus blythi*), and Hummock Grassland adjacent the Marsh/Lake (low halophytic shrubland) habitat represents potential nesting habitat for the Night Parrot.
- The Woodland (open/closed) (59.47% of the Survey Area) and Plain (stony/gibber) (2.03% of the Survey Area) were found to provide the lowest habitat value for conservation significant fauna and the overall fauna assemblage due to European Cattle degradation and comparatively fewer microhabitats.
- Coondiner Pool, a semi-permanent water source, is an important habitat feature for both birds and the broader fauna assemblage in the context of the Survey Area.
- The highest overall species diversity was recorded in the Hummock Grassland habitat, which was found to contain a highly diverse reptile assemblage and high number of unique reptile taxa, and the Drainage Line/River/Creek habitats (both major and minor), which were found to contain a highly diverse bird assemblage and high number of unique bird taxa. Given its small extent within the Survey Area, the Dunal (primary/secondary) habitat was found to contain a comparatively high species diversity, particularly within its reptile assemblage.
- Two aquatic fauna species were observed in pools within the Weeli Wolli Creek system, an introduced crustacean, the Redclaw (*Cherax quadricarinatus*), and a native fish species, the Spangled Perch (*Leiopotherapon unicolor*).

- Four conservation significant fauna taxa were recorded within the Survey Area during the field survey:
 - Ghost Bat, Vulnerable
 - Western Pebble-mound Mouse (*Pseudomys chapmani*), Priority 4
 - Pilbara Leaf-nosed Bat, Vulnerable
 - Gane's Blind Snake (*Anilius ganei*), Priority 1.
- Seven additional conservation significant taxa have been recorded within the Survey Area prior to the current survey:
 - Pacific Swift (Fork-tailed Swift) (*Apus pacificus*), Migratory and Marine
 - Grey Falcon, Vulnerable
 - Peregrine Falcon, Other specially protected fauna
 - Eastern Osprey (*Pandion haliaetus cristatus*), Migratory and Marine
 - Australian Painted Snipe (*Rostratula australis*), Endangered and Marine
 - Bilby, Vulnerable
 - Pilbara Olive Python, Vulnerable.
- The post survey results identified eight conservation significant taxa as having a high likelihood of occurrence within the Survey Area:
 - Night Parrot (*Pezoporus occidentalis*), Critically Endangered/Endangered
 - Princess Parrot (*Polytelis alexandrae*), Priority 4/Vulnerable
 - Brush-tailed Mulgara (*Dasyercus blythi*), Priority 4
 - Northern Quoll (*Dasyurus hallucatus*), Vulnerable
 - Pilbara Barking Gecko (*Underwoodisaurus seorsus*), Priority 2
 - Three waterbirds and shorebirds listed as Migratory and Marine.
- Six conservation significant taxa conservation significant taxa were assessed as having a medium likelihood of occurrence within the Survey Area, and 14 conservation significant taxa were assessed as having a low likelihood of occurrence within the Survey Area.

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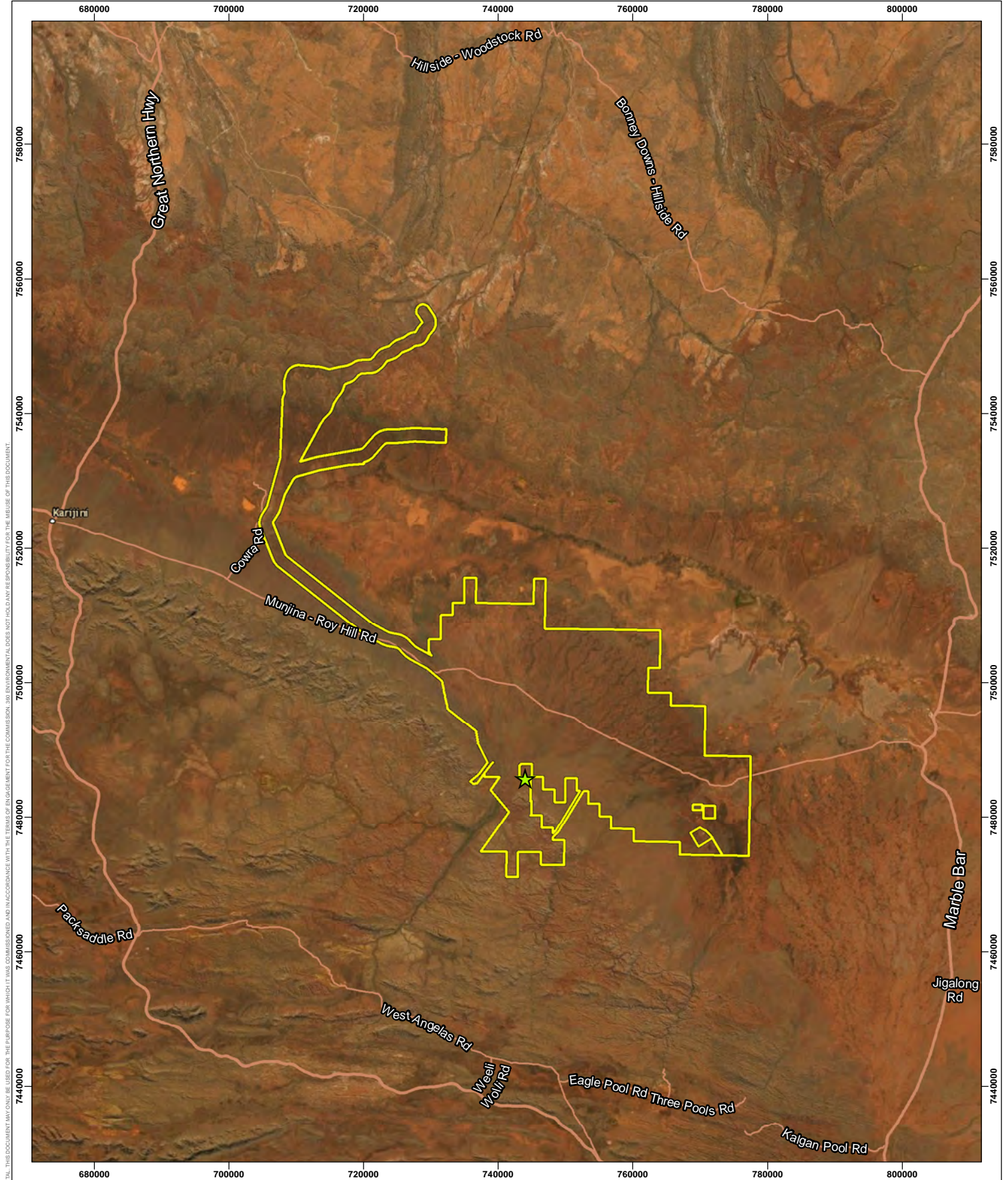
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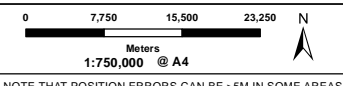
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- State Road
- Local Roads
- Nyidinghu Exploration Camp

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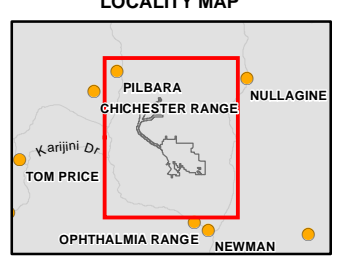
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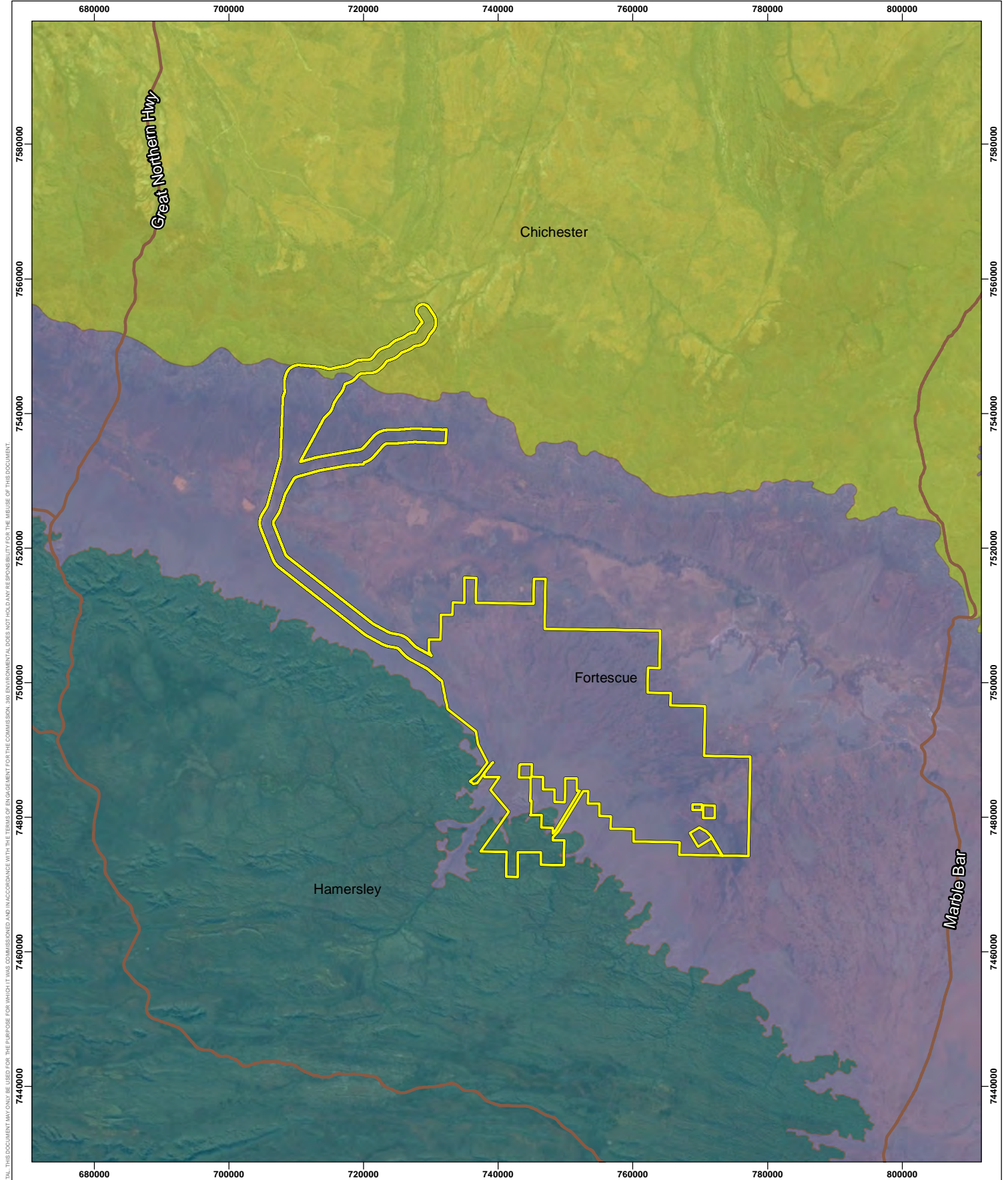
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Nyidinghu Iron Ore Project

Detailed Terrestrial Fauna Survey

Figure 1
Survey Area



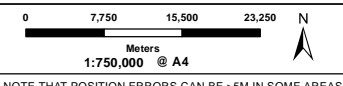
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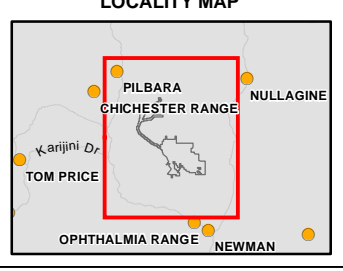
- Survey Area
- State Road
- IBRA Subregions**
- Chichester
- Fortescue
- Hamersley

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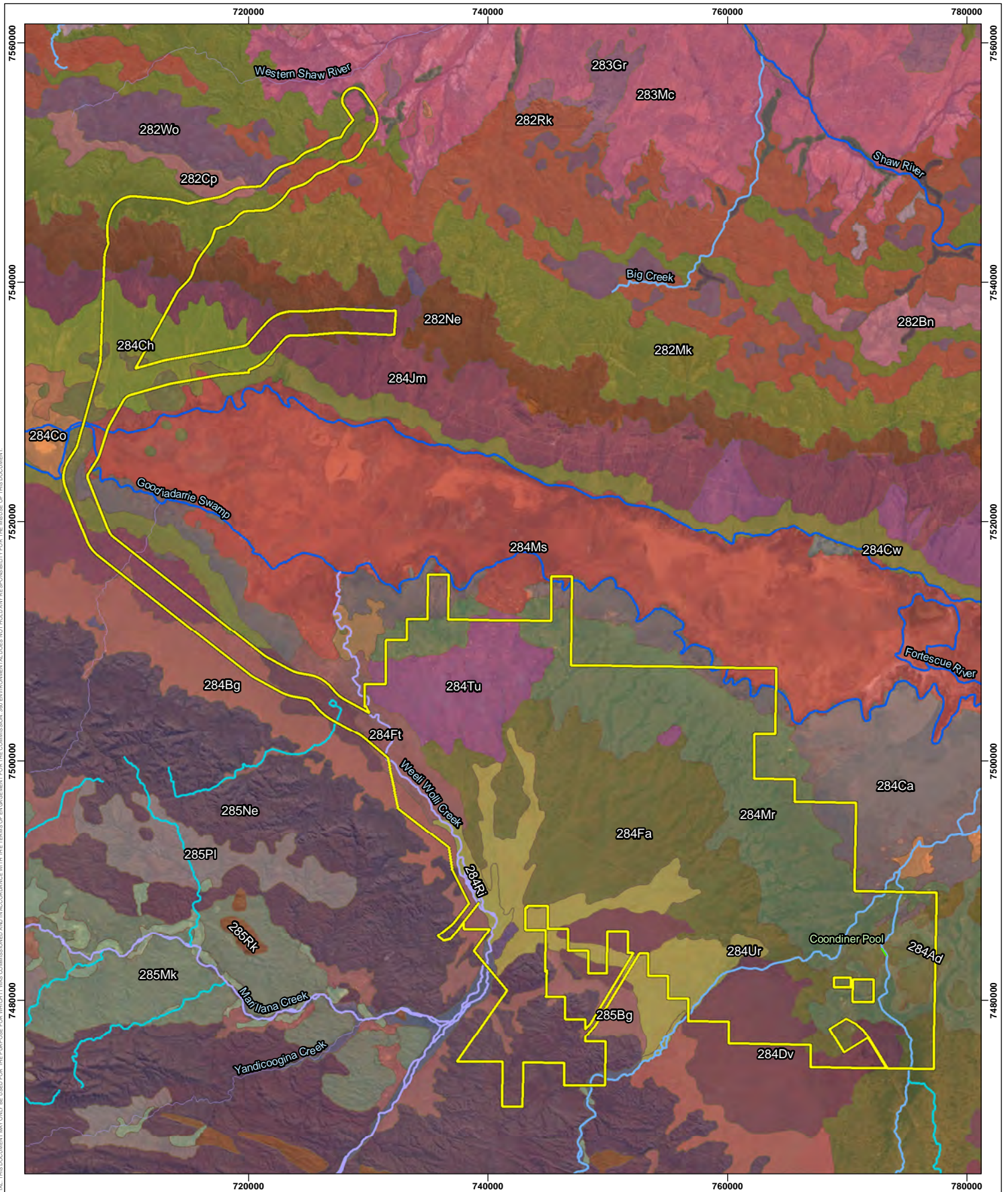
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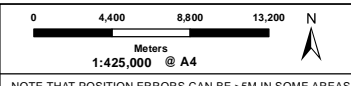
Detailed Terrestrial Fauna Survey

Figure 2
IBRA Subregions

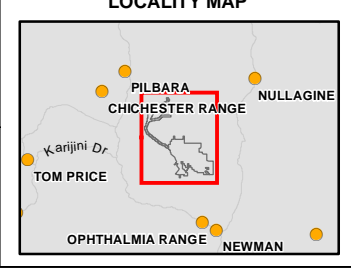


- Legend**
- Survey Area
 - State Road
- Hydrography**
- Mainstream
 - Major River
 - Minor River
 - Significant Stream
 - Major Tributary
 - Permanent Spring

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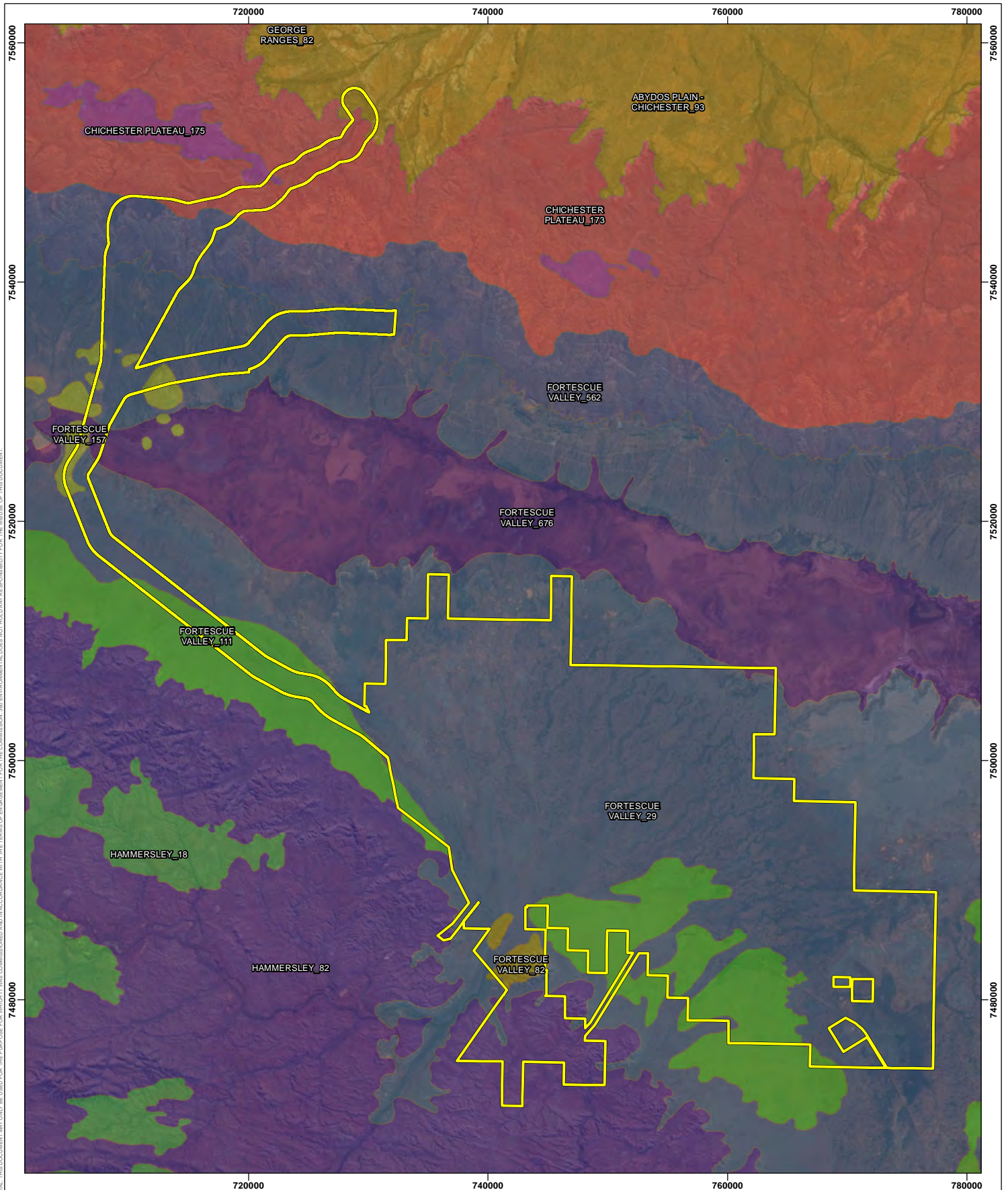
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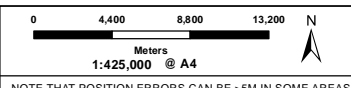
Figure 3
Soil Land Systems and Hydrography

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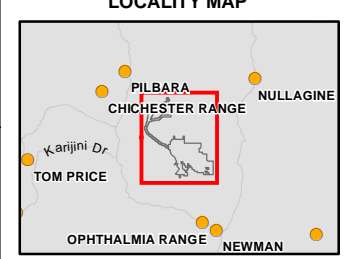


Legend

- Survey Area
- Broad Vegetation Types**
- ABYDOS PLAIN - CHICHESTER_93: Shrub-steppe
- CHICHESTER PLATEAU_173: Shrub-steppe
- CHICHESTER PLATEAU_175: Grasslands, short bunch-grass savanna
- FORTESCUE VALLEY_111: Shrub-steppe
- FORTESCUE VALLEY_157: Grass-steppe
- FORTESCUE VALLEY_29: Low woodland, open low woodland or sparse woodland
- FORTESCUE VALLEY_562: Low tree-steppe
- FORTESCUE VALLEY_676: Samphire
- FORTESCUE VALLEY_82: Low tree-steppe
- GEORGE RANGES_82: Low tree-steppe
- HAMMERSLEY_18: Low woodland, open low woodland or sparse woodland
- HAMMERSLEY_82: Low tree-steppe



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Figure 4
Broad Vegetation Types

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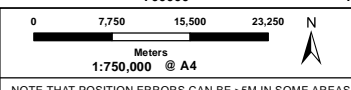


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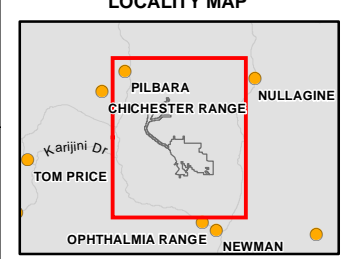
- Legend**
- Survey Area
 - State Road
 - Environmentally Sensitive Areas
- DBCA Managed Lands and Waters**
- DBCA Managed Land
 - Unallocated Crown Land

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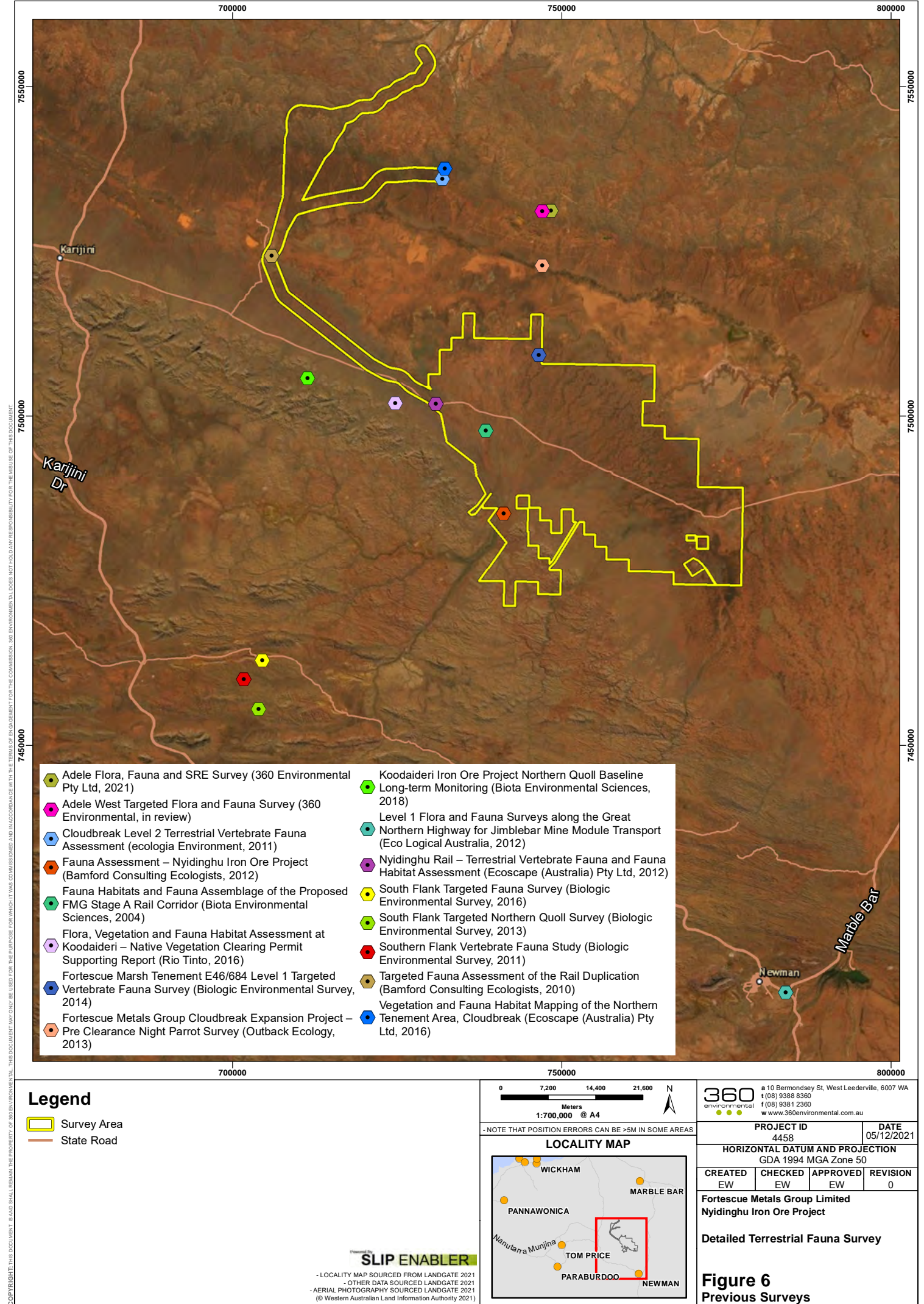
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Figure 5
Conservation and Environmentally Sensitive Areas

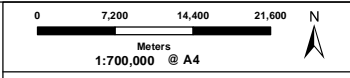


- Adele Flora, Fauna and SRE Survey (360 Environmental Pty Ltd, 2021)
- Adele West Targeted Flora and Fauna Survey (360 Environmental, in review)
- Cloudbreak Level 2 Terrestrial Vertebrate Fauna Assessment (ecologia Environment, 2011)
- Fauna Assessment – Nyidinghu Iron Ore Project (Bamford Consulting Ecologists, 2012)
- Fauna Habitats and Fauna Assemblage of the Proposed FMG Stage A Rail Corridor (Biota Environmental Sciences, 2004)
- Flora, Vegetation and Fauna Habitat Assessment at Koodaideri – Native Vegetation Clearing Permit Supporting Report (Rio Tinto, 2016)
- Fortescue Marsh Tenement E46/684 Level 1 Targeted Vertebrate Fauna Survey (Biologic Environmental Survey, 2014)
- Fortescue Metals Group Cloudbreak Expansion Project – Pre Clearance Night Parrot Survey (Outback Ecology, 2013)
- Koodaideri Iron Ore Project Northern Quoll Baseline Long-term Monitoring (Biota Environmental Sciences, 2018)
- Level 1 Flora and Fauna Surveys along the Great Northern Highway for Jimblebar Mine Module Transport (Eco Logical Australia, 2012)
- Nyidinghu Rail – Terrestrial Vertebrate Fauna and Fauna Habitat Assessment (Ecoscape (Australia) Pty Ltd, 2012)
- South Flank Targeted Fauna Survey (Biologic Environmental Survey, 2016)
- South Flank Targeted Northern Quoll Survey (Biologic Environmental Survey, 2013)
- Southern Flank Vertebrate Fauna Study (Biologic Environmental Survey, 2011)
- Targeted Fauna Assessment of the Rail Duplication (Bamford Consulting Ecologists, 2010)
- Vegetation and Fauna Habitat Mapping of the Northern Tenement Area, Cloudbreak (Ecoscape (Australia) Pty Ltd, 2016)

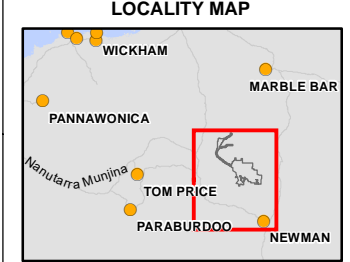
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Survey Area

State Road



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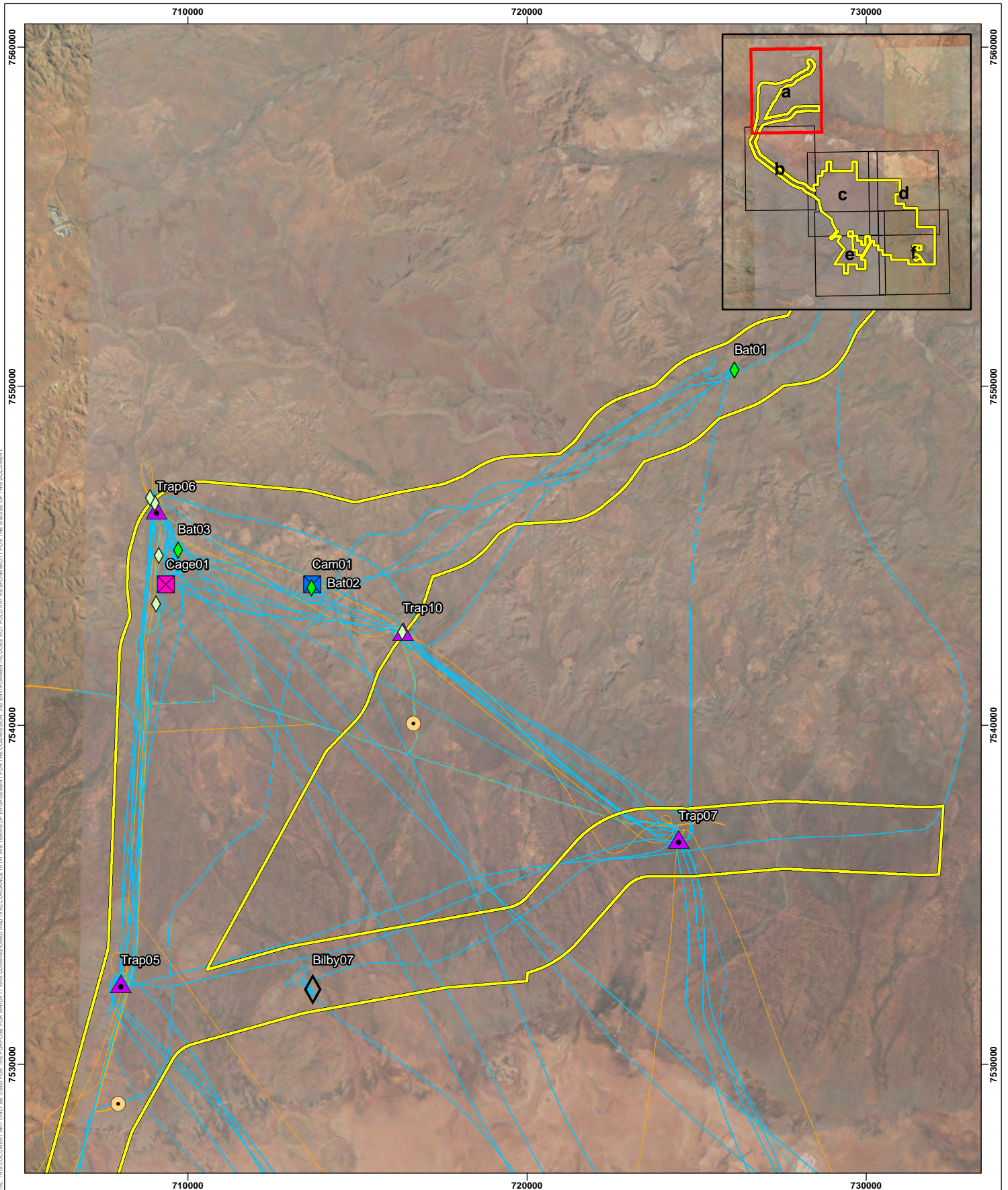
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Figure 6
Previous Surveys

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Legend

- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- ARU - audible calls (Trip 1)
- ◇ ARU - ultrasonic calls (Trip 1)
- ◇ ARU - ultrasonic calls (Trip 2)
- Bilby Search Plot
- ⊠ Cage Trap Line
- ⊠ Camera Trap Line
- ▲ Trap Site

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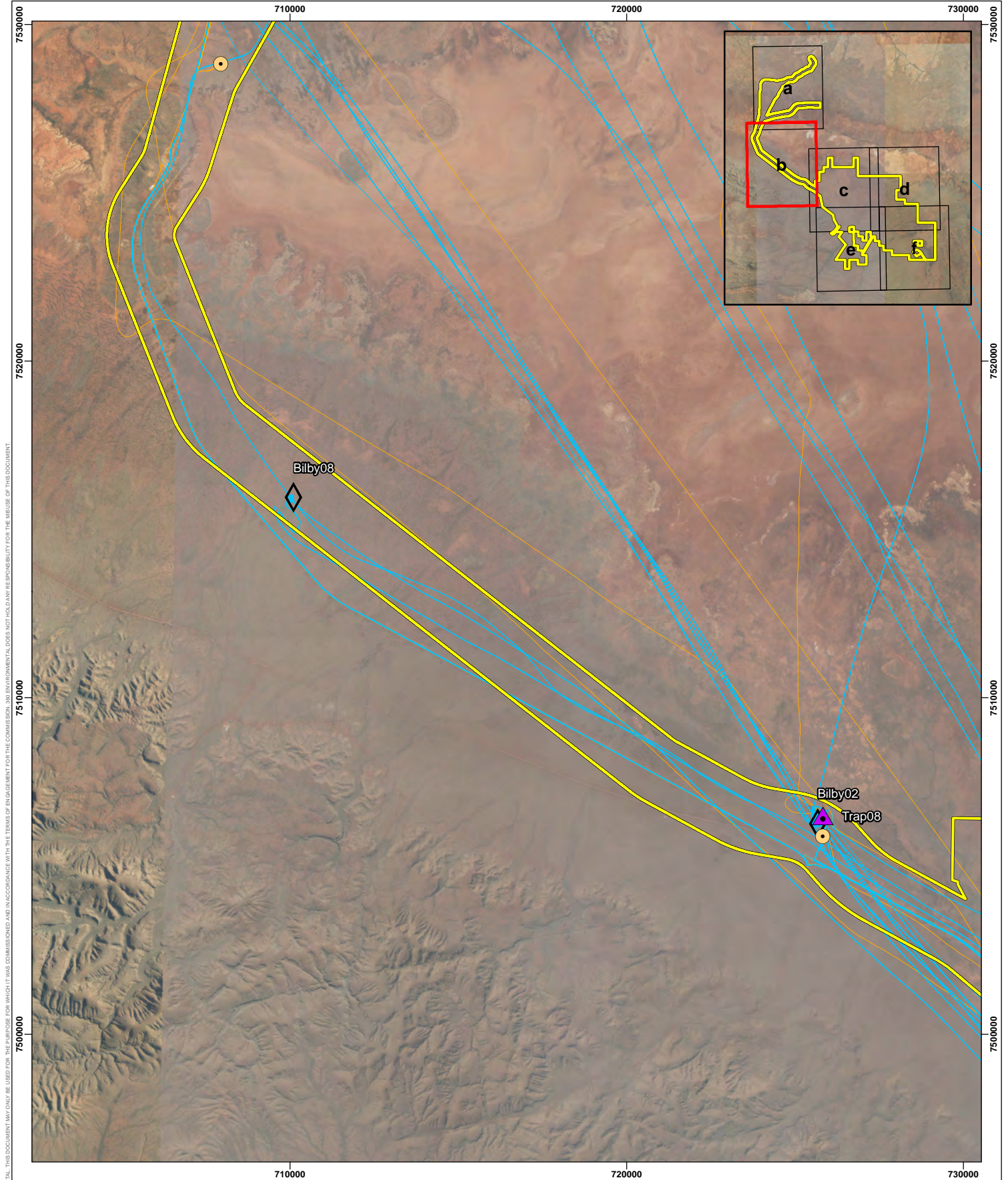
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Figure 7a Survey Effort			

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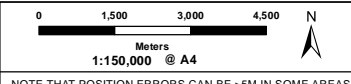
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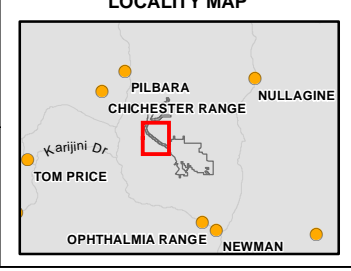
- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- ARU - audible calls (Trip 1)
- Bilby Search Plot
- ▲ Trap Site

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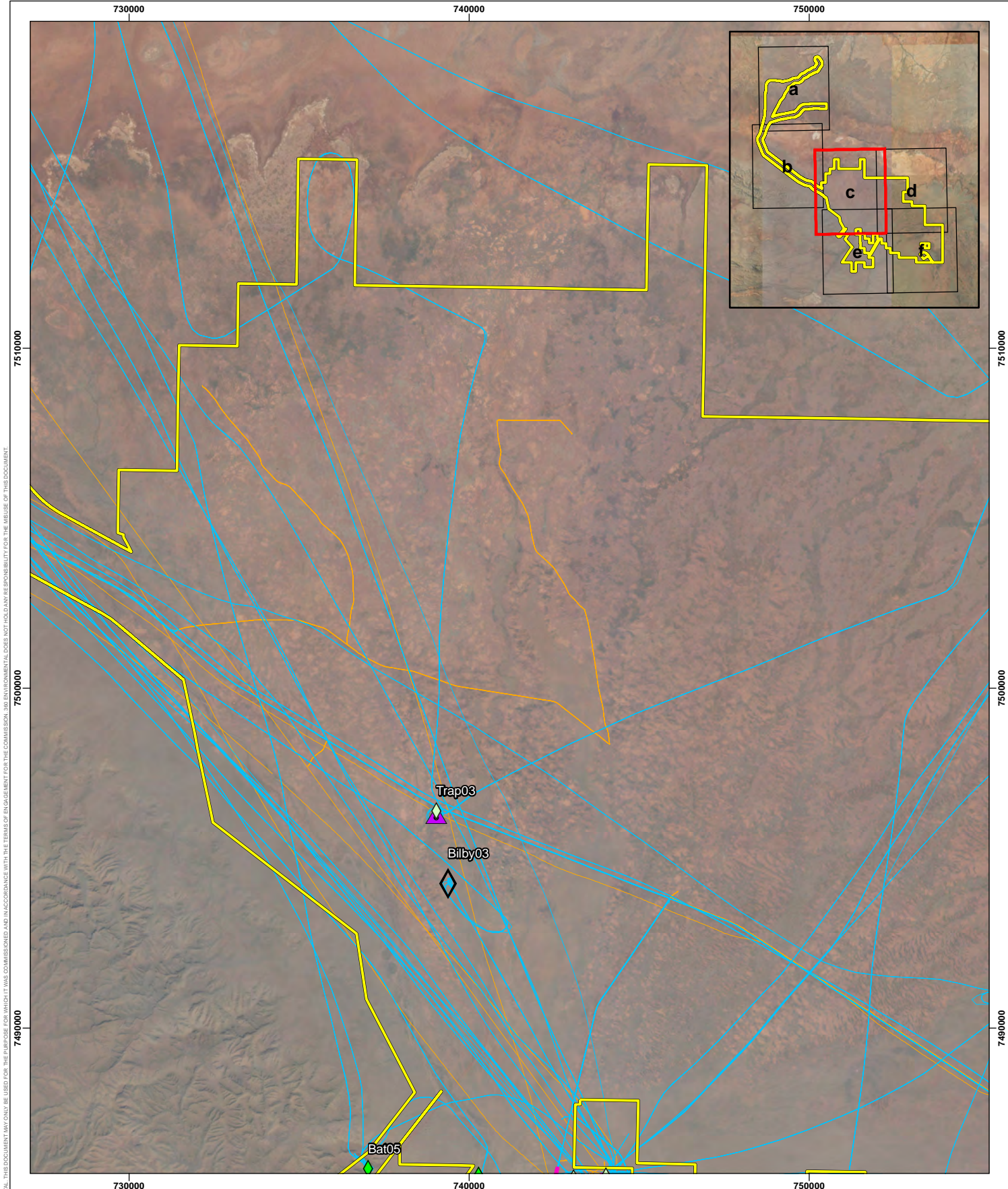
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Detailed Terrestrial Fauna Survey

**Figure 7b
 Survey Effort**



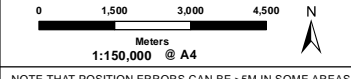
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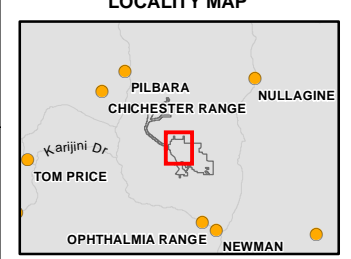
- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- GPS Tracks - spotlighting
- ◆ ARU - ultrasonic calls (Trip 1)
- ◆ ARU - ultrasonic calls (Trip 2)
- Bilby Search Plot
- ▲ Trap Site

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Detailed Terrestrial Fauna Survey

Figure 7c
Survey Effort

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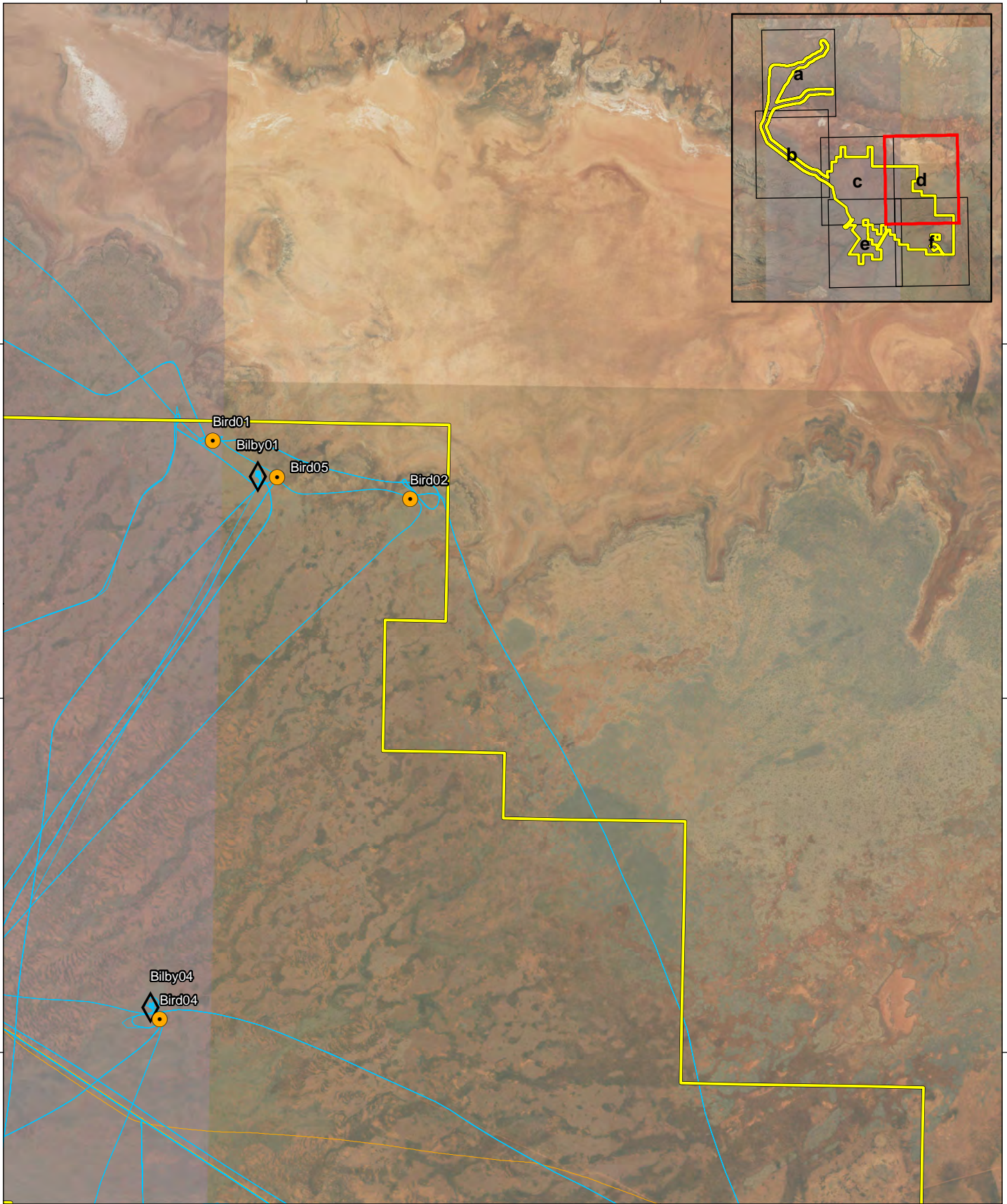
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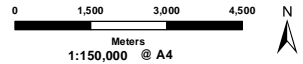
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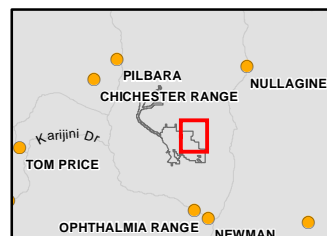
Legend

- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- ARU - audible calls (Trip 2)
- Bilby Search Plot



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Detailed Terrestrial Fauna Survey

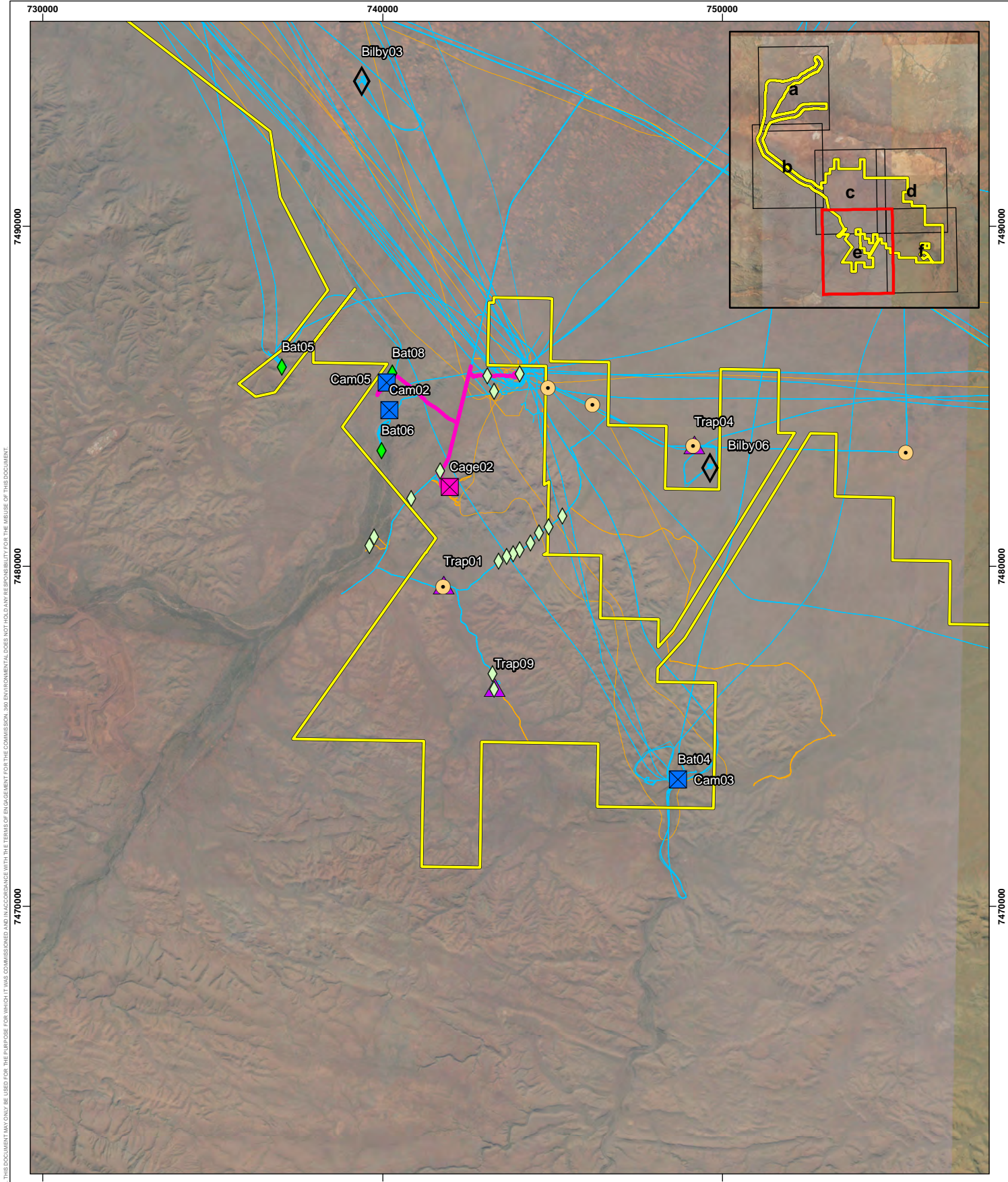
Figure 7d

Survey Effort

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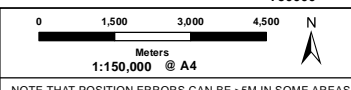


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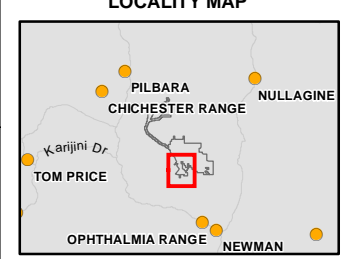
Legend

- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- GPS Tracks - spotlighting
- ARU - audible calls (Trip 1)
- ARU - audible calls (Trip 2)
- ◆ ARU - ultrasonic calls (Trip 1)
- ◆ ARU - ultrasonic calls (Trip 2)
- Bilby Search Plot
- Cage Trap Line
- Camera Trap Line
- ▲ Trap Site

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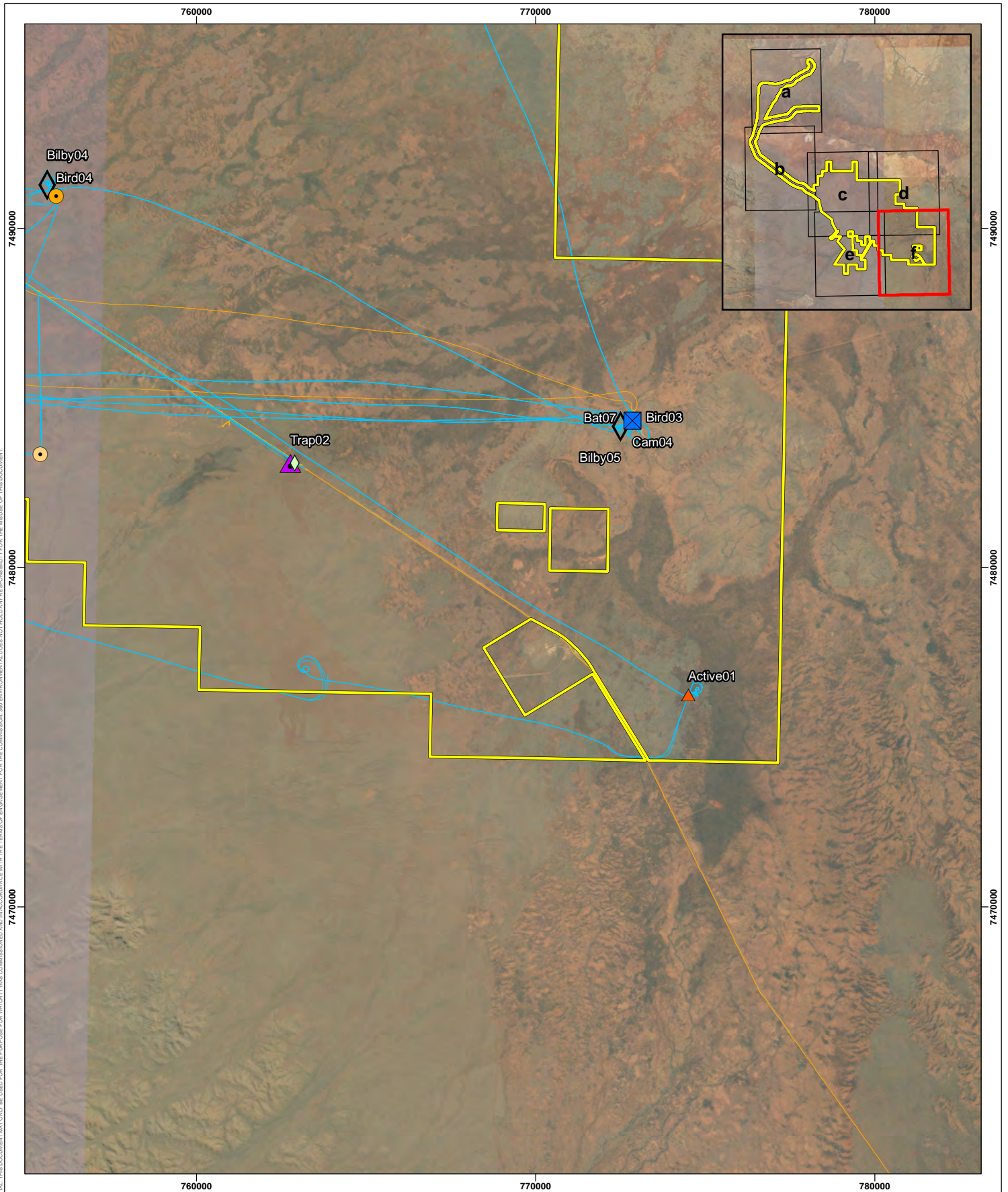
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Nyidinghu Iron Ore Project

Detailed Terrestrial Fauna Survey

Figure 7e
Survey Effort

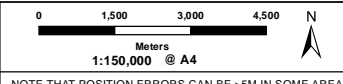


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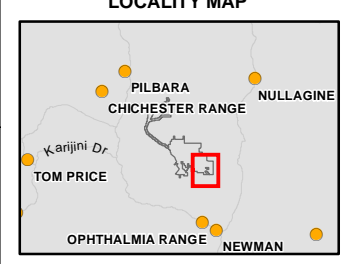
- Survey Area
- GPS Tracks - Trip 1
- GPS Tracks - Trip 2
- ARU - audible calls (Trip 1)
- ARU - audible calls (Trip 2)
- ARU - ultrasonic calls (Trip 1)
- ARU - ultrasonic calls (Trip 2)
- ▲ Active Search
- Bilby Search Plot
- Camera Trap Line
- ▲ Trap Site

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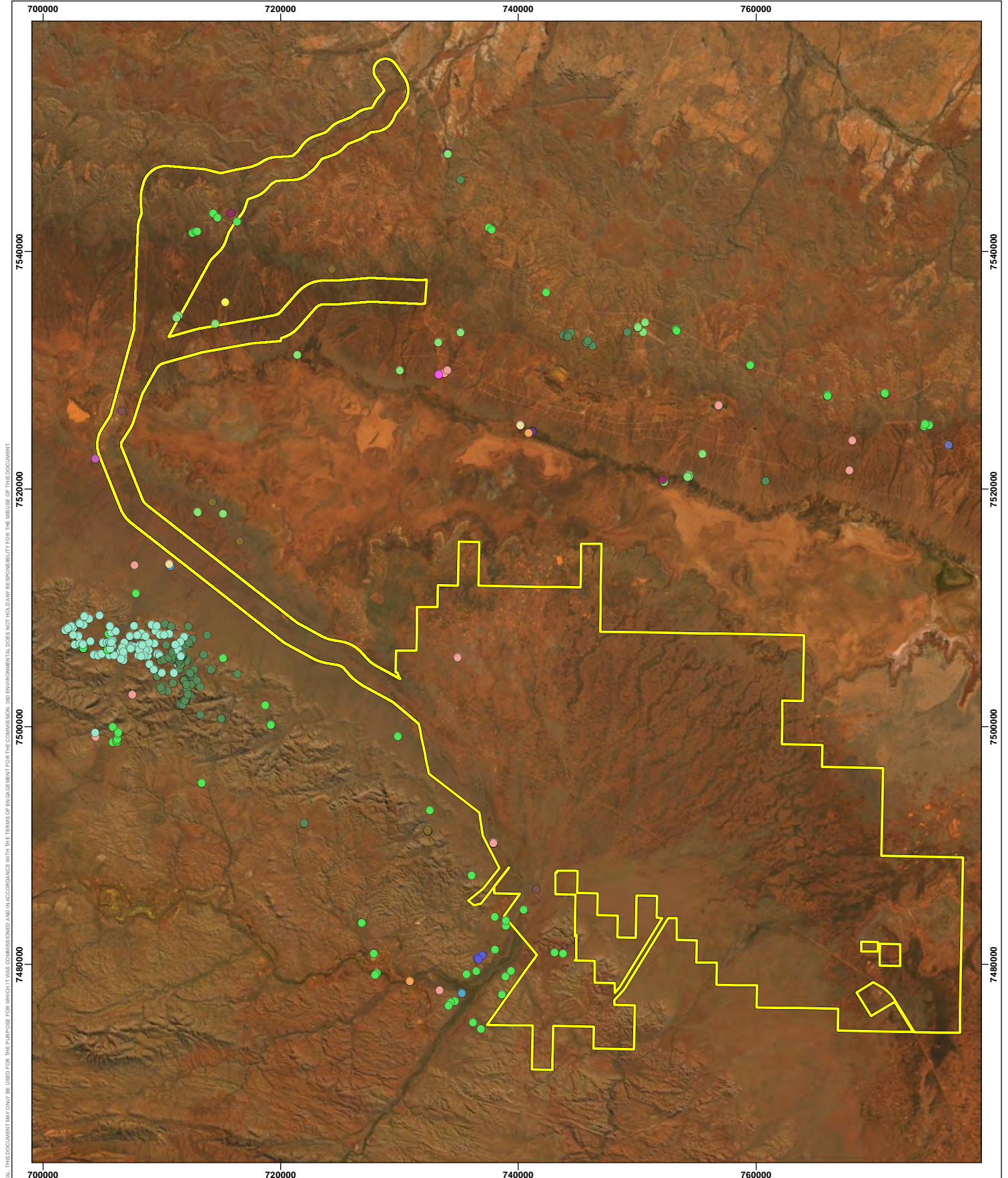
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Detailed Terrestrial Fauna Survey

Figure 7f
Survey Effort

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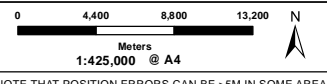
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Survey Area

DBCA Threatened and Priority Fauna Records

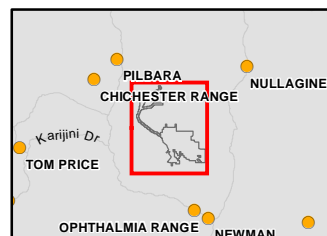
- | | |
|-------------------------------|---------------------------------------|
| Bilby, dalgte, ninu | Gull-billed tern |
| Brush-tailed mulgara | Night parrot |
| Common greenshank, greenshank | Northern quoll |
| Fork-tailed swift | Northern short-tailed mouse, Lakeland |
| Ghost bat | Downs mouse, kerakenga |
| Glossy ibis | Osprey, eastern osprey |
| Grey falcon | Peregrine falcon |
| Grey wagtail | Pilbara leaf-nosed bat |
| | Pilbara olive python |
| | Spotted ctenotus (northeast) |
| | Western pebble-mound mouse, ngadji |
| | Wood sandpiper |

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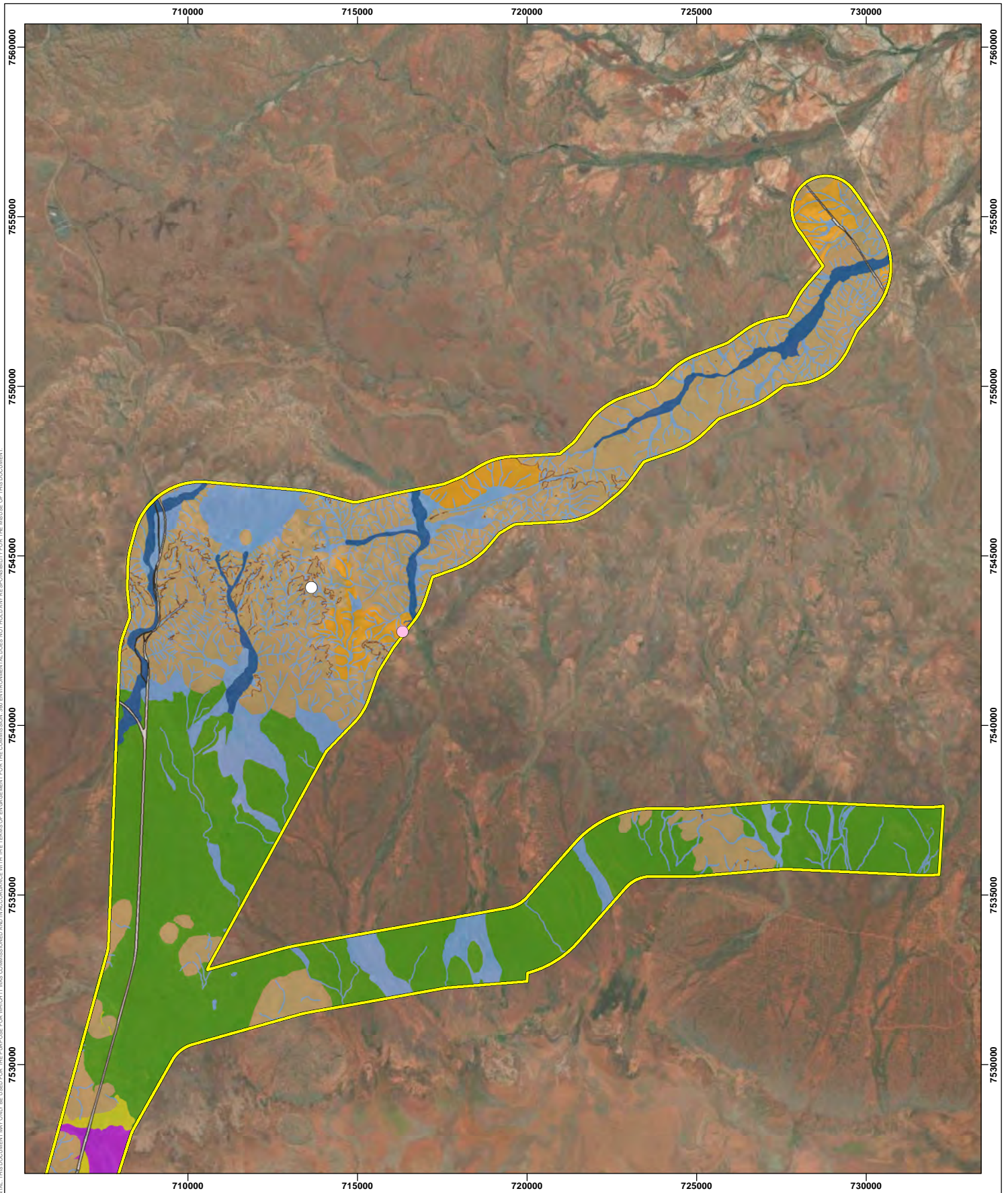
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Detailed Terrestrial Fauna Survey

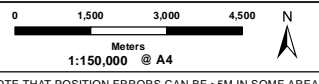
Figure 8
DBCA Threatened and Priority
Fauna Records



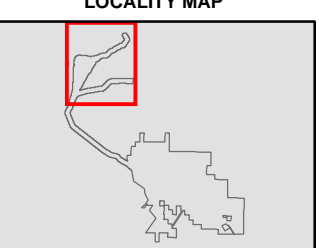
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Legend

- Survey Area
 - Fauna Habitat**
 - Cleared
 - Drainage Line/River/Creek (major)
 - Drainage Line/River/Creek (minor)
 - Dunal (primary/secondary)
 - Hills/Ranges/Plateaux
 - Hummock Grassland
 - Marsh/Lake (low halophytic shrubland)
 - Plain (stony/gibber)
 - Rocky Escarpments/Ridges/Mesa
 - Woodland (open/closed)
- Ghost Bat (VU)
 - Western Pebble-mound Mouse (P4)



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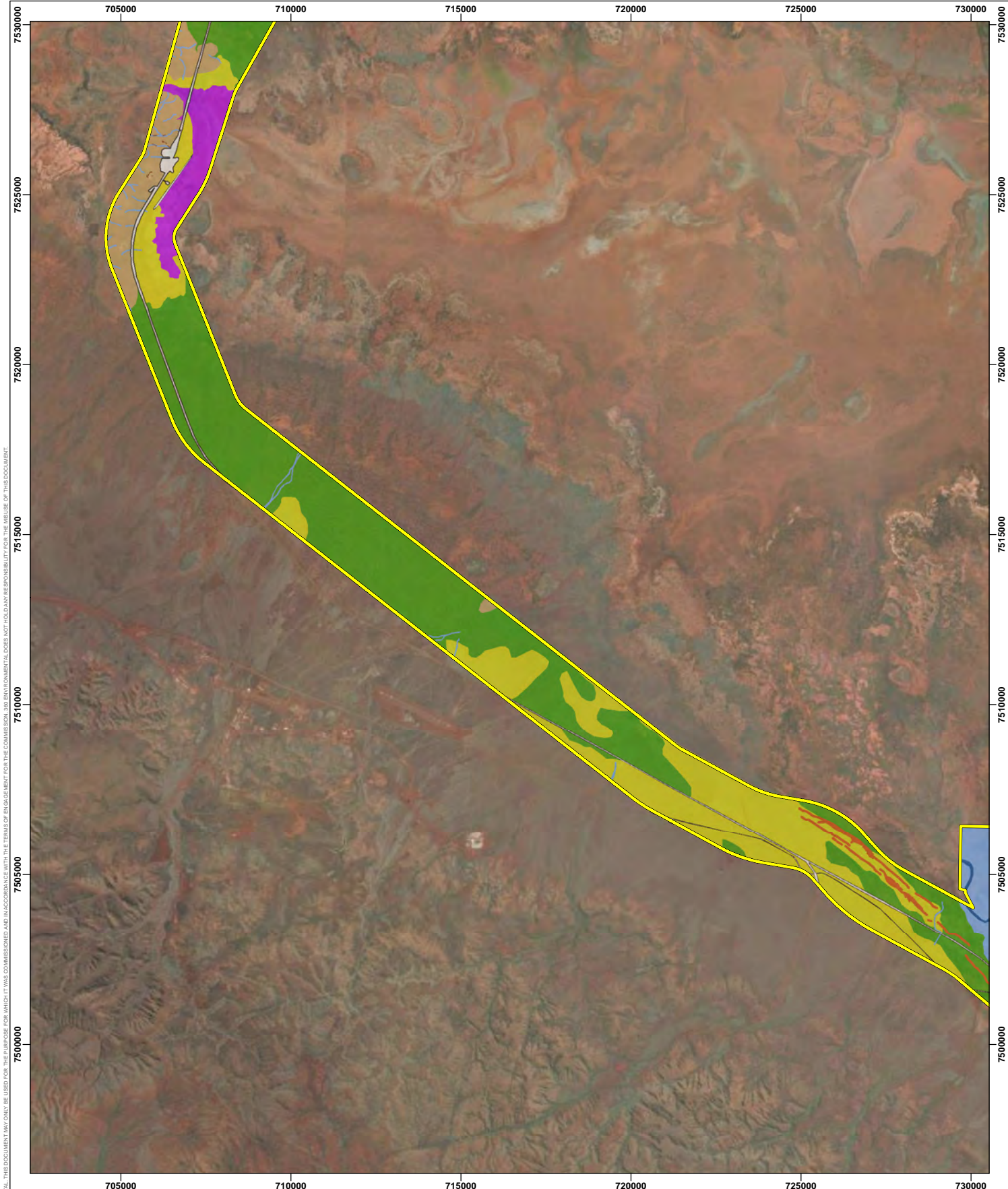
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Nyidinghu Iron Ore Project

Detailed Terrestrial Fauna Survey

Figure 9a
Fauna Habitat and Conservation
Significant Fauna Records

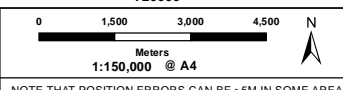
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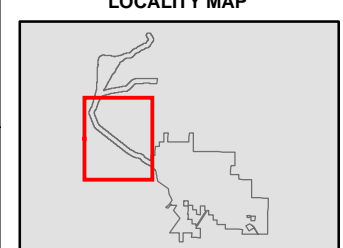
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- Legend**
- Survey Area
 - Fauna Habitat**
 - Cleared
 - Drainage Line/River/Creek (major)
 - Drainage Line/River/Creek (minor)
 - Dunal (primary/secondary)
 - Hills/Ranges/Plateaux
 - Hummock Grassland
 - Marsh/Lake (low halophytic shrubland)
 - Plain (stony/gibber)
 - Rocky Escarpments/Ridges/Mesa
 - Woodland (open/closed)


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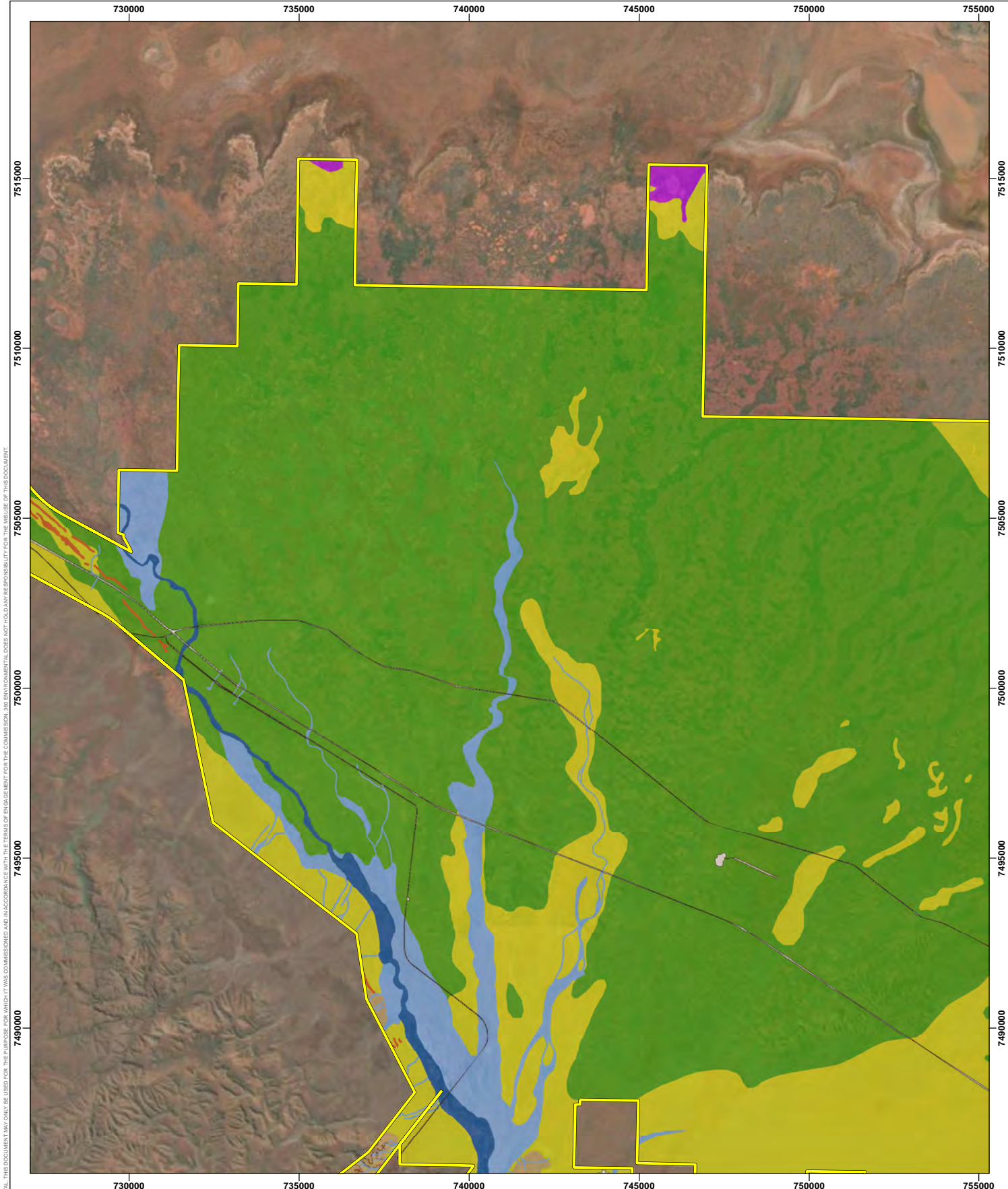
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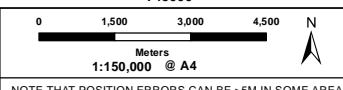
Figure 9b
Fauna Habitat and Conservation
Significant Fauna Records



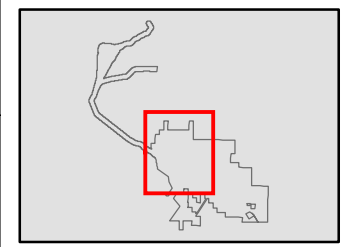
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- Legend**
- Survey Area
 - Fauna Habitat**
 - Cleared
 - Drainage Line/River/Creek (major)
 - Drainage Line/River/Creek (minor)
 - Dunal (primary/secondary)
 - Hills/Ranges/Plateaux
 - Hummock Grassland
 - Marsh/Lake (low halophytic shrubland)
 - Plain (stony/gibber)
 - Rocky Escarpments/Ridges/Mesa
 - Woodland (open/closed)

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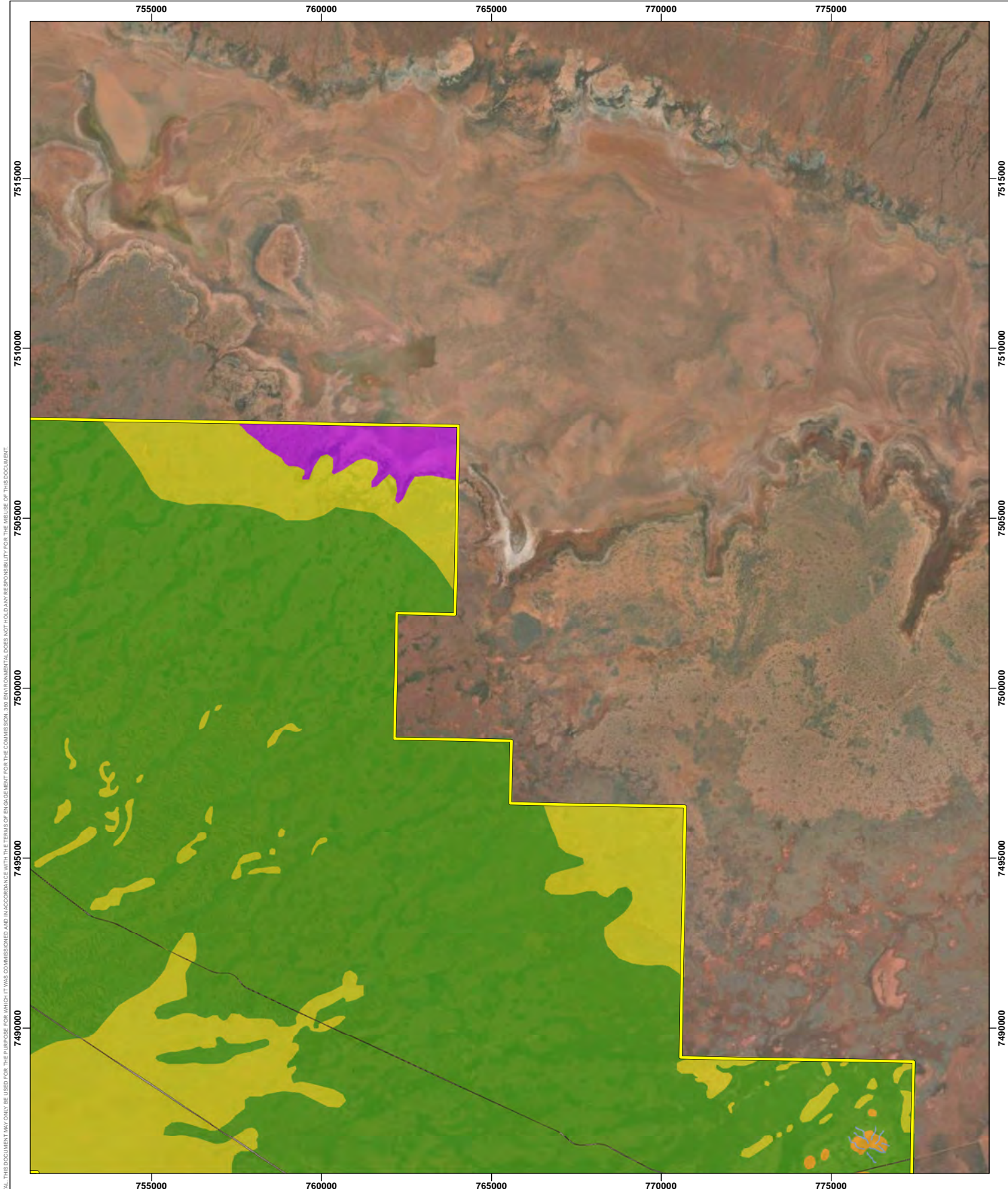
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Detailed Terrestrial Fauna Survey

Figure 9c
Fauna Habitat and Conservation
Significant Fauna Records



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Legend

- Survey Area
- Fauna Habitat**
- Cleared
- Drainage Line/River/Creek (major)
- Drainage Line/River/Creek (minor)
- Dunal (primary/secondary)
- Hills/Ranges/Plateaux
- Hummock Grassland
- Marsh/Lake (low halophytic shrubland)
- Plain (stony/gibber)
- Rocky Escarpments/Ridges/Mesa
- Woodland (open/closed)

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LOCALITY MAP

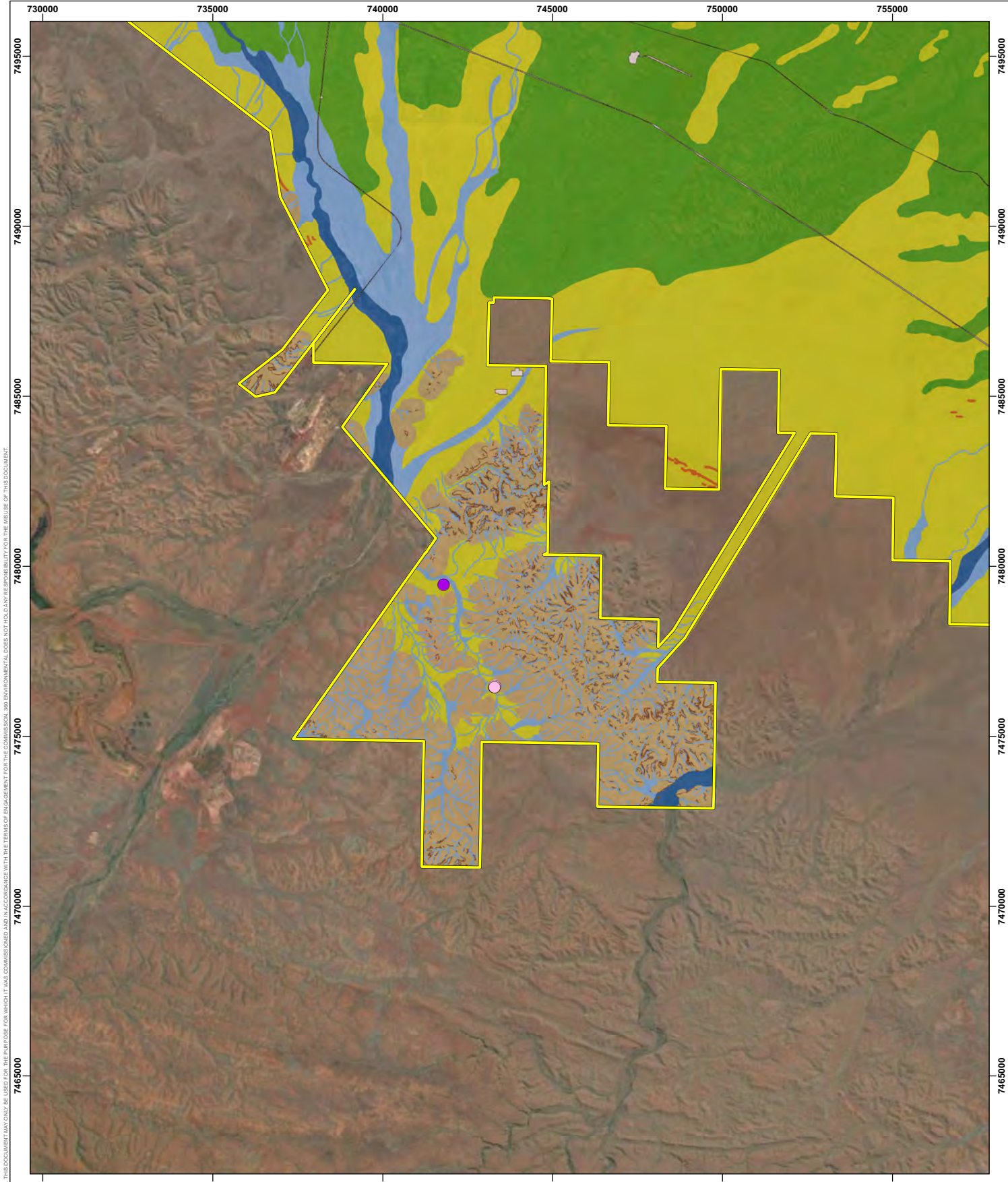
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Detailed Terrestrial Fauna Survey

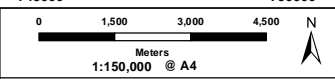
Figure 9d
Fauna Habitat and Conservation
Significant Fauna Records



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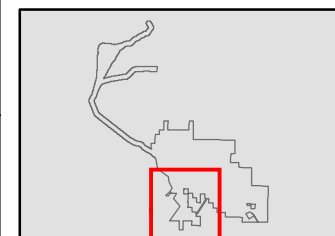
Legend

- Survey Area
 - Fauna Habitat**
 - Cleared
 - Drainage Line/River/Creek (major)
 - Drainage Line/River/Creek (minor)
 - Dunal (primary/secondary)
 - Hills/Ranges/Plateaux
 - Hummock Grassland
 - Marsh/Lake (low halophytic shrubland)
 - Plain (stony/gibber)
 - Rocky Escarpments/Ridges/Mesa
 - Woodland (open/closed)
- Gane's Blind Snake (P1)
 - Western Pebble-mound Mouse (P4)



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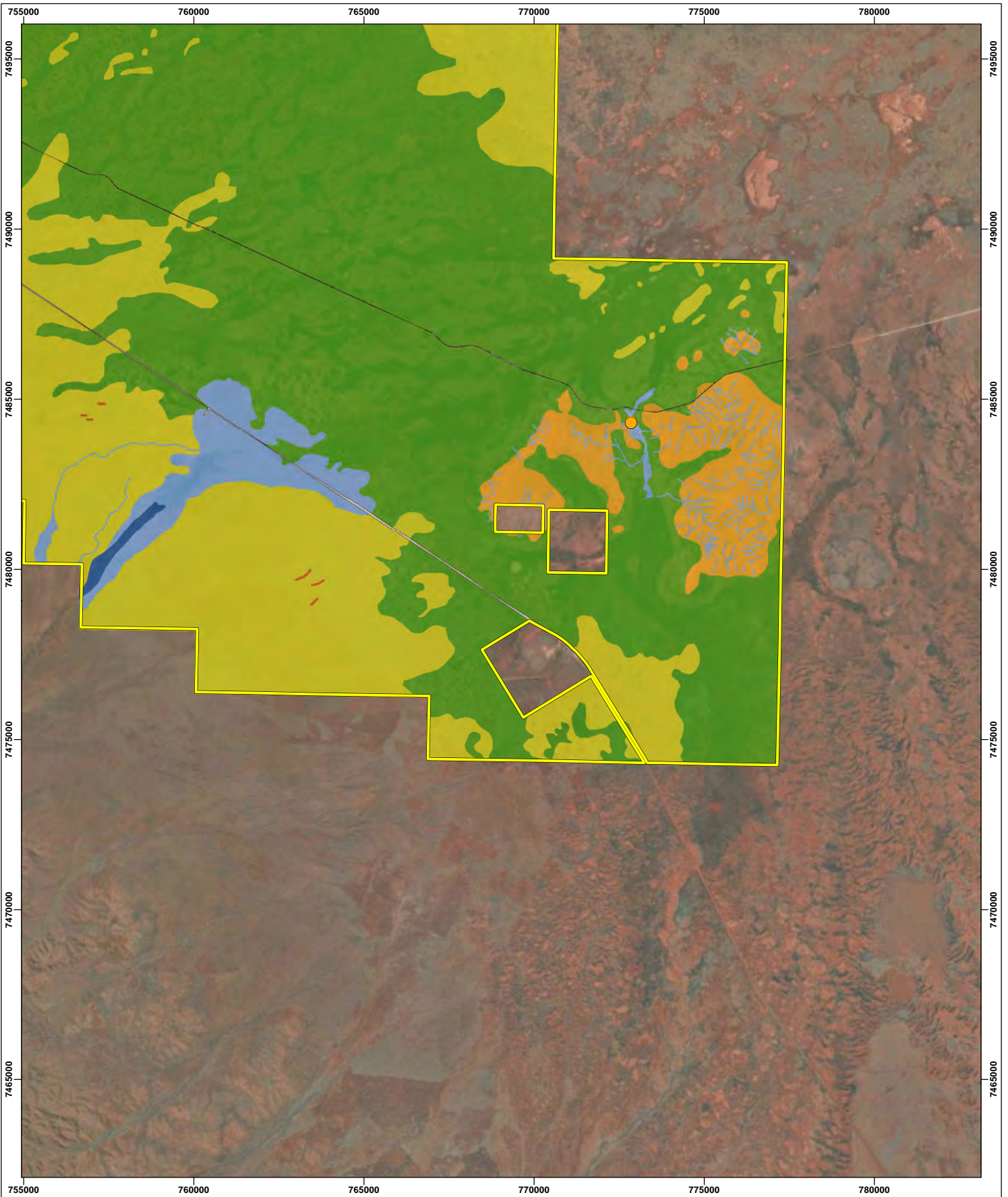
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Figure 9e
Fauna Habitat and Conservation Significant Fauna Records

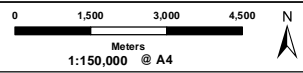
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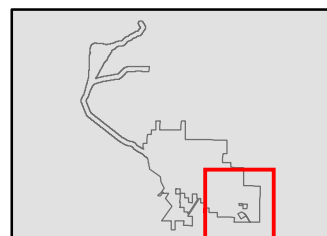
Legend

- Survey Area
- Pilbara Leaf-nosed Bat (VU)
- Fauna Habitat**
- Cleared
- Drainage Line/River/Creek (major)
- Drainage Line/River/Creek (minor)
- Dunal (primary/secondary)
- Hills/Ranges/Plateaux
- Hummock Grassland
- Marsh/Lake (low halophytic shrubland)
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Figure 9f
Fauna Habitat and Conservation Significant Fauna Records

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Appendices

Appendix A

Licence and Authorisation



FAUNA TAKING (BIOLOGICAL ASSESSMENT) LICENCE

Regulation 27, Biodiversity Conservation Regulations 2018

Licence Number: BA27000432

Licence Holder: Mr Lukas Geidans

360 Environmental Services
Unit 4 / 193 Oxford Street
LEEDERVILLE WA 6007

Date of Issue: 03/05/2021

Date Valid From: 03/05/2021

Date of Expiry: 07/05/2022

LICENSED ACTIVITIES

Subject to the terms and conditions on this licence, the licence holder may –

1. Take and disturb fauna for Nyidinghu vertebrate survey to enhance the level of knowledge in the area and inform environmental impact assessment using large cage traps, Elliot (medium) traps, drift fence dry pit traps (comprising five 20 L buckets and five PVC pipes), funnel traps, baited remote sensing cameras, ultrasonic bat detectors, visual observations, habitat assessment and hand foraging techniques. Record morphometrics and physical condition of fauna prior to release at capture site.

LOCATIONS

1. Nyidinghu Field Survey Area – 80km north-west of Newman (Pilbara Region).

AUTHORISED PERSONS

The following persons or persons of the specified class may assist in carrying out the licensed activities:

1. Lukas Geidans
2. Evan Webb
3. Edward Swinhoe
4. Michael Brown
5. Christina Walker
6. Louis Masarei

CONDITIONS

1. Fauna must not be taken on CALM land, (as defined in the Conservation and Land Management Regulations 2002), unless authorised by a written notice of a lawful authority issued under regulations 4 and 8 of the Conservation and Land Management Regulations 2002.
2. If persons, other than the licence holder, are authorised to carry out/assist in carrying out the activities under the licence, the licence holder must ensure those persons have read and understand the licence terms and conditions.
3. The written authorisation of the person in possession or occupation of the land accessed and upon which fauna is taken, as required under regulation 101(2) and referred to in “Additional information” below, must:



- a) state location details (including lot or location number, street/road, suburb and local government authority);
 - b) state land owner or occupier name, and contact phone number;
 - c) specify the time period that the authorisation is valid for;
 - d) be signed and dated; and
 - e) be attached to this licence at all times.
4. This licence, and any written authorisation or lawful authority which authorises the take of fauna on specified locations must be carried at all times while conducting licensed activities and be produced on demand by a wildlife officer.
 5. If a species of fauna listed as a threatened species under Section 19 of the *Biodiversity Conservation Act 2016* is inadvertently captured, that species is to be released immediately at the point of capture. If the fauna is injured or deceased, the licence holder shall contact the DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) for advice on treatment or disposal. Details of any capture of threatened fauna must be included in the "Return of Fauna Taken."
 6. The licence holder must not:
 - a) release any fauna in any area where it does not naturally occur;
 - b) transfer fauna to any other person or authority (other than the Western Australian Museum) unless approved in writing by the CEO; or
 - c) dispose of the remains of fauna in any manner likely to interfere the natural or present day distribution of the species.
 7. The licence holder must not take and remove more than ten specimens of any one protected species of fauna from any location less than 20km apart. Where exceptional circumstances make it necessary to take a larger number of specimens from a particular location in order to obtain adequate statistical data, the collector must proceed with circumspection and justify their actions to the Director General in advance.
 8. All holotypes and syntypes and a half share of paratypes of species or subspecies permitted to be permanently taken under this licence must be donated to the Western Australian Museum. Duplicates (one pair in each case) of any species collected, which represents a significant extension of geographic range must be offered to the Western Australian Museum.
 9. All specimens and material retained under the authority of this licence must be offered to the Western Australian Museum for loan, for inclusion in its collection, or on request be made available to other persons involved in relevant scientific studies.
 10. Any cage or Elliott trap is to be covered with hessian, set in complete shade throughout the whole day and checked within three hours of sunrise. If temperatures are forecast $>35^{\circ}\text{C}$, traps must be closed within three hours of sunrise, remain closed during the day and be re-opened in the late afternoon. If any adverse events are observed related to temperature/heat exposure, regardless of forecast temperature, then traps must be closed during the day (adverse events will be reported as soon as possible).
 11. All funnel traps be protected throughout the whole day by an adequate shade cover. Consideration should be given to checking funnel and pit traps a second time before midday. If there is any evidence of negative impacts from exposure after initial checking, this must be mitigated through addition of shade/shelter, and a second check before the heat of the days is essential, or alternatively traps should be closed.
 12. The licence holder must create, compile and maintain records and information as required in a DBCA approved "Return of Fauna Taken" of all fauna taking activities as they occur.
 13. A DBCA approved "Return of Fauna Taken" must be completed in full (including nil taking details) and submitted to DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) prior to the end of

each annual period of the licence (from the valid from date) (refer to “Additional Information” section below).



Danny Stefoni
LICENSING OFFICER
WILDLIFE PROTECTION BRANCH

Delegate of CEO

ADDITIONAL INFORMATION

1. It is an offence to take any species of fauna listed as a threatened species under Section 19 of the *Biodiversity Conservation Act 2016* unless the person is authorised under Section 40. The penalty ranges between \$300 000 and \$500 000; Section 150 Biodiversity Conservation Act 2016.
2. Regulation 82 empowers the CEO to add, substitute or delete a term or condition of a licence or to correct errors. Such power may be exercised on application of a licence holder or by the CEO’s own initiative. If an amendment to a licence term or condition is required, please contact the CEO or the Licensing Section on wildlifelicensing@dbca.wa.gov.au in the first instance. The licence holder, if adversely affected by a condition imposed in this licence, may apply to the State Administrative Tribunal for review of the decision of the CEO to impose that condition on a licence: regulation 89(2) Biodiversity Conservation Regulations 2018.
3. A person must not contravene a condition of a licence. The penalty for an offence involving the contravention of a condition of a licence is a fine of \$10 000: regulation 84 of the Biodiversity Conservation Regulations 2018.
4. It is an offence for persons authorised by this licence to enter land that is not in their possession or under their control without first having the *prior* written authorisation of the current owner or occupier of the land to:
 - a) enter the land; and
 - b) carry out the activity authorised by this licence.

The penalty for this offence is a fine of \$5 000: regulation 101(2) of the Biodiversity Conservation Regulations 2018.

5. The licence holder must be able to produce for inspection upon request any information or records required by regulation 85(2) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000. It is an offence to knowingly include false or misleading information or make statements in records: regulation 85(3) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000. It is an offence to include any information or make any statement in a return that the licence holder knows to be false or misleading in a material particular: regulation 86 (2) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000.
6. The approved DBCA “Return of Fauna Taken” data file can be downloaded from the DBCA webpage (<https://www.dpaw.wa.gov.au/plants-and-animals/licences-and-authorities>).



7. The issuing of a licence under the Biodiversity Conservation Regulations 2018 does not constitute an animal ethics approval or a licence to use animals for scientific purposes as required under the *Animal Welfare Act 2002*, Animal Welfare (Scientific Purposes) Regulations 2003. It is the responsibility of a licence applicant / licence holder to ensure that they comply with the requirements of all applicable legislation. Enquiries relating to the Animal Welfare Act licences and animal ethics approvals are to be directed to the Department of Primary Industries and Regional Development (<https://www.agric.wa.gov.au/animalwelfare>).
8. Threatened fauna can only be taken under a *Biodiversity Conservation Act 2016* Section 40 authorisation, Occurrences of threatened species must be reported to the CEO. For more information please see <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals>.
9. Any interaction involving Nationally Listed Threatened Fauna that may be invasive and/or harmful to the fauna may require approval from the Commonwealth Department of the Environment and Energy <http://www.environment.gov.au/about-us/business-us/permits-assessments-licences>. Interaction with such species is controlled by the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and Environment Protection and Biodiversity Conservation Regulations 2000 as well as the *Biodiversity Conservation Act 2016* and Biodiversity Conservation Regulations 2018.



FAUNA TAKING (BIOLOGICAL ASSESSMENT) LICENCE

Regulation 27, Biodiversity Conservation Regulations 2018

Licence Number: BA27000432-3
Licence Holder: Mr Lukas Geidans
360 Environmental Services
Unit 4 / 193 Oxford Street
LEEDERVILLE WA 6007

Date of Issue: 26/08/2021
Date Valid From: 26/08/2021
Date of Expiry: 07/05/2022

LICENSED ACTIVITIES

Subject to the terms and conditions on this licence, the licence holder may –

1. Take and disturb fauna for Nyidinghu vertebrate survey to enhance the level of knowledge in the area and inform environmental impact assessment using large cage traps, Elliot (medium) traps, drift fence dry pit traps (comprising five 20 L buckets and five PVC pipes), funnel traps, baited remote sensing cameras, ultrasonic bat detectors, visual observations, habitat assessment and hand foraging techniques. Record morphometrics and physical condition of fauna prior to release at capture site.

LOCATIONS

1. Nyidinghu Field Survey Area – 80km north-west of Newman (Pilbara Region).

AUTHORISED PERSONS

The following persons or persons of the specified class may assist in carrying out the licensed activities:

1. Lukas Geidans
2. Evan Webb
3. Edward Swinhoe
4. Michael Brown
5. Christina Walker
6. Louis Masarei
7. Lachlan Crossley
8. Michael Lohr
9. Michael Greenham

CONDITIONS

1. Fauna must not be taken on CALM land, (as defined in the Conservation and Land Management Regulations 2002), unless authorised by a written notice of a lawful authority issued under regulations 4 and 8 of the Conservation and Land Management Regulations 2002.

2. If persons, other than the licence holder, are authorised to carry out/assist in carrying out the activities under the licence, the licence holder must ensure those persons have read and understand the licence terms and conditions.
3. The written authorisation of the person in possession or occupation of the land accessed and upon which fauna is taken, as required under regulation 101(2) and referred to in “Additional information” below, must:
 - a) state location details (including lot or location number, street/road, suburb and local government authority);
 - b) state land owner or occupier name, and contact phone number;
 - c) specify the time period that the authorisation is valid for;
 - d) be signed and dated; and
 - e) be attached to this licence at all times.
4. This licence, and any written authorisation or lawful authority which authorises the take of fauna on specified locations must be carried at all times while conducting licensed activities and be produced on demand by a wildlife officer.
5. If a species of fauna listed as a threatened species under Section 19 of the *Biodiversity Conservation Act 2016* is inadvertently captured, that species is to be released immediately at the point of capture. If the fauna is injured or deceased, the licence holder shall contact the DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) for advice on treatment or disposal. Details of any capture of threatened fauna must be included in the “Return of Fauna Taken.”
6. The licence holder must not:
 - a) release any fauna in any area where it does not naturally occur;
 - b) transfer fauna to any other person or authority (other than the Western Australian Museum) unless approved in writing by the CEO; or
 - c) dispose of the remains of fauna in any manner likely to interfere the natural or present day distribution of the species.
7. The licence holder must not take and remove more than ten specimens of any one protected species of fauna from any location less than 20km apart. Where exceptional circumstances make it necessary to take a larger number of specimens from a particular location in order to obtain adequate statistical data, the collector must proceed with circumspection and justify their actions to the Director General in advance.
8. All holotypes and syntypes and a half share of paratypes of species or subspecies permitted to be permanently taken under this licence must be donated to the Western Australian Museum. Duplicates (one pair in each case) of any species collected, which represents a significant extension of geographic range must be offered to the Western Australian Museum.
9. All specimens and material retained under the authority of this licence must be offered to the Western Australian Museum for loan, for inclusion in its collection, or on request be made available to other persons involved in relevant scientific studies.
10. The licence holder must create, compile and maintain records and information as required in a DBCA approved “Return of Fauna Taken” of all fauna taking activities as they occur.
11. A DBCA approved “Return of Fauna Taken” must be completed in full (including nil taking details) and submitted to DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) prior to the end of each annual period of the licence (from the valid from date) (refer to “Additional Information” section below).



Danny Stefoni
LICENSING OFFICER
WILDLIFE PROTECTION BRANCH

Delegate of CEO

ADDITIONAL INFORMATION

1. It is an offence to take any species of fauna listed as a threatened species under Section 19 of the *Biodiversity Conservation Act 2016* unless the person is authorised under Section 40. The penalty ranges between \$300 000 and \$500 000; Section 150 Biodiversity Conservation Act 2016.
2. Regulation 82 empowers the CEO to add, substitute or delete a term or condition of a licence or to correct errors. Such power may be exercised on application of a licence holder or by the CEO's own initiative. If an amendment to a licence term or condition is required, please contact the CEO or the Licensing Section on wildlifelicensing@dbca.wa.gov.au in the first instance. The licence holder, if adversely affected by a condition imposed in this licence, may apply to the State Administrative Tribunal for review of the decision of the CEO to impose that condition on a licence: regulation 89(2) Biodiversity Conservation Regulations 2018.
3. A person must not contravene a condition of a licence. The penalty for an offence involving the contravention of a condition of a licence is a fine of \$10 000: regulation 84 of the Biodiversity Conservation Regulations 2018.
4. It is an offence for persons authorised by this licence to enter land that is not in their possession or under their control without first having the *prior* written authorisation of the current owner or occupier of the land to:
 - a) enter the land; and
 - b) carry out the activity authorised by this licence.The penalty for this offence is a fine of \$5 000: regulation 101(2) of the Biodiversity Conservation Regulations 2018.
5. The licence holder must be able to produce for inspection upon request any information or records required by regulation 85(2) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000. It is an offence to knowingly include false or misleading information or make statements in records: regulation 85(3) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000. It is an offence to include any information or make any statement in a return that the licence holder knows to be false or misleading in a material particular: regulation 86 (2) of the Biodiversity Conservation Regulations 2018 Penalty \$10 000.
6. The approved DBCA "Return of Fauna Taken" data file can be downloaded from the DBCA webpage (<https://www.dpaw.wa.gov.au/plants-and-animals/licences-and-authorities>).
7. The issuing of a licence under the Biodiversity Conservation Regulations 2018 does not constitute an animal ethics approval or a licence to use animals for scientific purposes as required under the *Animal Welfare Act 2002*, Animal Welfare (Scientific Purposes) Regulations 2003. It is the responsibility of a



licence applicant / licence holder to ensure that they comply with the requirements of all applicable legislation. Enquiries relating to the Animal Welfare Act licences and animal ethics approvals are to be directed to the Department of Primary Industries and Regional Development (<https://www.agric.wa.gov.au/animalwelfare>).

8. Threatened fauna can only be taken under a *Biodiversity Conservation Act 2016* Section 40 authorisation, Occurrences of threatened species must be reported to the CEO. For more information please see <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals>.
9. Any interaction involving Nationally Listed Threatened Fauna that may be invasive and/or harmful to the fauna may require approval from the Commonwealth Department of the Environment and Energy <http://www.environment.gov.au/about-us/business-us/permits-assessments-licences>. Interaction with such species is controlled by the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and Environment Protection and Biodiversity Conservation Regulations 2000 as well as the *Biodiversity Conservation Act 2016* and Biodiversity Conservation Regulations 2018.



AUTHORISATION TO TAKE OR DISTURB THREATENED SPECIES

Section 40 of the Biodiversity Conservation Act 2016

AUTHORISATION DETAILS

Authorisation type: Fauna

Authorisation number: TFA 2021-0052

Authorisation duration: From date signed by Minister's delegate, below, until 7 May 2022.

AUTHORISATION HOLDER

Lukas Geidans
360 Environmental
Unit 4 / 193 Oxford Street
Leederville WA 6007

AREA TO WHICH THIS AUTHORISATION APPLIES

Nyidinghu Field Survey Area, ~80 km north-west of Newman (Pilbara Region).

AUTHORISED ACTIVITY

Purpose of taking/disturbance:

Nyidinghu vertebrate survey to enhance the level of knowledge in the area and inform environmental impact assessments.

Threatened species authorised to be taken/disturbed (including conservation status):

Night parrot, *Pezoporus occidentalis* (Critically Endangered)

Northern quoll, *Dasyurus hallucatus* (Vulnerable)

Pilbara olive python, *Liasis olivaceus barroni* (Vulnerable)

Bilby, *Macrotis lagotis* (Vulnerable)

Quantity of threatened species authorised to be taken/disturbed:

Any number of individual northern quolls may potentially be captured and released during the trapping program.

Any number of individual animals of the above listed threatened fauna species may potentially be disturbed by the project activities.

Authorised taking/disturbance methodology:

Take northern quolls using cage and Elliott traps (set for up to eight days per survey). Traps will be covered with hessian, set in complete shade throughout the whole day and checked within three hours of sunrise. If temperatures are forecast >35 °C, traps will be closed within three hours of sunrise, remain closed during the day and be re-opened in the late afternoon. If any adverse events are observed related to temperature /heat exposure, regardless of forecast temperature, then traps will

be closed during the day (adverse events will be reported as soon as possible). Traps will be baited with universal bait (rolled oats, peanut butter and sardines). Captured quolls may have morphometric and condition/health details recorded and may be temporarily marked (using xylene free marker pen, to identify recaptures) prior to release near capture site.

Disturb northern quolls using cameras traps deployed (up to seven nights at each location) with a consumable lure (rolled oats, peanut butter and sardines).

Disturb bilbies by deployment of remote sensor cameras near the entrance of bilby burrows.

Disturb night parrots during deployment and collection of acoustic call recorders in night parrot nesting and roosting habitat.

Pilbara olive pythons may be disturbed by opportunistic active searching.

All proposed activities will be conducted in accordance with DBCA Standard Operating Procedures (SOPs) for fauna survey and monitoring techniques.

ADDITIONAL AUTHORISED PERSONS

Evan Webb

Edward Swinhoe

Michael Brown

Christina Walker

Louis Masarei

Additional personnel who are suitably qualified and experienced in the authorised activities working under the direction of the authorisation holder.

Field assistants assisting with the authorised activities working under the direct supervision of the authorisation holder or suitably qualified and experienced named additional authorised person.

CONDITIONS

1. The written authorisation of the person in possession or occupation of the land accessed and upon which threatened fauna is taken or disturbed must:
 - a) state location details (including lot or location number, street/road, suburb and local government authority);
 - b) state land owner or occupier name, and contact phone number;
 - c) specify the time period that the authorisation is valid for;
 - d) be signed and dated; and
 - e) be attached to this Authorisation to take or disturb threatened species at all times.
2. This Authorisation to take or disturb threatened species, and any other written authorisation or lawful authority which authorises the take or disturbance of fauna on specified locations for the authorised activities must be carried at all times while conducting authorised activities and be produced on demand by a wildlife officer.
3. Named additional authorised persons who are not suitably qualified and experienced in the authorised activities, and volunteer field assistants assisting with the authorised activities, must be working under direct supervision of experienced and competent named authorised persons.
4. Any inadvertently captured species of non-target threatened fauna or non-threatened fauna (threatened fauna as defined in *Biodiversity Conservation Act 2016* Section 19) is to be released

immediately at the point of capture. Details of such fauna must be included in the fauna taking return as required under this authorisation.

5. The authorisation holder, unless specified in the authorised activities, must not:
 - a) release any threatened fauna in any area where it does not naturally occur;
 - b) transfer threatened fauna to any other person or authority (other than the Western Australian Museum) unless the fauna is injured or abandoned fauna (condition 6); or
 - c) dispose of the remains of threatened fauna in any manner likely to confuse the natural or present-day distribution of the species.
6. All threatened fauna injuries, unexpected deaths, unplanned euthanasia, and abandoned young or eggs, must be reported by the authorisation holder to the DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) to notify of the incident and for advice on treatment or disposal. All deceased threatened fauna must be offered to the Western Australian Museum.
7. The authorisation holder must create, compile and maintain records and information as required in a DBCA approved "Return of Fauna Taken/Disturbed" of all fauna taking activities as they occur.
8. A DBCA approved "Return of Fauna Taken/Disturbed" must be completed in full (including nil taking details) and submitted to DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au) prior to the end of the authorisation duration and, if the authorisation duration is greater than 12 months, prior to the end of each annual period of the authorisation (from the date signed by the Minister's delegate) (refer to "Additional Information" section below). Where a licence to take or disturb fauna is issued in conjunction with this Authorisation to take or disturb threatened species, a combined "Return of Fauna Taken/Disturbed" may be completed and submitted.
9. A written report detailing the undertaken authorised activities, outcome, unintended incidents, injuries and mortalities of threatened fauna, implemented monitoring, mitigation and management, and explaining the records and information as required in a DBCA approved "Return of Fauna Taken/Disturbed" must be submitted, in addition to a "Return of Fauna Taken/Disturbed" to DBCA Wildlife Licensing Section (wildlifelicensing@dbca.wa.gov.au).

ADDITIONAL INFORMATION

1. Before undertaking the Authorised Activity, permission must be obtained from: (a) the owner or occupier of private land; or (b) the Department or Authority controlling Crown land, on which the Threatened Fauna occur. This includes obtaining the written endorsement from Department of Biodiversity, Conservation and Attractions (DBCA) if the authorised activity is proposed for land managed by DBCA.
2. This Authorisation to take or disturb threatened species does not constitute lawful authority issued under regulations 4 and 8 of the *Conservation and Land Management Regulations 2002*. Contact the applicable Department District Officer for further information.
3. The approved DBCA "Return of Fauna Taken/Disturbed" data file can be downloaded from the DBCA webpage (<https://www.dpaw.wa.gov.au/plants-and-animals/licences-and-authorities>).
4. Any interaction involving nationally listed threatened fauna that may be harmful to the fauna and/or invasive may require approval from the Commonwealth Department of the Environment and Energy (<http://www.environment.gov.au/biodiversity/threatened/permits>). Interaction with such species is controlled by the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and *Environment Protection and Biodiversity Conservation Regulations 2000*.
5. It is the responsibility of the authorisation holder to ensure that they comply with the requirements of all applicable legislation.

6. An Authorisation to take or disturb threatened species does not constitute an animal ethics approval or a licence to use animals for scientific purposes as required under the *Animal Welfare Act 2002*, *Animal Welfare (Scientific Purposes) Regulations 2003*. Enquiries relating to the Animal Welfare Act licences and animal ethics approvals are to be directed to the Western Australian Department of Primary Industries and Regional Development (<https://www.agric.wa.gov.au/animalwelfare>).

Margaret Byrne

Dr Margaret Byrne

Executive Director of Biodiversity and Conservation Science

AS DELEGATE OF THE MINISTER

DATE: 3/5/2021

Appendix B

Vertebrate Fauna Identified by the Desktop Assessment

Family	Scientific Name	Common Name	Conservation		Recorded	Source			Literature																
			State	Federal		NM	PMST	DBCA	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	<i>Demansia rufescens</i>	Rufous Whipsnake			x	x															x				
	<i>Furina ornata</i>	Moon Snake			x	x			x	x		x									x				
	<i>Parasuta monachus</i>	Inland Hooded Snake			x	x						x									x				x
	<i>Pseudechis australis</i>	Mulga Snake			x	x						x	x	x						x	x			x	
	<i>Pseudonaja mengdeni</i>	Western Brown Snake				x						x	x												
	<i>Pseudonaja modesta</i>	Ringed Brown Snake				x															x	x			
	<i>Pseudonaja nuchalis</i>	Gwardar; Northern Brown Snake			x	x																			
	<i>Suta fasciata</i>	Rosen's Snake				x								x							x			x	
	<i>Suta punctata</i>	Spotted Snake				x																			
	<i>Vermicella snelli</i>					x																			
Gekkonidae	<i>Gehyra pilbara</i>					x																			
	<i>Gehyra punctata</i>				x	x			x	x											x		x		
	<i>Gehyra purpurascens</i>					x							x										x		
	<i>Gehyra variegata</i>	Variegated Gehyra			x	x					x	x	x								x		x		
	<i>Heteronotia binoei</i>	Bynoe's Gecko			x	x			x		x	x	x								x		x		
	<i>Heteronotia spelea</i>	Pilbara Cave Gecko				x					x	x									x		x		
Pygopodidae	<i>Delma butleri</i>				x	x						x									x				
	<i>Delma elegans</i>					x																x			
	<i>Delma haroldi</i>																							x	
	<i>Delma nasuta</i>				x	x			x				x								x	x			
	<i>Delma pax</i>				x	x					x	x	x												
	<i>Delma tincta</i>					x							x									x			
	<i>Lialis burtonis</i>				x	x					x	x	x									x		x	
	<i>Pygopus nigriceps</i>					x						x	x												
Pythonidae	<i>Antaresia childreni</i>	Children's Python				x							x												
	<i>Antaresia perthensis</i>	Pygmy Python				x						x	x	x								x			
	<i>Aspidites melanocephalus</i>	Black-headed Python				x							x							x				x	
	<i>Liasis olivaceus barroni</i>	Pilbara Olive Python	VU	VU		x	x	x					x								x			x	
Scincidae	<i>Carlia munda</i>				x	x			x		x	x	x									x			x
	<i>Carlia triacantha</i>				x	x					x		x									x			
	<i>Cryptoblepharus buchananii</i>					x																x	x		
	<i>Cryptoblepharus plagiocephalus</i>					x																		x	
	<i>Cryptoblepharus ustulatus</i>					x																x	x		x
	<i>Ctenotus ariadnae</i>				x	x							x	x											
	<i>Ctenotus duricola</i>	Eastern Pilbara Lined Ctenotus				x			x				x	x											x
	<i>Ctenotus grandis</i>				x	x							x	x											
	<i>Ctenotus hanloni</i>				x	x							x												
	<i>Ctenotus helenae</i>				x	x			x		x		x										x		
	<i>Ctenotus leonhardii</i>				x	x							x												x
	<i>Ctenotus pantherinus</i>				x	x			x		x	x	x									x	x		x
	<i>Ctenotus quattuordecimlineatus</i>				x	x																			
	<i>Ctenotus rubicundus</i>					x							x									x			
	<i>Ctenotus rutilans</i>				x	x							x										x		
	<i>Ctenotus saxatilis</i>	Rock Ctenotus			x	x			x		x	x	x									x	x		x
	<i>Ctenotus schomburgkii</i>					x							x										x		
	<i>Ctenotus serventyi</i>				x	x																			
	<i>Ctenotus uber</i>				x	x																			
	<i>Ctenotus uber johnstonei</i>		P2			x			x				x												
	<i>Cyclodomorphus melanops</i>					x							x	x									x	x	

Appendix C

Database Searches

SCI_NAME	COM_NAME	CLASS	WA status	EPBC status	Date	SOURCE	CERTAINTY	OBS_METHOD	OBS_TYPE	COUNT	LOCALITY	SITE
<i>Apus pacificus</i>	Fork-tailed swift	BIRD	MI	MI	17/02/2012	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	BHPBIO_MAINLINE,
<i>Apus pacificus</i>	Fork-tailed swift	BIRD	MI	MI	17/03/2014	FAUNASURVEY	Certain	Survey	Unknown	9	NEWMAN	Yandi, YBLOPP
<i>Falco hypoleucos</i>	Grey falcon	BIRD	VU		07/12/2009	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Pilbara, Cloudbreak
<i>Falco hypoleucos</i>	Grey falcon	BIRD	VU		05/11/2010	FAUNASURVEY	Certain	Survey	Unknown	4	MULGA DOWNS	Mulga Downs, Brockman
<i>Falco hypoleucos</i>	Grey falcon	BIRD	VU		09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, BMG04
<i>Falco hypoleucos</i>	Grey falcon	BIRD	VU		05/11/2015	TFAUNA	Certain	Opportunistic sighting	Day sighting	2	Nullagine	Cook Pool drainage line, near Sandy Creek, proposed Fortescue Marsh reserve on former Hillside Stn pastoral lease
<i>Falco hypoleucos</i>	Grey falcon	BIRD	VU		01/07/2018	WL_REG17		Survey		0		Falco hypoleucos 01/07/2018
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		16/10/2007	BIRDATA				0	Minga Well	Minga Well
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		26/08/2011	BIRDATA				0	Pilbara	Pilbara
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		16/10/2007	BIRDATA				0	Marillana	Marillana
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		13/03/2011	BIRDATA				0	Marillana	Marillana
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		07/08/2011	BIRDATA				0	Marillana	Marillana
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		10/08/2011	BIRDATA				0	Marillana	Marillana
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		16/10/2007	BIRDATA				0	Biologic Recon Trip	Biologic Recon Trip
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		07/12/2009	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Pilbara, Cloudbreak
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		18/11/2011	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri Southern Corridor, KDC17E
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		08/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDV09E
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		09/03/2012	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, Koodaideri West Corridor
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, BMG04
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, BMG04
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, BMG04
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, BMG05
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		12/06/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NULLAGINE	Chichester Range, Christmas Creek
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		12/06/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NULLAGINE	Chichester Range, Christmas Creek
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		18/12/2017	FAUNASURVEY_WLS	Certain		Observation	1	Pilbara	Cloudbreak
<i>Falco peregrinus</i>	peregrine falcon	BIRD	OS		16/03/2006	TFAUNA	Certain	Survey	Day sighting	1	Mulga Downs	one over Minga Trap site
<i>Falco peregrinus</i>	Peregrine falcon	BIRD	OS		18/12/2017	WL_REG17		Survey		0		Falco peregrinus subsp. macropus 18/12/2017
<i>Gelochelidon nilotica</i>	Gull-billed tern	BIRD	MI	MI	17/02/2012	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	BHPBIO_MAINLINE,
<i>Gelochelidon nilotica</i>	Gull-billed tern	BIRD	MI	MI	12/08/2017	FAUNASURVEY_WLS	Certain		Observation	1	Pilbara	Cloudbreak

SCI_NAME	COM_NAME	CLASS	WA status	EPBC status	Date	SOURCE	CERTAINTY	OBS_METHOD	OBS_TYPE	COUNT	LOCALITY	SITE
<i>Gelochelidon nilotica</i>	Gull-billed tern	BIRD	MI	MI	12/08/2017	WL_REG17		Survey		0		Sterna nilotica 12/08/2017
<i>Motacilla cinerea</i>	Grey wagtail	BIRD	MI	MI	22/07/2012	BIRDATA				0	Mulga Downs 5	Mulga Downs 5
<i>Pandion cristatus</i>	Osprey, eastern osprey	BIRD	MI	MI	01/09/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Jinidi to Mainline, Site x
<i>Pandion cristatus</i>	Osprey, eastern osprey	BIRD	MI	MI	17/02/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	BHPBIO_MAINLINE,
<i>Pezoporus occidentalis</i>	night parrot	BIRD	CR	EN	12/04/2005	TFAUNA	Moderately certain	Targeted survey	Dusk sighting	3	Mulga Downs	Mingawirriewirrie (Minga) Well, Fortescue Marshes
<i>Plegadis falcinellus</i>	Glossy ibis	BIRD	MI	MI	12/08/2017	FAUNASURVEY_WLS	Certain		Observation	1	Pilbara	Cloudbreak
<i>Plegadis falcinellus</i>	Glossy ibis	BIRD	MI	MI	12/08/2017	WL_REG17		Survey		0		Plegadis falcinellus 12/08/2017
<i>Tringa glareola</i>	Wood sandpiper	BIRD	MI	MI	07/12/2009	FAUNASURVEY	Certain	Survey	Unknown	11	NEWMAN	Pilbara, Cloudbreak
<i>Tringa nebularia</i>	Common greenshank, greenshank	BIRD	MI	MI	07/12/2009	FAUNASURVEY	Certain	Survey	Unknown	6	NEWMAN	Pilbara, Cloudbreak
<i>Dasyercus blythi</i>	Brush-tailed mulgara	MAMMAL	P4		12/03/2014	FAUNASURVEY	Certain	Survey	Unknown	0	NEWMAN	Yandi, YBLOPP - Burrow
<i>Dasyercus blythi</i>	Brush-tailed mulgara	MAMMAL	P4		14/09/2014	FAUNASURVEY	Moderately certain	Survey	Unknown	0	NEWMAN	Yandi, YBLOPP - burrow
<i>Dasyercus blythi</i>	Brush-tailed mulgara	MAMMAL	P4		14/09/2014	FAUNASURVEY	Moderately certain	Survey	Unknown	0	NEWMAN	Yandi, YBLOPP - burrow
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	11/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDD06
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	19/05/2013	FAUNASURVEY	WAM Vouchered	Survey	Specimen	1	JUNA DOWNS	Koodaideri, KDA05E
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	20/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDA05E VIDEO RECORDING
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/10/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/10/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/10/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/10/2013	FAUNASURVEY	Moderately certain	Survey	Secondary sign	0	NEWMAN	Koodaideri Spring, NQS-01 - Scats
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/10/2013	FAUNASURVEY	Moderately certain	Survey	Secondary sign	0	NEWMAN	Koodaideri Spring, NQS-02 - Scats
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/10/2013	FAUNASURVEY	Moderately certain	Survey	Secondary sign	0	NEWMAN	Koodaideri Spring, NQS-03 - Scats
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NULLAGINE	Port_Hedland, Roy Hill Rail
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	06/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	06/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	08/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	08/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E2
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	08/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1

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<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	29/03/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	2	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	13/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	15/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	4	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	18/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	3	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	23/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	9	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	7	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	25/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	29/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	5	JUNA DOWNS	Koodaideri, KQMB3.M15-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	20/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	2	JUNA DOWNS	Koodaideri, KQMB3.M16-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/03/2016	FAUNASURVEY	Certain	Survey	Remote camera	4	JUNA DOWNS	Koodaideri, KQMB3.M17-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M17-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	20/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M17-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	21/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M17-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	1	JUNA DOWNS	Koodaideri, KQMB3.M17-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/04/2016	FAUNASURVEY	Certain	Survey	Remote camera	5	JUNA DOWNS	Koodaideri, KQMB3.M18-01 - Motion Camera
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	NULLAGINE	Cloudbreak North, MC08
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, MC23
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, MC28
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, MC80
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, CBS3-15
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, CBS3-14
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, CBS3-04
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, CBS4-14
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	24/08/2016	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Cloudbreak North, CBS4-13
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	29/05/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E12
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/05/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E56
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/05/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E54
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/06/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E11
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	27/05/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E18
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	31/05/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E53
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E13

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<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E08
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E08
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E25
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E22
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	04/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E59
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/07/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E55
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	20/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E44
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	21/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E67
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E39
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	23/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E45
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	18/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E44
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	23/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E17
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	19/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E14
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	20/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E07
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/08/2016	FAUNASURVEY	Certain	Survey	Caught or trapped	1	NEWMAN	Koodaideri, KQMB1-E14
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	29/05/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	29/05/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/05/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	01/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	04/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	08/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	09/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	09/06/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota01
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	04/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota02
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota02
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota02

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<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota03
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	05/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Location via VHF: Collar ID Biota03
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/07/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	JUNA DOWNS	Koodaideri, KQMBOPP - GPS Fix: Collar ID Biota03
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/08/2016	FAUNASURVEY	Certain	Survey	Remote sensing	0	NEWMAN	Koodaideri, KQMBOPP - Collar ID Biota03
<i>Dasyurus hallucatus</i>	northern quoll	MAMMAL	EN	EN	12/05/1980	TFAUNA	Certain	Survey	Caught or trapped	1	NULLAGINE	CHICHESTER RANGE
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	12/05/1980	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NULLAGINE	CHICHESTER RANGE
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	12/05/1980	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		CHICHESTER RANGE
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	30/09/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.052893 -22.541801 30/09/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	04/11/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.056019 -22.541901 04/11/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/07/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.056298 -22.543868 22/07/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	07/06/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.057005 -22.542156 07/06/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/09/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.05737 -22.540816 22/09/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	12/10/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.058632 -22.538383 12/10/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	19/12/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.059536 -22.577044 19/12/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	22/08/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.06204 -22.558265 22/08/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	27/06/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.061312 -22.573578 27/06/2017

SCI_NAME	COM_NAME	CLASS	WA status	EPBC status	Date	SOURCE	CERTAINTY	OBS_METHOD	OBS_TYPE	COUNT	LOCALITY	SITE
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	08/05/2018	WL_REG17		Survey		0		Dasyurus hallucatus 119.062159 -22.561282 08/05/2018
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	03/06/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.063623 -22.56866 03/06/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	26/05/2017	WL_REG17		Survey		0		Dasyurus hallucatus 119.065004 -22.553007 26/05/2017
<i>Dasyurus hallucatus</i>	Northern quoll	MAMMAL	EN	EN	02/06/2018	WL_REG17		Survey		0		Dasyurus hallucatus 119.160236 -22.665439 02/06/2018
<i>Leggadina lakedownensis</i>	Northern short-tailed mouse, Lakeland Downs mouse, kerakenga	MAMMAL	P4		08/07/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	40.2KM SE ROY HILL
<i>Leggadina lakedownensis</i>	Northern short-tailed mouse, Lakeland Downs mouse, kerakenga	MAMMAL	P4		08/07/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		40.2KM SE ROY HILL
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	23/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDasRE08
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	23/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDasRE08
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	06/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-E1
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	16/11/2015	FAUNASURVEY_WLS	Certain		Scat	1	Pilbara	Central Pilbara
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	15/12/2015	FAUNASURVEY_WLS	Certain		Scat	1	Pilbara	Central Pilbara
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	15/12/2015	FAUNASURVEY_WLS	Certain		Scat	1	Pilbara	Central Pilbara
<i>Macroderma gigas</i>	ghost bat	MAMMAL	VU	VU	05/11/2007	TFAUNA	Certain	Survey	Caught or trapped	1	Newman	2km south east of Minga well, Mulga Downs Station, Cloudbreak Project Area
<i>Macroderma gigas</i>	ghost bat	MAMMAL	VU	VU	21/05/2016	TFAUNA	Certain	Opportunistic sighting	Dead	1	Newman	Located on new UCL/NCR of Fortescue Marsh (prev. Marillan leasehold)
<i>Macroderma gigas</i>	Ghost bat	MAMMAL	VU	VU	26/04/2018	WL_REG17		Survey		0		Macroderma gigas 119.2615113 -22.66960604 26/04/2018
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/07/2017	FAUNASURVEY_WLS	Certain		Observation	1	Pilbara	Mainline Rail
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	29/05/2005	PILBTFAUNA	Certain	General fauna survey	Burrow	0	MULGA DOWNS	Near Cockeye Bore. Fortescue Marsh, Cloud Break Tenement, Mulga Downs Station.
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site.
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/06/2006	PILBTFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	North-east of Cloudbreak Mine Site
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/01/2006	PILBTFAUNA	Uncertain	Opportunistic	Digging	0	NULLAGINE	Cooke's Pool, Fortescue Marsh

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<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	05/09/2012	PILBFAUNA	Certain	General fauna survey	Remote camera	1	NEWMAN	Fortescue Marsh
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	01/01/2004	PILBFAUNA	Certain		Sighting	1	MULGA DOWNS	Kardarderrie Well, Mulga Downs Station
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	29/10/2010	PILBFAUNA	Uncertain		Burrow	1	MULGA DOWNS	Cloudbreak
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow	1	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow,Digging	0	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow,Digging	0	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow,Digging	0	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow,Digging	0	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/05/2005	PILBFAUNA	Certain	General fauna survey	Burrow,Digging	0	NULLAGINE	Cloud Break
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	02/07/2013	PILBFAUNA	Uncertain	Targeted for this species	Digging,Scat	0	MULGA DOWNS	130707fort001
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	04/07/2013	PILBFAUNA	Uncertain	Targeted for this species	Digging	0	NEWMAN	WP153
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	04/07/2013	PILBFAUNA	Uncertain	Targeted for this species	Digging	0	NEWMAN	WP159
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	20/11/1997	PILBFAUNA	Certain		Capture,Remains	1	MULGA DOWNS	Near 2 mile bore, 2km E of Walla Bore, Mulga Downs Station.
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	08/05/2009	PILBFAUNA	Uncertain	Targeted for this species	Digging	0	NULLAGINE	Cloudbreak Mining Tenement
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	08/05/2009	PILBFAUNA	Uncertain	Targeted for this species	Digging	0	MULGA DOWNS	Cloudbreak Mining Tenement
<i>Macrotis lagotis</i>	bilby, dalgyte, ninu	MAMMAL	VU	VU	20/11/1997	TFAUNA	Certain	Opportunistic sighting	Dead	1	Mulga Downs Station	In a mulga wash near 2 Mile Bore, 2km E of Walla Bore, Mulga Downs Station.
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	06/11/1997	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	MULGA DOWNS	NR 2 MILE BORE
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	06/11/1997	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		NR 2 MILE BORE
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	MAMMAL	VU	VU	27/07/2017	WL_REG17		Survey		0		Macrotis lagotis 27/07/2017
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		28/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDD14
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		28/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDD19
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		30/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDDSRE33
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		30/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDDSRE33
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		30/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDDSRE34
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		19/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDD14
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Active Pebble Mound Mouse

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<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NULLAGINE	Roy Hill, Opportunistic Site 05
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, Possible Active Pebble Mound Mouse
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 01
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 02
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 03
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 04
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 05
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 06
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/04/2011	FAUNASURVEY	Certain	Survey	Secondary sign	1	NULLAGINE	Roy Hill, 977-Pebble mound Opp 07
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		07/02/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Jinidi to Mainline, Site x
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		22/08/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Jinidi to Mainline, Site x
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		07/02/2012	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Pilbara, Area C West to Yandi
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		15/10/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KNEOPP
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		18/10/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KNEOPP

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<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		10/05/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Hamersley Range, Pilbara , Iron Valley
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		02/05/2012	FAUNASURVEY	Certain	Survey	Unknown	1	MULGA DOWNS	Roy Hill, Roy Hill
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		15/11/2013	FAUNASURVEY	Moderately certain	Survey	Unknown	1	MULGA DOWNS	Port_Hedland, Roy Hill Rail
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		15/11/2013	FAUNASURVEY	Moderately certain	Survey	Unknown	1	MULGA DOWNS	Port_Hedland, Roy Hill Rail
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		14/03/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - Mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		15/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		15/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound

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<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		16/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		18/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		18/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		18/09/2014	FAUNASURVEY	Certain	Survey	Secondary sign	0	NEWMAN	Yandi, YBLOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/07/2016	FAUNASURVEY	Certain	Survey	Secondary sign	0	JUNA DOWNS	Koodaideri, KDSOPP - mound
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	PRS_MAMMALS				0		
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		01/05/2005	PRS_MAMMALS				0		
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	PRS_MAMMALS				0		
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		16/10/2004	PRS_MAMMALS				0		
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		20/11/2003	PRS_MAMMALS				0		
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		10/12/1980	TFAUNA	Certain	Survey	Caught or trapped	1	Marillana	Yandicoogina , Marillana Stn
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		01/05/2001	TFAUNA	Certain	Survey	Caught or trapped	1	Hammersley Range	Hammersley Range on sandy alluvial plain. Proposed Hope Downs rail corridor (HAE3)

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<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		10/12/1980	TFAUNA	Moderately certain	Survey	Caught or trapped	1	Pilbara	Marillana
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		24/02/2011	TFAUNA	Certain	Survey	Secondary sign	0	Pilbara	Christmas Creek proposed airstrip
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		24/02/2011	TFAUNA	Certain	Survey	Secondary sign	0	Pilbara	Christmas Creek proposed airstrip
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		24/02/2011	TFAUNA	Certain	Survey	Secondary sign	0	Pilbara	Christmas Creek proposed airstrip
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	MAMMAL	P4		13/05/2011	TFAUNA	Certain	Survey	Secondary sign	0	Pilbara	Proposed Roy Hill Railway north of Newman
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		10/12/1980	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	YANDICOOGINA CREEK
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	NEWMAN	HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	26KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	26KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		16/10/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	24KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		01/05/2005	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	24KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		10/12/1980	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		YANDICOOGINA CREEK
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		05/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		HAMERSLEY IRON'S YANDI
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/03/1998	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		HAMERSLEY IRON'S YANDI

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<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		26KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		04/05/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		26KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		16/10/2004	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		24KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		01/05/2005	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		24KM WSW MOUNT MARSH
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		01/06/2018	WL_REG17		Survey		0		Pseudomys chapmani 119.2628645 -22.65442722 01/06/2018
<i>Pseudomys chapmani</i>	Western pebble-mound mouse, ngadji	MAMMAL	P4		27/04/2018	WL_REG17		Survey		0		Pseudomys chapmani 119.2981332 -22.70324995 27/04/2018
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDDBAT01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	20/04/2012	FAUNASURVEY	Certain	Survey	Unknown	430	JUNA DOWNS	Eastern Hamersley Range , Koodaideri KDDBat01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	21/04/2012	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Eastern Hamersley Range , Koodaideri KDDBat01
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	21/04/2012	FAUNASURVEY	Moderately certain	Survey	Unknown	100	NEWMAN	Eastern Hamersley Range , Koodaideri KDDBat03
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Wittenoom Gorge, MNB01 - SM2 Recording
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2013	FAUNASURVEY	Certain	Survey	Unknown	20	JUNA DOWNS	Wittenoom Gorge, MNB02 - SM2 Recording
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	22/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDA08 SM2 RECORDING
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	22/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KDA09 SM2 RECORDING
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	23/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, HERITAGECAVE SM2 RECORDING
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	23/05/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, HERITAGEPOOL SM2 RECORDING
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	07/09/2013	FAUNASURVEY	Certain	Survey	Unknown	86	JUNA DOWNS	Koodaideri, KBH05 - SM2 Recording
<i>Rhinonictes aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	07/09/2013	FAUNASURVEY	Certain	Survey	Unknown	18	NEWMAN	Koodaideri, KBH08 - SM2 Recording

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<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/09/2013	FAUNASURVEY	Certain	Survey	Unknown	1500	NEWMAN	Koodaideri, KBH10 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	08/09/2013	FAUNASURVEY	Certain	Survey	Unknown	615	JUNA DOWNS	Koodaideri, KBH12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/09/2013	FAUNASURVEY	Certain	Survey	Unknown	55	JUNA DOWNS	Koodaideri, KBH22 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/09/2013	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KBH23 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/09/2013	FAUNASURVEY	Certain	Survey	Unknown	3	JUNA DOWNS	Koodaideri, KBH28 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/09/2013	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KBH30 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/09/2013	FAUNASURVEY	Certain	Survey	Unknown	5	JUNA DOWNS	Koodaideri, KBH32 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/09/2013	FAUNASURVEY	Certain	Survey	Unknown	12	NEWMAN	Koodaideri, KBH33 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/09/2013	FAUNASURVEY	Certain	Survey	Unknown	5	NEWMAN	Koodaideri, KBH35 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	23/10/2013	FAUNASURVEY	Certain	Survey	Unknown	19	JUNA DOWNS	Koodaideri, RC11KOD0018 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	24/10/2013	FAUNASURVEY	Certain	Survey	Unknown	30	JUNA DOWNS	Koodaideri, RC11KOD0018 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	24/10/2013	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, Aditk75W - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/10/2013	FAUNASURVEY	Certain	Survey	Unknown	249	NEWMAN	Koodaideri Spring, KSM-SM2-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/10/2013	FAUNASURVEY	Certain	Survey	Unknown	26	NEWMAN	Koodaideri Spring, KSM-SM2-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/10/2013	FAUNASURVEY	Certain	Survey	Unknown	16	NEWMAN	Koodaideri Spring, KSM-SM2-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/10/2013	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri Spring, KSM-SM2-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/10/2013	FAUNASURVEY	Certain	Survey	Unknown	36	NEWMAN	Koodaideri Spring, KSM-SM2-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/10/2013	FAUNASURVEY	Certain	Survey	Unknown	117	NEWMAN	Koodaideri Spring, KSM-SM2-06 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	06/03/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KSD1SM2-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	04/03/2014	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KSD2SM2-07 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	05/03/2014	FAUNASURVEY	Certain	Survey	Unknown	6	NEWMAN	Koodaideri, KSD2SM2-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	06/03/2014	FAUNASURVEY	Certain	Survey	Unknown	5	NEWMAN	Koodaideri, KSD2SM2-11 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	06/03/2014	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KSD3SM2-17 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	04/03/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KSD4SM2-20 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	05/03/2014	FAUNASURVEY	Certain	Survey	Unknown	11	NEWMAN	Koodaideri, KSD4SM2-22 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	07/03/2014	FAUNASURVEY	Certain	Survey	Unknown	2	NEWMAN	Koodaideri, KSD2SM2-07 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	08/03/2014	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KSD2SM2-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/03/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KSD2SM2-11 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	07/03/2014	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KSD3SM2-14 - SM2 Recording

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<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	2	NEWMAN	Koodaideri Springs, KSM-SM2-10 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-06 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, KSM-SM2-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1318	JUNA DOWNS	Koodaideri, K75W Roost - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1201	JUNA DOWNS	Koodaideri, K75W Roost - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1185	JUNA DOWNS	Koodaideri, K75W Roost - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1152	JUNA DOWNS	Koodaideri, K75W Roost - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1150	JUNA DOWNS	Koodaideri, K75W Roost - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/11/2015	FAUNASURVEY	Certain	Survey	Unknown	171	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	155	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	14/11/2015	FAUNASURVEY	Certain	Survey	Unknown	153	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	146	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	129	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	16/11/2015	FAUNASURVEY	Certain	Survey	Unknown	117	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	91	NEWMAN	Koodaideri, Spring Gorge - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	16/03/2016	FAUNASURVEY	Certain	Survey	Unknown	112	JUNA DOWNS	Koodaideri, KODBAT75-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/03/2016	FAUNASURVEY	Certain	Survey	Unknown	104	JUNA DOWNS	Koodaideri, KODBAT75-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/03/2016	FAUNASURVEY	Certain	Survey	Unknown	47	JUNA DOWNS	Koodaideri, KODBAT75-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/11/2015	FAUNASURVEY	Certain	Survey	Unknown	74	NEWMAN	Koodaideri, KODBAT82-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	60	JUNA DOWNS	Koodaideri, KBH12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/11/2015	FAUNASURVEY	Certain	Survey	Unknown	41	NEWMAN	Koodaideri, KODBAT75-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	26	JUNA DOWNS	Koodaideri, KODBAT54-01 - SM2 Recording

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<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/11/2015	FAUNASURVEY	Certain	Survey	Unknown	23	NEWMAN	Koodaideri, KODBAT54-07 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	16	NEWMAN	Koodaideri, KODBAT93-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	16/11/2015	FAUNASURVEY	Certain	Survey	Unknown	15	NEWMAN	Koodaideri, KODBAT54-08 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/11/2015	FAUNASURVEY	Certain	Survey	Unknown	12	NEWMAN	Koodaideri, KODBAT44-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	11	JUNA DOWNS	Koodaideri, KODBAT54-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	JUNA DOWNS	Koodaideri, KODBAT54-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	10	NEWMAN	Koodaideri, KODBAT81-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	Koodaideri, KODBAT81-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	16/11/2015	FAUNASURVEY	Certain	Survey	Unknown	5	NEWMAN	Koodaideri, KODBAT75-08 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	Koodaideri, KODBAT75-08 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	JUNA DOWNS	Koodaideri, KODBAT54-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	Koodaideri, KODBAT81-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	Koodaideri, KODBAT88-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/11/2015	FAUNASURVEY	Certain	Survey	Unknown	4	NEWMAN	Koodaideri, KODBAT75-08 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	3	JUNA DOWNS	Koodaideri, KODBAT75-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KODBAT82-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KODBAT88-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KODBAT44-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	3	NEWMAN	Koodaideri, KODBAT44-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT81-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT44-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	10/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT93-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	NEWMAN	Koodaideri, KODBAT54-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	11/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	NEWMAN	Koodaideri, KODBAT93-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	12/11/2015	FAUNASURVEY	Certain	Survey	Unknown	2	NEWMAN	Koodaideri, KODBAT75-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/03/2016	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KODBAT40-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/03/2016	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KODBAT40-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	19/03/2016	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT40-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/03/2016	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT97-01 - SM2 Recording

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<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	16/03/2016	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KODBAT97-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	18/03/2016	FAUNASURVEY	Certain	Survey	Unknown	2	JUNA DOWNS	Koodaideri, KODBAT97-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KODBAT75-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	13/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KODBAT82-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	14/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KODBAT82-06 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	15/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KODBAT82-07 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	17/11/2015	FAUNASURVEY	Certain	Survey	Unknown	1	JUNA DOWNS	Koodaideri, KODBAT81-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	16	NEWMAN	Koodaideri, KSM-SM2-01 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	19	NEWMAN	Koodaideri, KSM-SM2-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	6	NEWMAN	Koodaideri, KSM-SM2-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	4	NEWMAN	Koodaideri, KSM-SM2-04 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	9	NEWMAN	Koodaideri, KSM-SM2-05 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	4	NEWMAN	Koodaideri, KSM-SM2-06 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	2	NEWMAN	Koodaideri, KSM-SM2-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	02/06/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	15	NEWMAN	Koodaideri, KSM-SM2-10 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	25/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	2	NEWMAN	Koodaideri, KSM-SM2-11 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	25/05/2016	FAUNASURVEY	Certain	Survey	Acoustic recorder	2	NEWMAN	Koodaideri, KSM-SM2-12 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	25/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ844-02 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ844-19 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ747-25 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ988-31 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ827-39 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	30/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ169-42 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	30/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ724-46 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	30/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ988-48 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	02/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ897-70 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	02/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	1	Koodaideri	KEZ698-72 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	26/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ654-09 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ827-23 - SM2 Recording

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<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ654-26 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ684-34 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	30/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ747-43 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ844-49 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	02/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	2	Koodaideri	KEZ781-65 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	3	Koodaideri	KEZ314-30 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	3	Koodaideri	KEZ314-64 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	26/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	4	Koodaideri	KEZ988-10 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	4	Koodaideri	KEZ698-52 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	5	Koodaideri	KEZ897-17 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	28/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	5	Koodaideri	KEZ738-28 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	25/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ685-03 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ685-35 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ844-38 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ169-57 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ982-60 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	6	Koodaideri	KEZ654-63 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	8	Koodaideri	KEZ698-37 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	31/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	9	Koodaideri	KEZ781-51 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	11	Koodaideri	KEZ897-36 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	25/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	15	Koodaideri	KEZ897-08 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	15	Koodaideri	KEZ738-61 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	27/05/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	29	Koodaideri	KEZ698-18 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	01/06/2017	FAUNASURVEY_WLS	Certain		Echolocation recording	187	Koodaideri	KEZ988-58 - SM2 Recording
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	JUNA DOWNS
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	JUNA DOWNS
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	JUNA DOWNS
<i>Rhinonictes aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1	JUNA DOWNS	JUNA DOWNS

SCI_NAME	COM_NAME	CLASS	WA status	EPBC status	Date	SOURCE	CERTAINTY	OBS_METHOD	OBS_TYPE	COUNT	LOCALITY	SITE
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	09/08/2010	WAM_MAMMALS	WAM Vouchered	Collection	Specimen	1		
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	02/06/2017	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 02/06/2017.1
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	26/05/2017	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 26/05/2017.2
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/05/2017	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 29/05/2017.3
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	29/08/2017	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 118.97432 - 22.516064 29/08/2017
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	21/07/2017	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 118.998947 - 22.530173 21/07/2017
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	23/12/2018	WL_REG17		Survey		0		Rhinonictoris aurantia (Pilbara) 119.057325 - 22.539875 23/12/2018
<i>Rhinonictoris aurantia (Pilbara)</i>	Pilbara leaf-nosed bat	MAMMAL	VU	VU	03/10/2018	WL_REG17		Survey		0		Rhinonictoris aurantius 119.0006 - 22.5299 03/10/2018.13
<i>Ctenotus uber johnstonei</i>	spotted Ctenotus (northeast)	REPTILE	P2		01/05/2001	TFAUNA	Certain	Survey	Caught or trapped	2	Fortescue Valley	Fortescue Valley, proposed Hope Downs rail corridor.
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	29/03/2011	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDD21
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	28/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDD21
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	11/08/2010	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri, KDD21
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	30/10/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSMOPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	30/10/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSMOPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	02/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSMOPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	03/11/2013	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Spring, KSMOPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	31/10/2013	FAUNASURVEY	Moderately certain	Survey	Secondary sign	0	NEWMAN	Koodaideri Spring, KSMOPP - Scats
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	07/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	07/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	09/05/2014	FAUNASURVEY	Certain	Survey	Unknown	1	NEWMAN	Koodaideri Springs, OPP
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	11/02/2013	TFAUNA	Certain	Opportunistic sighting	Day sighting	1	Mulga Downs	Fortescue Marsh Land System on Mulga Downs Station near the old fenceline between Mulga Downs and Hillside Stations approximately 1km SE of Goman Pool

SCI_NAME	COM_NAME	CLASS	WA status	EPBC status	Date	SOURCE	CERTAINTY	OBS_METHOD	OBS_TYPE	COUNT	LOCALITY	SITE
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	19/09/1980	WAM_REPTILES	WAM Vouchered	Collection	Specimen	1	NEWMAN	MARILLANA HS
<i>Liasis olivaceus barroni</i>	Pilbara olive python	REPTILE	VU	VU	19/09/1980	WAM_REPTILES	WAM Vouchered	Collection	Specimen	1		MARILLANA HS

NatureMap Species Report

Created By Guest user on 30/08/2021

Kingdom Animalia
Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 119° 22' 29" E, 22° 43' 01" S
Buffer 40km

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1.	<i>Ablabesmyia notabilis</i>			
2.	24559 <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)			
3.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
4.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
5.	24264 <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)			
6.	24265 <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)			
7.	25332 <i>Acanthophis wellsi</i> (Pilbara Death Adder)			
8.	<i>Acariformes</i> sp.			
9.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
10.	24281 <i>Accipiter cirrocephalus</i> subsp. <i>cirrocephalus</i> (Collared Sparrowhawk)			
11.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
12.	<i>Achnanthis minutissima</i> (Kütz.) Czarnecki			
13.	25755 <i>Acrocephalus australis</i> (Australian Reed Warbler)			
14.	<i>Adelotopus laevis</i>			
15.	25544 <i>Aegotheles cristatus</i> (Australian Owllet-nightjar)			
16.	<i>Aeolosoma</i> sp. 1 (PSS)			
17.	<i>Aeolosoma</i> sp. 3 (PSS)			
18.	<i>Aeolosoma</i> sp. 4 (cf <i>travancorensis</i>) (PSS)			
19.	<i>Aeshnidae</i> sp.			
20.	<i>Ainudrilus</i> sp. WA26 (PSS)			Y
21.	<i>Allodessus bistrigatus</i>			
22.	<i>Allonais paraguayensis</i>			
23.	<i>Allonais pectinata</i>			
24.	<i>Alluaudomyia</i> sp.			
25.	<i>Alona</i> (cf.) n. sp. a (PSW)			Y
26.	<i>Alona</i> cf. <i>verrucosa</i>			
27.	<i>Amblyomma triguttatum</i>			
28.	<i>Ameiridae</i> sp.			
29.	<i>Amniataba percoides</i>			
30.	30833 <i>Amphibolurus longirostris</i> (Long-nosed Dragon)			
31.	<i>Amphipoda</i> sp.			
32.	<i>Amphora coffeaeformis</i> (Ag.) Kütz.			
33.	<i>Amphora veneta</i> Kütz.			
34.	<i>Ampullacypris?</i> sp. nov. 469 (CB)			
35.	25647 <i>Amytornis striatus</i> (Striated Grasswren)			
36.	24540 <i>Amytornis striatus</i> subsp. <i>whitei</i> (Rufous Grasswren)			
37.	<i>Aname mellosa</i>			
38.	24312 <i>Anas gracilis</i> (Grey Teal)			
39.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
40.	<i>Anax papuensis</i>			
41.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
42.	44634 <i>Anilius ganei</i> (Gane's blind snake (Pilbara))		P1	
43.	<i>Anisops canaliculatus</i>			
44.	<i>Anisops hackeri</i>			
45.	<i>Anisops thienemanni</i>			
46.	<i>Anomoeoneis styriaca</i> (Grun.) Hust.			
47.	<i>Anopheles annulipes</i> s.l.			
48.	25318 <i>Antaresia perthensis</i> (Pygmy Python)			
49.	25448 <i>Antaresia stimsoni</i> (Stimson's Python)			
50.	25241 <i>Antaresia stimsoni</i> subsp. <i>stimsoni</i> (Stimson's Python)			
51.	25670 <i>Anthus australis</i> (Australian Pipit)			
52.	24599 <i>Anthus australis</i> subsp. <i>australis</i> (Australian Pipit)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
53.	<i>Antichiropus</i> sp.			
54.	<i>Aphanoneura</i> sp.			
55.	25528 <i>Aphelocephala leucopsis</i> (Southern Whiteface)			
56.	25554 <i>Apus pacificus</i> (Fork-tailed Swift, Pacific Swift)		IA	
57.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
58.	<i>Arcella discoides</i>			
59.	<i>Arcella</i> sp.			
60.	24337 <i>Ardea garzetta</i> subsp. <i>nigripes</i> (Little Egret)			
61.	41324 <i>Ardea modesta</i> (great egret, white egret)			
62.	24340 <i>Ardea novaehollandiae</i> (White-faced Heron)			
63.	24341 <i>Ardea pacifica</i> (White-necked Heron)			
64.	24610 <i>Ardeotis australis</i> (Australian Bustard)			
65.	<i>Argiocnemis rubescens</i>			
66.	<i>Argiope protensa</i>			
67.	<i>Armatalona macrocopa</i>			
68.	<i>Arrenurus</i> sp. nov. 1 (PSS)			Y
69.	25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)			
70.	24352 <i>Artamus cinereus</i> subsp. <i>melanops</i> (Black-faced Woodswallow)			
71.	24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)			
72.	24355 <i>Artamus minor</i> (Little Woodswallow)			
73.	24356 <i>Artamus personatus</i> (Masked Woodswallow)			
74.	<i>Arthrorhabdus paucispinus</i>			
75.	<i>Asadipus yundamindra</i>			
76.	<i>Aspidobates pilbara</i>			
77.	25320 <i>Aspidites melanocephalus</i> (Black-headed Python)			
78.	<i>Asplanchna sieboldi</i>			
79.	<i>Atopobathynella</i> sp.			
80.	<i>Aulacoseira ambigua</i>			
81.	<i>Australiobates</i> n. sp. (PSS)			
82.	<i>Australiobates queenslandensis</i>			
83.	<i>Australiobates</i> sp. P3 (nr <i>crassisetus</i>) (PSW)			
84.	<i>Australoencyclops karaytugi</i> (ex <i>Paracyclops</i> sp. 7)			
85.	<i>Australutica</i> sp. 1			
86.	<i>Austraturus</i> sp. P1 (PSW)			
87.	<i>Austroagrimon pindrina</i> /Ischnura heterosticta			
88.	<i>Austrodytes insularis</i>			
89.	<i>Austroepigomphus</i> (<i>Xerogomphus</i>) <i>gordoni</i>			
90.	<i>Austrolimnius</i> WA sp. 2 (= adult sp WA 2) (PSW)			
91.	<i>Austropeplea lessoni</i>			
92.	<i>Austrostrophus stictopygus</i>			
93.	<i>Axonopsella</i> nr <i>truza</i> (PSW)			
94.	24318 <i>Aythya australis</i> (Hardhead)			
95.	<i>Baetidae</i> sp.			
96.	<i>Barnardius zonarius</i>			
97.	<i>Bathynella</i> sp.			
98.	<i>Bdelloidea</i> sp.			
99.	<i>Bdelloidea</i> sp. 2:2			
100.	<i>Bdelloidea</i> sp. 6:6			
101.	<i>Belostomatidae</i> sp.			
102.	<i>Bennelongia barangaroo</i> lineage			
103.	<i>Bennelongia coondinerensis</i>			
104.	<i>Bennelongia nimala</i>			
105.	<i>Bennelongia pinderi</i>			
106.	<i>Bennelongia</i> sp.			
107.	<i>Berosus dallasae</i>			
108.	<i>Berosus pulchellus</i>			
109.	<i>Berosus</i> sp.			
110.	<i>Bezzia</i> sp.			
111.	<i>Bezzia</i> sp. 1 (SAP)			
112.	<i>Bezzia</i> sp. 2 (SAP)			
113.	<i>Bidessini</i> sp.			
114.	<i>Bigenditia zuytdorp</i>			
115.	<i>Boeckella triarticulata</i>			
116.	<i>Boongurrus occidentalis</i>			
117.	<i>Boongurrus</i> sp.			Y
118.	24251 <i>Bos taurus</i> (European Cattle)	Y		
119.	<i>Brachionus angularis</i>			
120.	<i>Brachionus calyciflorus</i>			
121.	<i>Brachionus dichotomus</i>			
122.	<i>Brachionus quadridentatus</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
123.	<i>Brachionus quadridentatus minor</i>			
124.	25331 <i>Brachyurophis approximans</i> (North-western Shovel-nosed Snake)			
125.	<i>Branchinella affinis</i>			
126.	24252 <i>Bubalus bubalis</i> (Water Buffalo)	Y		
127.	<i>Buddelundia</i> sp.			
128.	24359 <i>Burhinus grallarius</i> (Bush Stone-curlew)			
129.	25715 <i>Cacatua roseicapilla</i> (Galah)			
130.	24725 <i>Cacatua roseicapilla</i> subsp. <i>assimilis</i> (Galah)			
131.	24726 <i>Cacatua roseicapilla</i> subsp. <i>roseicapilla</i> (Galah)			
132.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
133.	24727 <i>Cacatua sanguinea</i> subsp. <i>westralensis</i> (Little Corella)			
134.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
135.	<i>Caenidae</i> sp.			
136.	24269 <i>Calamanthus campestris</i> (Rufous Fieldwren)			
137.	<i>Calamoecia baylyi</i> (Cue form) (ex nr <i>Lucasi</i> CB)			
138.	<i>Calamoecia halsei</i>			
139.	<i>Caloneis bacillum</i> (Grun.) Cl.			
140.	24254 <i>Camelus dromedarius</i> (Dromedary, Camel)	Y		
141.	<i>Candonocypris fitzroyi</i>			
142.	<i>Candonopsis</i> cf. <i>tenuis</i> (PSS)			
143.	<i>Carenum pulchrum</i>			
144.	<i>Carenum subplanatum</i>			
145.	25015 <i>Carlia munda</i> (Shaded-litter Rainbow Skink)			
146.	25017 <i>Carlia triacantha</i> (Desert Rainbow Skink)			
147.	<i>Catadromus lacordairei</i>			
148.	25600 <i>Centropus phasianinus</i> (Pheasant Coucal)			
149.	<i>Centropyxis ecomis</i>			
150.	<i>Cephalodella gibba</i>			
151.	<i>Cephalodella panarista</i>			
152.	<i>Ceratopogonidae</i> sp.			
153.	<i>Ceriodaphnia cornuta</i>			
154.	24564 <i>Certhionyx variegatus</i> (Pied Honeyeater)			
155.	24181 <i>Chaerephon jobensis</i> (Greater Northern Freetail-bat, Northern Mastiff Bat)			
156.	24186 <i>Chalinolobus gouldii</i> (Gould's Wattled Bat)			
157.	24187 <i>Chalinolobus morio</i> (Chocolate Wattled Bat)			
158.	<i>Chaoborus punctilliger</i>			
159.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
160.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
161.	<i>Cheumatopsyche wellsae</i>			
162.	<i>Chimarra</i> sp AV17 (PSW)			
163.	<i>Chironominae</i> sp.			
164.	<i>Chironomus</i> aff. <i>alternans</i> (V24) (CB)			
165.	<i>Chlaenius australis</i>			
166.	24431 <i>Chrysococcyx basalis</i> (Horsfield's Bronze Cuckoo)			
167.	24434 <i>Chrysococcyx osculans</i> (Black-eared Cuckoo)			
168.	<i>Chydaekata</i> sp.			
169.	<i>Chydorus eurynotus</i>			
170.	25580 <i>Cinclosoma castaneothorax</i> (Chestnut-breasted Quail-thrush)			
171.	24288 <i>Circus approximans</i> (Swamp Harrier)			
172.	24289 <i>Circus assimilis</i> (Spotted Harrier)			
173.	<i>Cladotanytarsus</i> aff K4 (PSW)			
174.	<i>Clinohalea</i> sp.			
175.	<i>Cloeon</i> sp.			
176.	<i>Cloeon</i> sp. P1 (PSW)			
177.	<i>Cnephia</i> nr <i>aurantiacum</i>			
178.	<i>Cocconeis placentula</i> var. <i>euglypta</i> ehr.			
179.	<i>Coelopynia pruinosa</i>			
180.	<i>Coenagrionidae</i> sp.			
181.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
182.	24613 <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)			
183.	<i>Conopterum leai</i>			
184.	<i>Conopterum pyripenne</i>			
185.	24361 <i>Coracina maxima</i> (Ground Cuckoo-shrike)			
186.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
187.	24362 <i>Coracina novaehollandiae</i> subsp. <i>novaehollandiae</i> (Black-faced Cuckoo-shrike)			
188.	24363 <i>Coracina novaehollandiae</i> subsp. <i>subpallida</i> (Black-faced Cuckoo-shrike)			
189.	<i>Corduliidae</i> sp.			
190.	<i>Corixidae</i> sp.			
191.	<i>Cormocephalus strigosus</i>			
192.	<i>Cormocephalus turneri</i>			

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193.	24416 <i>Corvus bennetti</i> (Little Crow)			
194.	25592 <i>Corvus coronoides</i> (Australian Raven)			
195.	25593 <i>Corvus orru</i> (Torresian Crow)			
196.	24418 <i>Corvus orru</i> subsp. <i>ceciliae</i> (Western Crow)			
197.	24419 <i>Corvus splendens</i> (House Crow)			
198.	<i>Corynoneura</i> sp. P2 (PSW)			
199.	25701 <i>Coturnix ypsilophora</i> (Brown Quail)			
200.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
201.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
202.	24422 <i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
203.	24423 <i>Cracticus tibicen</i> subsp. <i>tibicen</i> (Black-backed Magpie)			
204.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
205.	<i>Craticula cuspidata</i> (Grun. ex. Van Heurck) Mann			
206.	<i>Craticula halophila</i> (Grun. ex. Van Heurck) Mann			
207.	25456 <i>Crenadactylus ocellatus</i> (Clawless Gecko)			
208.	24919 <i>Crenadactylus ocellatus</i> subsp. <i>horni</i> (Clawless Gecko)			
209.	24921 <i>Crenadactylus ocellatus</i> subsp. <i>rostralis</i> (Clawless Gecko)			
210.	30893 <i>Cryptoblepharus buchananii</i>			
211.	25020 <i>Cryptoblepharus plagiocephalus</i>			
212.	30892 <i>Cryptoblepharus ustulatus</i>			
213.	<i>Cryptochironomus griseidorsum</i>			
214.	25458 <i>Ctenophorus caudicinctus</i> (Ring-tailed Dragon)			
215.	24865 <i>Ctenophorus caudicinctus</i> subsp. <i>caudicinctus</i> (Ring-tailed Dragon)			
216.	25459 <i>Ctenophorus isolepis</i> (Crested Dragon, Military Dragon)			
217.	24874 <i>Ctenophorus isolepis</i> subsp. <i>citrinus</i> (Yellow Military Dragon)			
218.	24875 <i>Ctenophorus isolepis</i> subsp. <i>gularis</i> (Central Military Dragon)			
219.	24876 <i>Ctenophorus isolepis</i> subsp. <i>isolepis</i> (Crested Dragon, Military Dragon)			
220.	24882 <i>Ctenophorus nuchalis</i> (Central Netted Dragon)			
221.	24886 <i>Ctenophorus reticulatus</i> (Western Netted Dragon)			
222.	25025 <i>Ctenotus ariadnae</i>			
223.	25026 <i>Ctenotus atlas</i>			
224.	25036 <i>Ctenotus duricola</i>			
225.	25462 <i>Ctenotus grandis</i>			
226.	25041 <i>Ctenotus grandis</i> subsp. <i>grandis</i>			
227.	25043 <i>Ctenotus grandis</i> subsp. <i>titan</i>			
228.	25042 <i>Ctenotus greeri</i>			
229.	25044 <i>Ctenotus hanloni</i>			
230.	25045 <i>Ctenotus helenae</i>			
231.	25048 <i>Ctenotus inornatus</i>			
232.	25052 <i>Ctenotus leonhardii</i>			
233.	25463 <i>Ctenotus pantherinus</i> (Leopard Ctenotus)			
234.	25060 <i>Ctenotus pantherinus</i> subsp. <i>acripes</i> (Leopard Ctenotus)			
235.	25064 <i>Ctenotus pantherinus</i> subsp. <i>ocellifer</i> (Leopard Ctenotus)			
236.	25065 <i>Ctenotus pantherinus</i> subsp. <i>pantherinus</i> (Leopard Ctenotus)			
237.	25066 <i>Ctenotus quattuordecimlineatus</i>			
238.	25072 <i>Ctenotus rubicundus</i>			
239.	25071 <i>Ctenotus rutilans</i>			
240.	25073 <i>Ctenotus saxatilis</i> (Rock Ctenotus)			
241.	25074 <i>Ctenotus schomburgkii</i>			
242.	25077 <i>Ctenotus serventyi</i>			
243.	25465 <i>Ctenotus uber</i> (Spotted Ctenotus)			
244.	<i>Culex crinicauda</i>			
245.	<i>Culicidae</i> sp.			
246.	<i>Culicoides?</i> sp P4 (PSW)			
247.	<i>Curculionidae</i> sp.			
248.	<i>Cybister tripunctatus</i>			
249.	25466 <i>Cyclodomorphus melanops</i> (Slender Blue-tongue)			
250.	25089 <i>Cyclodomorphus melanops</i> subsp. <i>elongatus</i> (Slender Blue-tongue)			
251.	25090 <i>Cyclodomorphus melanops</i> subsp. <i>melanops</i> (Slender Blue-tongue)			
252.	25375 <i>Cyclorana maini</i> (Sheep Frog)			
253.	24322 <i>Cygnus atratus</i> (Black Swan)			
254.	<i>Cymbella affinis</i> Kütz.			
255.	<i>Cymbella cymbiformis</i> Ag.			
256.	<i>Cymbella delicatula</i> Kütz.			
257.	<i>Cymbella falaisensis</i> (Grun.) Krammer & Lange-Bertalot			
258.	<i>Cymbella pusilla</i> Grun.			
259.	<i>Cymbella</i> sp.			Y
260.	<i>Cypretta baylyi</i>			
261.	<i>Cypretta seurati</i>			
262.	<i>Cypretta</i> sp.			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
263.	<i>Cypretta</i> sp. BOS080			
264.	<i>Cypricerus salinus</i>			
265.	<i>Cypricerus</i> sp. 911 (FVS)			
266.	25547 <i>Dacelo leachii</i> (Blue-winged Kookaburra)			
267.	24304 <i>Dacelo leachii</i> subsp. <i>leachii</i> (Blue-winged Kookaburra)			
268.	30903 <i>Dasyercus blythi</i> (Brush-tailed Mulgara, Ampurta)		P4	
269.	48395 <i>Dasyercus</i> sp. (mulgara)		P4	
270.	<i>Dasyheleinae</i> sp. P1 (PSW)			
271.	<i>Dasyheleinae</i> sp. P2 (PSW)			
272.	24091 <i>Dasykaluta rosamondae</i> (Little Red Kaluta)			
273.	24092 <i>Dasyurus geoffroi</i> (Chuditch, Western Quoll)		T	
274.	24093 <i>Dasyurus hallucatus</i> (Northern Quoll)		T	
275.	24997 <i>Delma butleri</i>			
276.	24998 <i>Delma elegans</i>			
277.	25000 <i>Delma haroldi</i>			
278.	25001 <i>Delma nasuta</i>			
279.	25002 <i>Delma pax</i>			
280.	25004 <i>Delma tincta</i>			
281.	25468 <i>Demansia psammophis</i> (Yellow-faced Whipsnake)			
282.	25295 <i>Demansia psammophis</i> subsp. <i>cupreiceps</i> (Yellow-faced Whipsnake)			
283.	25297 <i>Demansia rufescens</i> (Rufous Whipsnake)			
284.	<i>Deminutiocandona mica</i>			Y
285.	<i>Deminutiocandona</i> sp. 1' (PSS)			
286.	24325 <i>Dendrocygna eytoni</i> (Plumed Whistling Duck)			
287.	<i>Dero</i> WA3 (cf. <i>sawayai</i>)			
288.	<i>Dero furcata</i>			
289.	<i>Diacyclops cockingi</i>			
290.	<i>Diacyclops humphreysi humphreysi</i>			
291.	<i>Diacyclops scanloni</i>			
292.	<i>Diacyclops sobeprolatus</i>			
293.	<i>Diacyclops</i> sp.			
294.	<i>Diaphanosoma</i> cf. <i>sarsi</i>			
295.	<i>Diaphanosoma excisum</i>			
296.	25607 <i>Dicaeum hiruandaceum</i> (Mistletoebird)			
297.	<i>Dicranophorus epicharis</i>			
298.	<i>Dicrotendipes</i> 'CA1' Pilbara type 3 (= 'K4', P3) (PSW)			
299.	<i>Dicrotendipes jobetus</i>			
300.	<i>Dicrotendipes p6</i>			
301.	<i>Dicrotendipes</i> sp P4 (PSW)			
302.	<i>Diffugia corona</i>			
303.	<i>Diffugia</i> sp. P1			
304.	<i>Diplacodes bipunctata</i>			
305.	<i>Diplacodes haematodes</i>			
306.	<i>Diplacodes</i> sp.			
307.	24926 <i>Diplodactylus conspicillatus</i> (Fat-tailed Gecko)			
308.	24940 <i>Diplodactylus pulcher</i>			
309.	24944 <i>Diplodactylus savagei</i> (Southern Pilbara Beak-faced Gecko)			
310.	<i>Diplonychus eques</i>			
311.	<i>Diplopoda</i> sp.			
312.	<i>Dissotrocha</i> n. sp. (Pilbara stygo)			
313.	<i>Djalmabatista</i> sp.			
314.	<i>Dolichopodidae</i> sp.			
315.	24470 <i>Dromaius novaehollandiae</i> (Emu)			
316.	<i>Dytiscidae</i> sp.			
317.	<i>Ecnomidae</i> sp.			
318.	<i>Ecnomus pilbarensis</i>			
319.	<i>Ecnomus</i> sp.			
320.	<i>Ectocyclops phaleratus</i>			
321.	25094 <i>Egernia formosa</i>			
322.	<i>Egretta garzetta</i>			
323.	<i>Egretta novaehollandiae</i>			
324.	<i>Elanus axillaris</i>			
325.	25540 <i>Elanus caeruleus</i> (Black-shouldered Kite)			
326.	24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
327.	<i>Elaphoidella</i> sp. 2 (PSS)			
328.	47937 <i>Elsyornis melanops</i> (Black-fronted Dotterel)			
329.	24631 <i>Emblema pictum</i> (Painted Finch)			
330.	<i>Empididae</i> sp.			
331.	<i>Encentridophorus sarasini</i>			
332.	<i>Enchytraeus Pilbara</i> sp. 2 (PSS)			

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333.	<i>Eodiaptomus lumholtzi</i>			
334.	<i>Eolimna minima</i> (Grun.) Lange-Bertalot			
335.	<i>Eolophus roseicapillus</i>			
336.	<i>Eosphora najas</i>			
337.	<i>Ephemeroporus barroisi</i> s.l.			
338.	<i>Ephydriidae</i> sp.			
339.	24568 <i>Epthianura aurifrons</i> (Orange Chat)			
340.	24570 <i>Epthianura tricolor</i> (Crimson Chat)			
341.	24257 <i>Equus asinus</i> (Donkey)	Y		
342.	24258 <i>Equus caballus</i> (Horse)	Y		
343.	42404 <i>Eremiascincus isolepis</i>			
344.	43381 <i>Eremiascincus pallidus</i> (Western Narrow-banded Skink, Narrow-banded Sand Swimmer)			
345.	25109 <i>Eremiascincus richardsonii</i> (Broad-banded Sand Swimmer)			
346.	24837 <i>Eremiornis carteri</i> (Spinifex-bird)			
347.	<i>Eretes australis</i>			
348.	24379 <i>Erythrogonys cinctus</i> (Red-kneed Dotterel)			
349.	<i>Ethmostigmus curtipes</i>			
350.	<i>Euchlanis dilatata</i>			
351.	<i>Euchlanis oropha</i>			
352.	<i>Euchlanis</i> sp. A FVS			
353.	<i>Eucyclops australiensis</i>			
354.	<i>Euglypha</i> sp.			
355.	<i>Eunotia pectinatus</i> (Dillw.) Rabh.			
356.	24368 <i>Eurostopodus argus</i> (Spotted Nightjar)			
357.	<i>Eurysticta coolawanyah</i>			
358.	<i>Eylais</i> sp.			
359.	25621 <i>Falco berigora</i> (Brown Falcon)			
360.	24471 <i>Falco berigora</i> subsp. <i>berigora</i> (Brown Falcon)			
361.	25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
362.	24472 <i>Falco cenchroides</i> subsp. <i>cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
363.	24473 <i>Falco hypoleucos</i> (Grey Falcon)		T	
364.	25623 <i>Falco longipennis</i> (Australian Hobby)			
365.	24474 <i>Falco longipennis</i> subsp. <i>longipennis</i> (Australian Hobby)			
366.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
367.	24041 <i>Felis catus</i> (Cat)	Y		
368.	<i>Ferrisia</i> sp.			
369.	<i>Filinia longiseta</i>			
370.	<i>Fragilaria capucina</i> Desm.			
371.	<i>Fragilaria ulna</i> (Nitz.) Lange Bertalot			
372.	24761 <i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
373.	25301 <i>Furina ornata</i> (Moon Snake)			
374.	25730 <i>Gallirallus philippensis</i> (Buff-banded Rail)			
375.	42314 <i>Gavicalis virescens</i> (Singing Honeyeater)			
376.	24953 <i>Gehyra montium</i>			
377.	24956 <i>Gehyra pilbara</i>			
378.	24958 <i>Gehyra punctata</i>			
379.	24957 <i>Gehyra purpurascens</i>			
380.	24959 <i>Gehyra variegata</i>			
381.	24401 <i>Geopelia cuneata</i> (Diamond Dove)			
382.	25585 <i>Geopelia striata</i> (Zebra Dove)			
383.	24403 <i>Geopelia striata</i> subsp. <i>placida</i> (Peaceful Dove)			
384.	24404 <i>Geophaps plumifera</i> (Spinifex Pigeon)			
385.	<i>Geoscaptus laevis</i>			
386.	<i>Gerridae</i> sp.			
387.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
388.	24271 <i>Gerygone fusca</i> subsp. <i>fusca</i> (Western Gerygone)			
389.	47959 <i>Gerygone fusca</i> subsp. <i>mungi</i> (Desert Gerygone)			
390.	<i>Glossiphoniidae</i> sp.			
391.	<i>Glyptophysa</i> sp			
392.	<i>Gnathaphanus melbournensis</i>			
393.	<i>Gomphidae</i> sp.			
394.	<i>Gomphodella</i> sp. 4 (PSS)			
395.	<i>Gomphonema parvulum</i> (Kütz.) Kütz.			
396.	<i>Gondwanabates nr bodivus</i> (PSW)			
397.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
398.	24571 <i>Grantiella picta</i> (Painted Honeyeater)			
399.	<i>Guineaxonopsis</i> sp. P1 (PSW)			
400.	<i>Gyraulus hesperus</i>			
401.	<i>Gyrinidae</i> sp.			

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402.	<i>Gyrosigma attenuatum</i> (Kütz.) Rabh.			
403.	<i>Gyrosigma nodiferum</i>			
404.	24293 <i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)			
405.	24295 <i>Haliastur sphenurus</i> (Whistling Kite)			
406.	<i>Halipilus halsei</i>			
407.	<i>Halipilus</i> sp.			
408.	24296 <i>Hamirostra isura</i> (Square-tailed Kite)			
409.	24297 <i>Hamirostra melanosternon</i> (Black-breasted Buzzard)			
410.	<i>Hantzschia amphioxys</i> (Ehr.) Grun.			
411.	<i>Harpacticoida</i> sp			
412.	<i>Hebridae</i> sp.			
413.	<i>Hellyethira litua</i>			
414.	<i>Hellyethira</i> sp.			
415.	<i>Hellyethira vernoni</i>			
416.	<i>Helochares/E mastersi</i> larvae			
417.	<i>Hemicordulia intermedia</i>			
418.	<i>Hemicordulia tau</i>			
419.	<i>Hesperomomonie humphreysi</i>			
420.	24961 <i>Heteronotia binoei</i> (Bynoe's Gecko)			
421.	24962 <i>Heteronotia spelea</i> (Desert Cave Gecko, Pilbara Cave Gecko)			
422.	<i>Heteronyx tepperi</i>			
423.	<i>Heteropoda marillana</i>			Y
424.	<i>Hexarthra mira</i>			
425.	47965 <i>Hieraaetus morphnoides</i> (Little Eagle)			
426.	25734 <i>Himantopus himantopus</i> (Black-winged Stilt)			
427.	<i>Hoggicosa bicolor</i>			
428.	<i>Humphreyscandona woutersi</i>			
429.	<i>Hydaticus consanguineus</i>			
430.	<i>Hydra</i> sp.			
431.	<i>Hydraena barbipes</i>			
432.	<i>Hydraenidae</i> sp.			
433.	<i>Hydrochus eurypleuron</i>			
434.	<i>Hydrochus lateviridus</i>			
435.	<i>Hydrochus obsкуроaeneus</i>			
436.	<i>Hydrochus</i> sp.			
437.	<i>Hydrodroma</i> sp.			
438.	<i>Hydroglyphus grammopterus</i> (=trilineatus)			
439.	<i>Hydroglyphus leai</i>			
440.	<i>Hydroglyphus orthogrammus</i>			
441.	<i>Hydrophiliidae</i> sp.			
442.	<i>Hydropsychidae</i> sp.			
443.	<i>Hydroptilidae</i> sp.			
444.	<i>Hyphydrus lyratus</i>			
445.	<i>Ictinogomphus dobsoni</i>			
446.	<i>Ilyocyptus cf. raridentatus</i> (PSW)			Y
447.	<i>Ilyodromus FVS1</i> (=sp. 845 of SAH)			
448.	<i>Ilyodromus</i> sp BOS25			
449.	<i>Ilyodromus</i> sp. PB			
450.	<i>Ilyodromus viridulus</i>			
451.	<i>Indolpium</i> sp.			
452.	<i>Inermipes</i> sp. 1 (PSS)			
453.	<i>Ischnura aurora aurora</i>			
454.	<i>Isidorella</i> sp.			
455.	<i>Isocypris williamsi</i> (ex <i>Ilyodromus</i> sp. 413)			
456.	<i>Isostictidae</i> sp.			
457.	<i>Keratella procurva</i>			
458.	<i>Keratella tropica</i>			
459.	<i>Laccobius</i> sp.			
460.	<i>Laccophilus sharpi</i>			
461.	<i>Lacinularia cf. racemovata</i>			
462.	24572 <i>Lacustroica whitei</i> (Grey Honeyeater)			
463.	24367 <i>Lalage tricolor</i> (White-winged Triller)			
464.	<i>Lamponata daviesae</i>			
465.	<i>Lamponina scutata</i>			
466.	<i>Larsia albiceps</i>			
467.	<i>Latonopsis nr australis</i> (Pilbara Corridors)			
468.	<i>Latrodectus hasseltii</i>			
469.	<i>Leberis cf. diaphanus</i>			
470.	<i>Lecane aculeata</i>			
471.	<i>Lecane bulla</i>			

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472.	<i>Lecane haliclysta</i>			
473.	<i>Lecane homemanni</i>			
474.	<i>Lecane levistyla</i>			
475.	<i>Lecane luna</i>			
476.	<i>Lecane lunaris</i>			
477.	<i>Lecane obtusa</i>			
478.	<i>Lecane papuana</i>			
479.	<i>Lecane sp. s.str.</i>			
480.	<i>Lecane thalera</i>			
481.	<i>Leiopotherapon unicolor</i>			
482.	<i>Lepadella (H.) apsicora</i>			
483.	<i>Lepadella (H.) ehrenbergii</i>			
484.	<i>Lepadella (H.) heterostyla</i>			
485.	<i>Lepadella acuminata</i>			
486.	<i>Lepadella latusinus</i>			
487.	<i>Lepadella ovalis</i>			
488.	<i>Lepadella patella</i>			
489.	<i>Lepadella triptera</i>			
490.	<i>Leptasteron platyconductor</i>			
491.	<i>Leptoceridae sp.</i>			
492.	<i>Leptocerus sp. AV2 (atsou?) (PSW)</i>			
493.	30926 <i>Lerista amicornum</i>			
494.	25125 <i>Lerista bipes</i>			
495.	30929 <i>Lerista jacksoni</i>			
496.	25146 <i>Lerista labialis</i>			
497.	25482 <i>Lerista macropisthopus</i>			
498.	25151 <i>Lerista macropisthopus subsp. fusciceps</i>			
499.	25155 <i>Lerista muelleri</i>			
500.	25156 <i>Lerista neander</i>			
501.	42411 <i>Lerista timida</i>			
502.	30925 <i>Lerista verhmens</i>			
503.	25183 <i>Lerista zietzi</i>			
504.	<i>Lesquereusia spiralis</i>			
505.	25005 <i>Lialis burtonis</i>			
506.	25238 <i>Liasis olivaceus subsp. barroni (Pilbara Olive Python)</i>		T	
507.	<i>Libellulidae sp.</i>			
508.	25661 <i>Lichmera indistincta (Brown Honeyeater)</i>			
509.	24582 <i>Lichmera indistincta subsp. indistincta (Brown Honeyeater)</i>			
510.	<i>Limnebius sp.</i>			
511.	<i>Limnesia parasolida</i>			
512.	<i>Limnesia sp.</i>			
513.	<i>Limnesia sp. 1 (PSW)</i>			
514.	<i>Limnesia sp. 4 (PSW)</i>			
515.	<i>Limnesia sp. 7 (PSW)</i>			
516.	<i>Limnochares australica</i>			
517.	<i>Limnocythere dorsosicula</i>			
518.	<i>Limnogonus luctuosus</i>			
519.	25392 <i>Litoria rubella (Little Red Tree Frog)</i>			
520.	<i>Loxandrus laevigatus</i>			
521.	<i>Loxandrus micantior</i>			
522.	30933 <i>Lucasium stenodactylum</i>			
523.	30934 <i>Lucasium wombeyi</i>			
524.	<i>Lychas sp. 1</i>			
525.	<i>Lychas sp. 2</i>			
526.	<i>Lycidas sp. 1</i>			
527.	<i>Lycidas sp. 2</i>			
528.	<i>Lymnaeidae sp.</i>			
529.	<i>Maarka weeliwoli</i>			Y
530.	<i>Macrochaetus altamirai</i>			
531.	24180 <i>Macroderma gigas (Ghost Bat)</i>		T	
532.	<i>Macrogyrus darlingtoni</i>			
533.	24690 <i>Macronectes giganteus (Southern Giant Petrel)</i>		IA	
534.	25489 <i>Macropus robustus (Euro, Biggada)</i>			
535.	24135 <i>Macropus robustus subsp. erubescens (Euro, Biggada)</i>			
536.	24136 <i>Macropus rufus (Red Kangaroo, Marlu)</i>			
537.	<i>Macrothrix cf. breviseta (PSW)</i>			
538.	<i>Macrothrix indistincta</i>			
539.	<i>Macrothrix n. sp. (Drummond) (SAP)</i>			
540.	24168 <i>Macrotis lagotis (Bilby, Dalgyte, Ninu)</i>		T	
541.	24326 <i>Malacorhynchus membranaceus (Pink-eared Duck)</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
542.	25651 <i>Malurus lamberti</i> (Variegated Fairy-wren)			
543.	24544 <i>Malurus lamberti</i> subsp. <i>assimilis</i> (Variegated Fairy-wren)			
544.	25652 <i>Malurus leucopterus</i> (White-winged Fairy-wren)			
545.	24547 <i>Malurus leucopterus</i> subsp. <i>edouardi</i> (Barrow Island black and white fairy-wren)		T	
546.	24549 <i>Malurus leucopterus</i> subsp. <i>leuconotus</i> (White-winged Fairy-wren)			
547.	24548 <i>Malurus leucopterus</i> subsp. <i>leucopterus</i> (Dirk Hartog black and white fairy-wren)		T	
548.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
549.	<i>Masasteron sampeyae</i>			
550.	<i>Mastogloia elliptica</i> (Ag.) Cl.			
551.	<i>Mastogloia elliptica</i> var. <i>danseii</i> (thwaites) grun.			
552.	<i>Mastogloia smithii</i> Thwaites			
553.	<i>Meedo yarragin</i>			
554.	47997 <i>Melanodryas cucullata</i> (Hooded Robin)			
555.	<i>Melanotaenia australis</i>			
556.	25665 <i>Melithreptus gularis</i> (Black-chinned Honeyeater)			
557.	24589 <i>Melithreptus gularis</i> subsp. <i>laetior</i> (Black-chinned Honeyeater)			
558.	<i>Melitidae</i> sp.			
559.	24736 <i>Melopsittacus undulatus</i> (Budgerigar)			
560.	25184 <i>Menetia greyii</i>			
561.	25491 <i>Menetia surda</i>			
562.	25187 <i>Menetia surda</i> subsp. <i>surda</i>			
563.	<i>Meridiescandona 'marillaneae'</i> (PSS)			Y
564.	<i>Meridiescandona cf. facies</i> (PSS)			
565.	<i>Meridiescandona facies</i> (PSS)			
566.	<i>Meridiescandona</i> sp. 1" (PSS)			Y
567.	<i>Meridiescandona</i> sp. 3' (PSS)			
568.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
569.	<i>Mesocyclops brooksi</i>			
570.	<i>Mesocyclops darwini</i>			
571.	<i>Mesocyclops notius</i>			
572.	<i>Mesostigmata</i> sp.			
573.	<i>Mesovelia vittigera</i>			
574.	<i>Mesoveliidae</i> sp.			
575.	<i>Microcarbo melanoleucos</i>			
576.	<i>Microchironomus 'K1'</i> (PSW)			
577.	<i>Microcyclops varicans</i>			
578.	<i>Micronecta micra</i>			
579.	<i>Micronecta n. sp. P1</i> (PSW)			
580.	<i>Micronecta robusta</i>			
581.	<i>Micronecta</i> sp.			
582.	<i>Microvelia (Austromicrovelia) peramoena</i>			
583.	25542 <i>Milvus migrans</i> (Black Kite)			
584.	24298 <i>Milvus migrans</i> subsp. <i>affinis</i> (Black Kite)			
585.	<i>Minasteron minusculum</i>			
586.	25545 <i>Mirafra javanica</i> (Horsfield's Bushlark, Singing Bushlark)			
587.	24302 <i>Mirafra javanica</i> subsp. <i>horsfieldii</i> (Horsfield's Bushlark, Singing Bushlark)			
588.	<i>Miralona victoriensis</i>			
589.	<i>Missulena faulderi</i>			Y
590.	<i>Mitullodon tarantulinus</i>			
591.	<i>Moina micrura</i> s.l.			
592.	25495 <i>Morethia ruficauda</i>			
593.	25193 <i>Morethia ruficauda</i> subsp. <i>exquisita</i>			
594.	24183 <i>Mormopterus loriae</i> (Little Northern Freetail-bat)			
595.	24223 <i>Mus musculus</i> (House Mouse)	Y		
596.	<i>Mytilina ventralis macracantha</i>			
597.	<i>Naididae</i> (ex <i>Tubificidae</i>)			
598.	<i>Navicula cryptonella</i> Lange-Bertalot			
599.	<i>Navicula leptostriata</i> Jørgensen			
600.	<i>Navicula molestiformis</i> Hust.			
601.	<i>Navicula radiosa</i> Kütz.			
602.	<i>Navicula variostrata</i> Krasske			
603.	<i>Nebela</i> sp.			
604.	<i>Necterosoma regulare</i>			
605.	<i>Nematoda</i> sp.			
606.	<i>Nematoda</i> sp. 12 (PSS)			
607.	<i>Nematoda</i> sp. 4 (PSS)			
608.	<i>Nematoda</i> sp. P2/P4 (PSW)			
609.	<i>Nematoda</i> sp. P3 (PSW)			
610.	<i>Nematoda</i> sp. P8 (PSW)			
611.	<i>Neocandona</i> sp. 1 (PSS)			Y

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612.	25685 <i>Neochmia ruficauda</i> (Star Finch)			
613.	24639 <i>Neochmia ruficauda</i> subsp. <i>clarescens</i> (Star Finch)			
614.	24737 <i>Neophema bourkii</i> (Bourke's Parrot)			
615.	<i>Neopsephotus bourkii</i>			
616.	<i>Neosilurus hyrtlii</i>			
617.	<i>Nephila edulis</i>			
618.	25498 <i>Nephrurus wheeleri</i>			
619.	24972 <i>Nephrurus wheeleri</i> subsp. <i>cinctus</i>			
620.	<i>Nerthra luteovaria</i>			
621.	<i>Neumania</i> sp.			
622.	<i>Nilobezzia</i> sp.			
623.	<i>Nilobezzia</i> sp. P1 (PSW)			
624.	<i>Nilotanypus</i> sp. P1 (PSW)			
625.	24094 <i>Ningai ridei</i> (Wongai Ningai)			
626.	24095 <i>Ningai timealeyi</i> (Pilbara Ningai)			
627.	25747 <i>Ninox connivens</i> (Barking Owl)			
628.	24819 <i>Ninox connivens</i> subsp. <i>connivens</i> (Barking owl (southwest subpop.))		P3	
629.	<i>Nitzschia amphibia</i> Grun.			
630.	<i>Nitzschia angustata</i> Grun.			
631.	<i>Nitzschia capitellata</i>			
632.	<i>Nitzschia filiformis</i> (W. Sm.) Van Heurck			
633.	<i>Nitzschia frustulum</i> (Kütz.) Grun.			
634.	<i>Nitzschia linearis</i> (Ag.) W. Sm.			
635.	<i>Nitzschia palea</i> (Kütz.) W. Sm.			
636.	<i>Nitzschia sigma</i> (Kütz.) W. Sm.			
637.	<i>No invertebrates</i>			
638.	<i>Nososticta</i> sp.			
639.	<i>Notacandona boultoni</i>			Y
640.	<i>Notacandona modesta</i>			Y
641.	<i>Notobathynella</i> sp.			
642.	24224 <i>Notomys alexis</i> (<i>Spinifex</i> Hopping-mouse)			
643.	<i>Notonectidae</i> sp.			
644.	25499 <i>Notoscincus ornatus</i>			
645.	25197 <i>Notoscincus ornatus</i> subsp. <i>ornatus</i>			
646.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			
647.	42365 <i>Nyctophilus daedalus</i> (Northwestern Long-eared Bat, Pallid Long-eared Bat)			
648.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
649.	24742 <i>Nymphicus hollandicus</i> (Cockatiel)			
650.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
651.	<i>Oecetis</i> sp.			
652.	<i>Oecetis</i> sp. Pilbara 4 (PSW)			
653.	<i>Oecetis</i> sp. Pilbara 5 (PSW)			
654.	<i>Oecetis</i> sp. Pilbara 6 (PSW)			
655.	24976 <i>Oedura marmorata</i> (Marbled Velvet Gecko)			
656.	<i>Offadens soror</i> (ex genus 1 WA sp. 1)			
657.	<i>Oligochaeta</i> sp.			
658.	<i>Onthophagus margaretensis</i>			
659.	<i>Onthophagus pugnacioides</i>			
660.	<i>Opisthopora</i> sp.			
661.	24618 <i>Oreoica gutturalis</i> (Crested Bellbird)			
662.	<i>Oribatida</i> group 1 (PSS)			
663.	<i>Oribatida</i> group 5 (PSS)			
664.	<i>Orthetrum caledonicum</i>			
665.	<i>Orthetrum pruinosum migratum</i>			
666.	<i>Orthocladinae</i> sp.			
667.	<i>Orthotrichia</i> sp.			
668.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
669.	<i>Ostracoda</i> (unident.)			
670.	<i>Oxus orientalis</i>			
671.	<i>Ozestheria packardii</i>			
672.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
673.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
674.	<i>Paracyclops chiltoni</i>			
675.	<i>Paramelitidae</i> cf. sp. 9 (PSS)			Y
676.	<i>Paramelitidae</i> sp.			
677.	<i>Paramelitidae</i> sp. 2 (PSS)			
678.	<i>Paramerina</i> sp.A (parva?) (SAP)			
679.	<i>Parametricnemus</i> sp P1 (PSW)			
680.	25254 <i>Parasuta monachus</i>			
681.	24627 <i>Pardalotus rubricatus</i> (Red-browed Pardalote)			

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682.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
683.	24628 <i>Pardalotus striatus</i> subsp. <i>murchisoni</i> (Striated Pardalote)			
684.	24629 <i>Pardalotus striatus</i> subsp. <i>uropygialis</i> (Striated Pardalote)			
685.	24630 <i>Pardalotus striatus</i> subsp. <i>westraliensis</i> (Striated Pardalote)			
686.	<i>Pediana horni</i>			
687.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
688.	<i>Pellenes bitaeniata</i>			
689.	<i>Pentaneurini</i> sp. P6 (PSW)			
690.	<i>Pescecyclus</i> sp.			
691.	48060 <i>Petrochelidon ariel</i> (Fairy Martin)			
692.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
693.	24144 <i>Petrogale rothschildi</i> (Rothschild's Rock-wallaby)			
694.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
695.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
696.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
697.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
698.	<i>Philopotamidae</i> sp.			
699.	<i>Phreodrilid</i> with dissimilar ventral chaetae			
700.	<i>Phreodrilid</i> with similar ventral chaetae			
701.	<i>Phreodrilidae</i> sp.			
702.	<i>Phreodrilus</i> sp.			Y
703.	<i>Physsonotus novaehollandiae</i>			
704.	<i>Pilbaracandona 'rosa'</i> (PSS)			
705.	<i>Pilbaracandona eberhardi</i>			
706.	<i>Pilbarascutigera incola</i>			
707.	<i>Pilbarus millsii</i>			
708.	<i>Pinnularia brevicostata</i> Cl.			
709.	<i>Pinnularia gibba</i> Ehr.			
710.	<i>Pinnularia gibba</i> var. <i>linearis</i>			Y
711.	<i>Piona cumberlandensis</i>			
712.	24101 <i>Planigale ingrami</i> (Long-tailed Planigale)			
713.	24102 <i>Planigale maculata</i> (Common Planigale)			
714.	<i>Planorbidae</i> sp.			
715.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
716.	<i>Platinius patulus</i>			
717.	24748 <i>Platycercus varius</i> (Mulga Parrot)			
718.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
719.	24751 <i>Platycercus zonarius</i> subsp. <i>zonarius</i> (Port Lincoln Parrot)			
720.	<i>Platyias quadricornis</i>			
721.	<i>Platynectes decempunctatus</i> var. <i>decempunctatus</i>			
722.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
723.	<i>Pleidae</i> sp.			
724.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
725.	25510 <i>Pogona minor</i> (Dwarf Bearded Dragon)			
726.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
727.	24908 <i>Pogona minor</i> subsp. <i>mitchelli</i> (Dwarf Bearded Dragon)			
728.	24681 <i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)			
729.	<i>Polyarthra dolichoptera</i>			
730.	<i>Polypedilum leei</i>			
731.	<i>Polypedilum nubifer</i>			
732.	<i>Polypedilum</i> sp. S1 (PSW)			
733.	<i>Polypedilum watsoni</i>			
734.	24683 <i>Pomatostomus superciliosus</i> (White-browed Babbler)			
735.	25706 <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)			
736.	24684 <i>Pomatostomus temporalis</i> subsp. <i>rubeculus</i> (Grey-crowned Babbler)			
737.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
738.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
739.	<i>Pristina longiseta</i>			
740.	<i>Pristina</i> sp.			
741.	25199 <i>Proablepharus reginae</i>			
742.	<i>Procladius paludicola</i>			
743.	<i>Proctocacarus</i> P1 (PSW)			
744.	<i>Prodidomus woodleigh</i>			
745.	<i>Pseudagrion microcephalum</i>			
746.	24106 <i>Pseudantechinus woolleyae</i> (Woolley's Pseudantechinus)			
747.	25261 <i>Pseudechis australis</i> (Mulga Snake)			
748.	24233 <i>Pseudomys chapmani</i> (Western Pebble-mound Mouse, Ngadjji)		P4	
749.	24235 <i>Pseudomys desertor</i> (Desert Mouse)			
750.	24237 <i>Pseudomys hermannsburgensis</i> (Sandy Inland Mouse)			
751.	42416 <i>Pseudonaja mengdeni</i> (Western Brown Snake)			

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752.	25263 <i>Pseudonaja modesta</i> (Ringed Brown Snake)			
753.	25264 <i>Pseudonaja nuchalis</i> (Gwardar, Northern Brown Snake)			
754.	25432 <i>Pseudophryne douglasi</i> (Gorge Toadlet)			
755.	24390 <i>Psophodes occidentalis</i> (Western Wedgebill, Chiming Wedgebill)			
756.	<i>Psychodidae</i> sp.			
757.	<i>Ptilonorhynchus guttatus</i>			
758.	25724 <i>Ptilonorhynchus maculatus</i> (Spotted Bowerbird)			
759.	24757 <i>Ptilonorhynchus maculatus</i> subsp. <i>guttatus</i> (Western Bowerbird)			
760.	42323 <i>Ptilotula keartlandi</i> (Grey-headed Honeyeater)			
761.	42344 <i>Pumella albifrons</i> (White-fronted Honeyeater)			
762.	<i>Pygolabis weeliwollii</i>			
763.	25009 <i>Pygopus nigriceps</i>			
764.	<i>Pyralidae</i> nr sp. 37 of JHH (now sp. 53) (ex. <i>Pilbara</i> sp. 3) (PSW)			
765.	<i>Pyralidae</i> sp.			
766.	<i>Pyralidae</i> sp. 3 of JHH (PSW) (= <i>Margarosticha ?repetalis</i>)			
767.	<i>Ranatra diminuta</i>			
768.	<i>Recifella</i> sp.			
769.	<i>Regimbartia attenuata</i>			
770.	<i>Reimeria sinutata</i>			
771.	<i>Rhantaticus congestus</i>			
772.	<i>Rheocricotopus</i> sp. P1 (PSW)			
773.	<i>Rheotanytarsus trivittatus</i>			
774.	43368 <i>Rhinonictes aurantia</i> (Orange Leaf-nosed bat)		P4	
775.	48095 <i>Rhinonictes aurantia</i> (<i>Pilbara</i>) (<i>Pilbara</i> leaf-nosed bat)		T	
776.	<i>Rhipidura albicauda</i>			
777.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
778.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
779.	24454 <i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)			
780.	<i>Rhodothermis lieftincki</i>			
781.	<i>Rhopalodia gibba</i> (Ehr.) O. Mull.			
782.	<i>Rhopalodia gibberula</i> (Ehr.) O. Mull.			
783.	24982 <i>Rhynchoedura ornata</i> (Western Beaked Gecko)			
784.	48237 <i>Rostratula australis</i> (Australian Painted Snipe)		T	
785.	24174 <i>Saccolaimus flaviventris</i> (Yellow-bellied Sheath-tailed Bat)			
786.	<i>Scapholeberis kingi</i>			
787.	<i>Scaridium longicaudum</i>			
788.	<i>Sciomyzidae</i> sp.			
789.	<i>Scirtidae</i> sp.			
790.	<i>Scirtidae</i> sp. 1 (PSW)			
791.	<i>Scolopendra laeta</i>			
792.	<i>Scolopendra morsitans</i>			
793.	<i>Scopodes rugatus</i>			
794.	24200 <i>Scotorepens greyii</i> (Little Broad-nosed Bat)			
795.	<i>Sellephora pupula</i> (Kütz) Mereschkowsky			
796.	<i>Sellophora seminulum</i> (Grun.) Mann			
797.	<i>Simuliidae</i> sp.			
798.	<i>Simulium clathrinum</i>			
799.	30948 <i>Smicromis brevisrostris</i> (Weebill)			
800.	24114 <i>Sminthopsis hirtipes</i> (Hairy-footed Dunnart)			
801.	24116 <i>Sminthopsis macroura</i> (Stripe-faced Dunnart)			
802.	24117 <i>Sminthopsis ooldea</i> (Ooldea Dunnart)			
803.	24120 <i>Sminthopsis youngsoni</i> (Lesser Hairy-footed Dunnart)			
804.	<i>Spinasteron barlee</i>			
805.	<i>Spinasteron cavasteroides</i>			
806.	<i>Spinasteron waldockae</i>			
807.	<i>Spongillidae</i> sp.			
808.	<i>Stauroneis kriegeri</i>			
809.	<i>Stauroneis phoenicenteron</i> (Nitz.) Ehr.			
810.	<i>Stenochironomus cf watsoni</i>			
811.	<i>Stenocypris major</i>			
812.	25643 <i>Sterna hybrida</i> (Whiskered Tern)			
813.	<i>Sternolophus marginicollis</i>			
814.	<i>Sternopriscus multimaculatus</i>			
815.	<i>Stilobezzia</i> sp P1 (PSW)			
816.	24482 <i>Stiltia isabella</i> (Australian Pratincole)			
817.	25656 <i>Stipiturus ruficeps</i> (Rufous-crowned Emu-wren)			
818.	24556 <i>Stipiturus ruficeps</i> subsp. <i>ruficeps</i> (Rufous-crowned Emu-wren)			
819.	<i>Stratiomyidae</i> sp.			
820.	24927 <i>Strophurus elderi</i>			
821.	24932 <i>Strophurus jeanae</i>			

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822.	24949 <i>Strophurus wellingtonae</i>			
823.	<i>Stygonitocrella bispinosa</i>			
824.	<i>Stygoridgewayia trispinosa</i>			
825.	25269 <i>Suta fasciata</i> (Rosen's Snake)			
826.	25307 <i>Suta punctata</i> (Spotted Snake)			
827.	<i>Synsphyronus gracilis</i>			
828.	<i>Synsphyronus heptatrachus</i>			
829.	<i>Tabanidae</i> sp.			
830.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
831.	24682 <i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
832.	24207 <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
833.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
834.	30870 <i>Taeniopygia guttata</i> (Zebra Finch)			
835.	30871 <i>Taeniopygia guttata</i> subsp. <i>castanotis</i> (Zebra Finch)			
836.	<i>Tamopsis fickerti</i>			
837.	<i>Tanypodinae</i> sp.			
838.	<i>Tanytarsus</i> 'K12' (PSW)			
839.	<i>Tanytarsus fuscithorax/semibarbitarsus</i>			
840.	<i>Tanytarsus</i> sp. D (SAP)			
841.	<i>Tanytarsus</i> sp. P2 (PSW)			
842.	<i>Tanytarsus</i> sp. P4 (PSW)			
843.	24175 <i>Taphozous georgianus</i> (Common Sheath-tailed Bat)			
844.	24176 <i>Taphozous hilli</i> (Hill's Sheath-tail-bat)			
845.	<i>Tasmanocoenis arcuata</i>			
846.	<i>Tasmanocoenis</i> sp. E (PSW)			
847.	<i>Tesserodon variolosum</i>			
848.	<i>Testudinella amphora</i>			
849.	<i>Testudinella patina</i>			
850.	<i>Testudinella</i> sp.			
851.	<i>Thienemanniella</i> sp. P1 (PSW)			
852.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
853.	25202 <i>Tiliqua multifasciata</i> (Central Blue-tongue)			
854.	<i>Tiporus</i> sp.			
855.	<i>Tiporus tambreyi</i>			
856.	<i>Tipulidae</i> sp.			
857.	<i>Tipulidae</i> type P1 (PSW)			
858.	42351 <i>Todiramphus pyrropygius</i> (Red-backed Kingfisher)			
859.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
860.	24309 <i>Todiramphus sanctus</i> subsp. <i>sanctus</i> (Sacred Kingfisher)			
861.	<i>Trachyspina mundaring</i>			
862.	<i>Triaenodes</i> sp.			
863.	<i>Triaenodes</i> sp. P1=P2 (PSW)			
864.	<i>Trichocerca pusilla</i>			
865.	<i>Trichocerca similis</i>			
866.	<i>Trichocerca similis grandis</i>			
867.	<i>Trichocycclus aranda</i>			
868.	24806 <i>Tringa glareola</i> (Wood Sandpiper)		IA	
869.	24808 <i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	
870.	<i>Triplectides australis</i>			
871.	<i>Tropocyclops confinis</i> (ex <i>Paracyclops</i> sp. 6)			
872.	<i>Tubificidae</i> WA28 (SAP))			
873.	<i>Tubificidae stygo</i> type 1 (imm <i>Ainudrilus</i> WA25/26?) (PSS)			
874.	<i>Turbellaria</i> sp.			
875.	24851 <i>Turnix velox</i> (Little Button-quail)			
876.	30814 <i>Tympanocryptis cephalus</i> (Pebble Dragon)			
877.	<i>Tyrannochthonius aridus</i>			
878.	25762 <i>Tyto alba</i> (Barn Owl)			
879.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
880.	<i>Unionicola neoaffinis</i>			
881.	<i>Unixenus attemsi</i>			
882.	25445 <i>Uperoleia russelli</i> (Northwest Toadlet)			
883.	41428 <i>Uperoleia saxatilis</i> (Pilbara Toadlet)			
884.	<i>Urodacus butleri</i>			
885.	24386 <i>Vanellus tricolor</i> (Banded Lapwing)			
886.	25209 <i>Varanus acanthurus</i> (Spiny-tailed Monitor)			
887.	25210 <i>Varanus brevicauda</i> (Short-tailed Pygmy Monitor)			
888.	30825 <i>Varanus bushi</i> (Pilbara Mulga Monitor)			
889.	25211 <i>Varanus caudolineatus</i>			
890.	25212 <i>Varanus eremius</i> (Pygmy Desert Monitor)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
891.	25216 <i>Varanus giganteus</i> (Perentie)			
892.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
893.	48154 <i>Varanus hamersleyensis</i> (Southern Pilbara Rock Goanna)			
894.	25524 <i>Varanus panoptes</i> (Yellow-spotted Monitor)			
895.	25222 <i>Varanus panoptes</i> subsp. <i>panoptes</i>			
896.	25223 <i>Varanus panoptes</i> subsp. <i>rubidus</i>			
897.	25224 <i>Varanus pilbarensis</i> (Pilbara Rock Monitor, Northern Pilbara Rock Goanna)			
898.	<i>Varanus</i> sp.			
899.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			
900.	25227 <i>Varanus tristis</i> subsp. <i>tristis</i> (Racehorse Monitor)			
901.	<i>Velliidae</i> sp.			
902.	25311 <i>Vermicella snelli</i>			
903.	24205 <i>Vespadelus finlaysoni</i> (Finlayson's Cave Bat)			
904.	<i>Vestalenula marmonieri</i>			
905.	<i>Wandesia</i> sp. P1(nr <i>glareosa</i>)(PSW)			
906.	<i>Wyndundra barrow</i>			
907.	<i>Xanthagrion erythroneurum</i>			
908.	<i>Zebraplatys keyserlingi</i>			
909.	<i>Zenodorus orbiculatus</i>			
910.	<i>Zyomma elgneri</i>			
911.	24248 <i>Zyomys argurus</i> (Common Rock-rat)			
912.	24249 <i>Zyomys pedunculatus</i> (Central Rock-rat, Antina)		T	
913.	<i>Zyomys</i> sp.			Y
914.	24250 <i>Zyomys woodwardi</i> (Kimberley Rock-rat)			
915.	nr <i>Encoparthria</i> sp. B01			Y

Conservation Codes

T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

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



EPBC Act Protected Matters Report

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

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

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

Report created: 23/03/21 14:53:51

[Summary](#)

[Details](#)

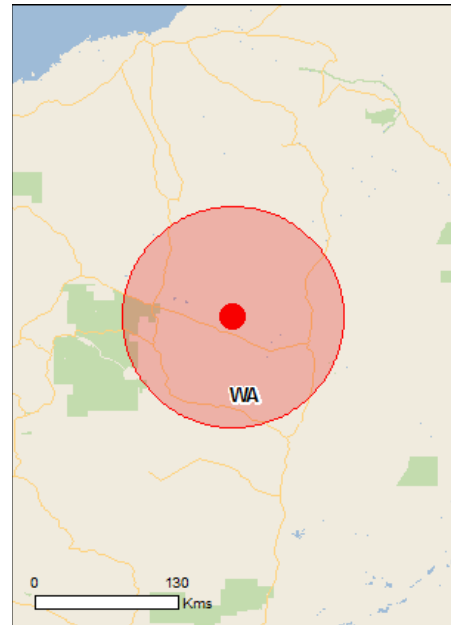
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

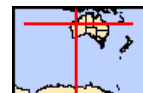
[Acknowledgements](#)



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

Buffer: 100.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	13
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	12
Nationally Important Wetlands:	2
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat likely to occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Mammals		
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Breeding known to occur within area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Rhinonictis aurantia (Pilbara form) Pilbara Leaf-nosed Bat [82790]	Vulnerable	Roosting known to occur within area
Plants		
Pityrodia augustensis Mt Augustus Foxglove [4962]	Vulnerable	Species or species habitat likely to occur within area
Thryptomene wittweri Mountain Thryptomene [16645]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Liasis olivaceus barroni Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji [83160]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
------	------------	------------------

Migratory Marine Birds

Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
---	--	--

Migratory Terrestrial Species

Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
---	--	--

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

Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
---	--	--

Migratory Wetlands Species

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
--	--	--

Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat likely to 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
--	--	--

Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
--	--	--

Other Matters Protected by the EPBC Act

Listed Marine Species [[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
------	------------	------------------

Birds

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
---	--	--

Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
--	--	---

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat likely to 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
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat known to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Karijini	WA

Invasive Species [Resource Information]

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

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Mammals		
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Nationally Important Wetlands		[Resource Information]
Name		State
Fortescue Marshes		WA
Karijini (Hamersley Range) Gorges		WA

Caveat

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

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

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

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

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

Where very little information is available for 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 reliable distribution mapping methods are used to update these distributions as time permits.

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-22.4652 119.3458

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](#)
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- [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.

Appendix D

Habitat Assessments

Trap01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-13	Personnel	EW, PW
Easting	741795	Northing	7479446
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	0 - 5%
Soil colour	Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter, Woody debris
Disturbance	None observed		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Corymbia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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25

Trap02

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-11	Personnel	EW, PW
Easting	762757	Northing	7483069
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Ironstone
Soil type	Clay loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hollows - logs, Hollows - trees, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris
Disturbance	Litter, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Open woodland (0.25-20%)	<i>Eucalyptus, Corymbia, Acacia ?aptaneura</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia, Senna</i>
Ground stratum	Tall (1-2 m)	Open tussock grassland (20-50%)	<i>Cenchrus ciliaris</i>



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Trap03

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-11	Personnel	EW, PW
Easting	739037	Northing	7496280
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Clay loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Logs > 10 cm, Peeling bark, Woody debris
Disturbance	Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Woodland (20-50%)	<i>Acacia ?aptaneura</i>
Mid stratum	Low (0.5-1 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Senna</i>
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)	<i>Cenchrus ciliaris</i>



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27

Trap04

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-13	Personnel	EW, PW
Easting	749168	Northing	7483565
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Clay loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf Litter, Woody debris
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Absent		
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Mixed Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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Trap05

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-10	Personnel	EW, PW
Easting	708015	Northing	7532373
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Clay	Surface stone cover	5 - 25%
Soil colour	Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Unknown	Microhabitats	Logs > 10 cm, Peeling bark, Termite mounds, Woody debris
Disturbance	Overgrazing		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Woodland (20-50%)	<i>Acacia ?aptaneura</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Mixed Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)	<i>Cenchrus ciliaris</i>



Fulcrum photo ID 0076d4a5-61df-49e5-8e4d-ac12d053625e

29

Trap06

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-10	Personnel	EW, PW
Easting	709075	Northing	7546348
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Siltstone, Chert
Soil type	Clay	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Present
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hollows - trees, Hummocks, Logs > 10 cm, Peeling bark, Woody debris
Disturbance	Litter, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Woodland (20-50%)	<i>Eucalyptus camaldulensis, E. victrix, Acacia ?aptaneura</i>
Mid stratum	Mid (1-2 m)	Open shrubland and/or heathland (20-50%)	<i>Mixed Axacia</i>
Ground stratum	Mid (0.5-1 m)	Sparse hummock grassland (0.25-20%)	<i>Triodia, Cenchrus ciliaris</i>



Fulcrum photo ID

Trap07

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-10	Personnel	EW, PW
Easting	724460	Northing	7536634
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy clay	Surface stone cover	75 - 100%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter, Peeling bark, Woody debris
Disturbance	None observed		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Acacia ?aptaneura</i>
Mid stratum	Mid (1-2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Gossypium, Senna</i>
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%)	<i>Triodia ?epactia</i>



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31

Trap08

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-12	Personnel	EW, PW
Easting	725823	Northing	7506482
Landform and soil		Rock	
Landform	Dune crest	Rock type/s	None
Soil type	Sand	Surface stone cover	
Soil colour	Brown	Surface stone size classes present	
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	<i>Corymbia</i>
Mid stratum	Tall (>2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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Trap09

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-01	Personnel	LC, ML
Easting	743290	Northing	7476430
Landform and soil		Rock	
Landform	Upper slope	Rock type/s	Ironstone
Soil type	Rock	Surface stone cover	50 - 75%
Soil colour	Brown, Orange	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Unknown	Microhabitats	Hummocks, Rock crevices
Disturbance	Vehicle tracks		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Corymbia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia inaequilatera</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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33

Trap10

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-05-10	Personnel	EW, PW
Easting	716337	Northing	7542770
Landform and soil		Rock	
Landform	Lower slope	Rock type/s	Ironstone
Soil type	Clay loam	Surface stone cover	75 - 100%
Soil colour	Brown	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Burnt (1-5 years)	Microhabitats	Hummocks
Disturbance	Vehicle tracks		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Eucalyptus leucophloia</i>
Mid stratum	Low (0.5-1 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia ancistrocarpa</i> , <i>Senna</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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Bat01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-07	Personnel	PW
Easting	726115	Northing	7550489
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Ironstone
Soil type	Sandy clay	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Present
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hollows - logs, Hollows - trees, Leaf litter, Peeling bark
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Open woodland (0.25-20%)	<i>Eucalyptus</i>
Mid stratum	Tall (>2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Eucalyptus</i>
Ground stratum	Tall (1-2 m)	Sparse rushland and/or sedgeland (0.25-20%), Sparse tussock grassland (0.25-20%)	<i>Sedge, Cenchrus ciliaris</i>



Fulcrum photo ID 7b0198c5-8470-4d6b-b300-5d6e17ef8267, 99ff37bd-dea4-46f5-83e3-

1

Bat03

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-02	Personnel	PW
Easting	709704	Northing	7545181
Landform and soil		Rock	
Landform	Outcrop/breakaway	Rock type/s	Ironstone
Soil type	Rock	Surface stone cover	75 - 100%
Soil colour	Brown, Red	Surface stone size classes present	Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm), Big Rocks (60 cm - 2 m), Boulders (>2 m)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Caves, Exfoliating rock, Hollows - logs, Leaf litter, Rock crevices, Woody debris
Disturbance	None observed		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	<i>Eucalyptus</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Dodonaea, Acacia</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



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Bat05

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-03	Personnel	PW
Easting	737034	Northing	7485858
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Ironstone
Soil type	Rock	Surface stone cover	75 - 100%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Caves, Exfoliating rock, Hummocks, Leaf litter, Rock crevices
Disturbance	None observed		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Absent		
Mid stratum	Tall (>2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Acacia</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



Fulcrum photo ID fb7f9999-4189-42f3-a18a-1e1797cfe2ed, 3834a176-47c4-4a1f-a864-

3

Bilby01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-05	Personnel	PW
Easting	758618	Northing	7506266
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	75 - 100%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Absent		
Mid stratum	Absent		
Ground stratum	Mid (0.5-1 m)	Hummock grassland (50-80%)	<i>Triodia</i>



Fulcrum photo ID c47d964d-99c7-454a-81a6-04c95bb90b91, 8816e0fd-fe7c-46c5-bbf4-

Bilby02

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-05	Personnel	EW
Easting	725669	Northing	7506254
Landform and soil		Rock	
Landform	Dune slope	Rock type/s	None
Soil type	Sand	Surface stone cover	
Soil colour	Black, Brown, Red	Surface stone size classes present	
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Peeling bark, Woody debris
Disturbance	Grazing		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Grevillea</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



Fulcrum photo ID

5

Bilby03

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-05	Personnel	PW
Easting	739383	Northing	7494255
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone, Chert
Soil type	Sandy loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Burnt (1-5 years)	Microhabitats	Hummocks, Peeling bark, Woody debris
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	<i>Acacia, Grevillea</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Mixed Acacia</i>
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%), Sparse tussock g	<i>Triodia, Cenchrus ciliaris</i>



Fulcrum photo ID

512950f4-60c1-4061-a0c8-c9d05b1fa0c3, efaaff237-a9b2-450a-8cea-

Bilby04

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-09	Personnel	EW, PW
Easting	755586	Northing	7491272
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Woody debris
Disturbance	None observed		
Introduced fauna	Cattle, Camel		
Vegetation			
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	<i>Acacia</i>
Mid stratum	Mid (1-2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Acacia</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



Fulcrum photo ID a56488a8-531c-42e5-a5d7-2fd97b50bc76, 23226743-a29c-4651-8190-

7

Bilby05

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	LC, ML
Easting	772488	Northing	7484151
Landform and soil		Rock	
Landform	Undulating plain	Rock type/s	Quartz, Agate
Soil type	Clay loam	Surface stone cover	25 - 50%
Soil colour	Orange	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter, Peeling bark, Rock crevices, Termite mounds, Woody debris
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Acacia ?aptaneura, Acacia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Eremophila, Acacia</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodia, Ptilotus sp.</i>



Fulcrum photo ID afe3bff0-2356-4827-bb6d-d5cf1174e17b, fd370914-14d9-4c19-aac2-

Bilby06

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	EW
Easting	749626	Northing	7482887
Landform and soil		Rock	
Landform	Dune crest	Rock type/s	None
Soil type	Sand	Surface stone cover	
Soil colour	Brown, Red	Surface stone size classes present	
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Burrows, Hummocks, Leaf litter, Woody debris
Disturbance	Weeds		
Introduced fauna	Cattle, Camel		
Vegetation			
Upper stratum	Absent		
Mid stratum	Mid (1-2 m)	Open shrubland and/or heathland (20-50%)	<i>Acacia</i>
Ground stratum	Mid (0.5-1 m)	Sparse hummock grassland (0.25-20%), Sparse tussock grassland (0.25-20%)	<i>Triodia, Cenchrus ciliaris</i>



Fulcrum photo ID

9

Bilby07

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	EW
Easting	713682	Northing	7532204
Landform and soil		Rock	
Landform	Undulating plain	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	50 - 75%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter, Woody debris
Disturbance	Overgrazing		
Introduced fauna	Cattle, Dog		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Eucalyptus</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia, Eremophila, mixed shrubs</i>
Ground stratum	Tall (1-2 m)	Open hummock grassland (20-50%)	<i>Triodia</i>



Fulcrum photo ID

Bilby08

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-11	Personnel	ML
Easting	710093	Northing	7515949
Landform and soil		Rock	
Landform	Plain	Rock type/s	Chert
Soil type	Clay loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Small Stones (0.6 - 2 cm), Stones (2 - 6 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Woody debris
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Acacia ?aptaneura, Acacia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Solanum, Eremophila</i>
Ground stratum	Mid (0.5-1 m)	Sparse hummock grassland (0.25-20%), Sparse tussock grassland (0.25-20%)	<i>Triodia, Cenchrus ciliaris</i>



Fulcrum photo ID 74ac88e6-8acf-41cf-93e1-0cf277a124da, 9603d4cc-d6fc-47d7-8e16-

11

Bird01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	PW
Easting	757349	Northing	7507270
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy clay	Surface stone cover	5 - 25%
Soil colour	Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks
Disturbance	Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Absent		
Mid stratum	Mid (1-2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Acacia</i>
Ground stratum	Tall (1-2 m)	Hummock grassland (50-80%)	<i>Triodia, Tussock grasses</i>



Fulcrum photo ID 80de1fbd-4ee4-4414-8528-aa1e465f1f00, 13e0bf24-c9eb-4d98-b455-

Bird02

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	PW
Easting	762924	Northing	7505615
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Clay loam	Surface stone cover	0 - 5%
Soil colour	Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Absent		
Mid stratum	Mid (1-2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Acacia</i>
Ground stratum	Tall (1-2 m)	Hummock grassland (50-80%)	<i>Triodia, Samphire</i>



Fulcrum photo ID 35962a39-0b79-42fa-b34e-987f9f370c41, 00e06903-7cd7-4564-802d-

13

Bird04

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-09	Personnel	EW, PW
Easting	755858	Northing	7490941
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	0 - 5%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Peeling bark, Woody debris
Disturbance	None observed		
Introduced fauna	Cattle, Camel		
Vegetation			
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	<i>Corymbia hamersleyana</i>
Mid stratum	Tall (>2 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Acacia</i>
Ground stratum	Mid (0.5-1 m)	Open hummock grassland (20-50%)	<i>Triodia, Ptilotus sp.</i>



Fulcrum photo ID 3868556d-66b5-4abf-8999-c7b981ab8029, 2516943d-a5c7-47d6-

Bird05

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-04	Personnel	PW, ML
Easting	759159	Northing	7506240
Landform and soil		Rock	
Landform	Plain	Rock type/s	Ironstone
Soil type	Sandy clay	Surface stone cover	0 - 5%
Soil colour	Orange, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter
Disturbance	Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Absent		
Mid stratum	Absent		
Ground stratum	Tall (1-2 m)	Hummock grassland (50-80%)	<i>Triodia, Samphire</i>



Fulcrum photo ID 8274bbd5-95d1-4106-899b-716e4d533fc8, 2f1def46-dbee-4c27-8720-

15

Cage01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-03	Personnel	ML
Easting	709352	Northing	7544149
Landform and soil		Rock	
Landform	Outcrop/breakaway	Rock type/s	Ironstone, Laterite
Soil type	Rock	Surface stone cover	75 - 100%
Soil colour	Orange, Red	Surface stone size classes present	Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Burnt (1-5 years)	Microhabitats	Caves, Hollows - logs, Hummocks, Rock crevices
Disturbance	None observed		
Introduced fauna	None observed		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Eucalyptus</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Hibiscus, Acacia</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20-50%)	<i>Triodi, Sida</i>



Fulcrum photo ID c881f63d-3d74-4f9d-9d71-eb412e22d72, 37cd29b5-a902-4d11-bfee-

Cage02

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	EW
Easting	741972	Northing	7482327
Landform and soil		Rock	
Landform	Gully	Rock type/s	Ironstone
Soil type	Sandy loam	Surface stone cover	5 - 25%
Soil colour	Brown	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Absent
Fire History	Burnt (1-5 years)	Microhabitats	Exfoliating rock, Hummocks, Leaf litter, Rock crevices, Woody debris
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle, Dog		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Corymbia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia inaequilatera</i>
Ground stratum	Low (>0.5 m)	Open tussock grassland (20-50%)	<i>Cenchrus ciliaris</i>



Fulcrum photo ID

17

Cam01 Bat02

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-02	Personnel	ML
Easting	713666	Northing	7544152
Landform and soil		Rock	
Landform	Outcrop/breakaway	Rock type/s	Ironstone
Soil type	Rock	Surface stone cover	75 - 100%
Soil colour	Orange, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm), Big Rocks (60 cm - 2 m)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Caves, Hollows - trees, Hummocks, Rock crevices
Disturbance	Overgrazing		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open woodland (0.25-20%)	<i>Eucalyptus</i>
Mid stratum	Low (0.5-1 m)	Isolated shrubs and/or heath shrubs (<0.25%)	<i>Eucalypt</i>
Ground stratum	Low (>0.5 m)	Open hummock grassland (20%-50%), Sparse tussock gr: <i>Triodia</i> , <i>Tussock grasses</i>	



Fulcrum photo ID

da5b3322-67e1-4dd1-bd31-b3ff1720aab8, ee221750-306e-449a-808b

Cam02 Bat06

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-04	Personnel	EW
Easting	740199	Northing	7484589
Landform and soil		Rock	
Landform	River	Rock type/s	Ironstone, Siltstone
Soil type	Sandy clay	Surface stone cover	75 - 100%
Soil colour	Brown	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm), Rocks (20 - 60 cm)
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Unknown	Microhabitats	Hollows - logs, Hollows - trees
Disturbance	Overgrazing, Vehicle tracks, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Woodland (20-50%)	<i>Eucalyptus camaldulensis, E. victrix</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia, mixed shrubs</i>
Ground stratum	Low (>0.5 m)	Sparse tussock grassland (0.25-20%)	<i>Cenchrus ciliaris</i>



Fulcrum photo ID

19

Cam03 Bat04

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-03	Personnel	PW
Easting	748683	Northing	7473729
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Ironstone, Siltstone
Soil type	Rock	Surface stone cover	75 - 100%
Soil colour	Brown, Red	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	High quality	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Caves, Exfoliating rock, Hollows - logs, Hollows - trees, Hummocks, Leaf litter, Peeling bark, Rock crevices, Woody debris
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Isolated trees (<0.25%)	<i>Eucalyptus</i>
Mid stratum	Mid (1-2 m)	Open shrubland and/or heathland (20-50%)	<i>Acacia, Sida</i>
Ground stratum	Mid (0.5-1 m)	Hummock grassland (50-80%)	<i>Cenchrus ciliaris</i>



Fulcrum photo ID

23807706-0449-439d-8358-5becc8c4b466, acfaef44-4fc9-4c3f-998d-

Cam04 Bat07 Bird03

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-10	Personnel	LC, ML
Easting	772846	Northing	7484316
Landform and soil		Rock	
Landform	Lake	Rock type/s	Chert
Soil type	Sandy clay	Surface stone cover	0 - 5%
Soil colour	Brown, Orange	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	Disturbed	Water Source	Present
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hollows - logs, Hollows - trees, Leaf litter, Logs > 10 cm, Peeling bark, Woody debris
Disturbance	Overgrazing, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Woodland (20-50%)	<i>Eucalyptus camaldulensis</i>
Mid stratum	Mid (1-2 m)	Open shrubland and/or heathland (20-50%)	<i>Acacia, mixed shrubs</i>
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%)	<i>Cenchrus ciliaris</i>



Fulcrum photo ID 1a5dff59-13eb-4595-a390-3395bf2fa770, afc51a2f-ebf4-4dac-b299-

21

Cam05

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-07	Personnel	EW
Easting	740119	Northing	7485403
Landform and soil		Rock	
Landform	Drainage line	Rock type/s	Ironstone, Chert
Soil type	Sandy loam	Surface stone cover	75 - 100%
Soil colour	Brown	Surface stone size classes present	Pebbles (<0.6 cm), Small Stones (0.6 - 2 cm), Stones (2 - 6 cm), Small Rocks (6 - 20 cm)
Condition		Habitat Features	
Quality	Good	Water Source	Present
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hollows - logs, Hollows - trees, Leaf litter, Peeling bark, Woody debris
Disturbance	Overgrazing, Vehicle tracks, Weeds		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Mid (10-30 m)	Isolated trees (<0.25%)	<i>Eucalyptus camaldulensis</i>
Mid stratum	Tall (>2 m)	Shrubland and/or heathland (50-80%)	<i>Typha domingensis (creek), Acacia (riverbed)</i>
Ground stratum	Low (>0.5 m)	Sparse hummock grassland (0.25-20%)	<i>Sedge (creek), Malvaceae (riverbed)</i>



Fulcrum photo ID 1669dd7f-0c82-40af-b876-b8fcdc75aae6, 9a63a22d-5966-4757-ae03-

Active01

Project:	4458 Nyidinghu Vertebrate Fauna Survey		
Date	2021-09-11	Personnel	LC, ML
Easting	774498	Northing	7476255
Landform and soil		Rock	
Landform	Plain	Rock type/s	None
Soil type	Clay loam	Surface stone cover	
Soil colour	Brown, Orange, Red	Surface stone size classes present	
Condition		Habitat Features	
Quality	Very good	Water Source	Absent
Fire History	Little or no fire evidence (>5 years)	Microhabitats	Hummocks, Leaf litter, Peeling bark, Termite mounds, Woody debris
Disturbance	None observed		
Introduced fauna	Cattle		
Vegetation			
Upper stratum	Low (<10 m)	Open forest (50-80%)	<i>Acacia ?aptaneura, Acacia</i>
Mid stratum	Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	<i>Acacia</i>
Ground stratum	Low (>0.5 m)	Open tussock grassland (20-50%)	<i>Austrostipa elegantissima, Tussock grasses</i>



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Appendix E

Inventory of Fauna Recorded during the Field Survey

Terrestrial Vertebrate Fauna Inventory - Records by Site

Key: State - Listed under Biodiversity Conservation Act 2016 or Department of Biodiversity, Conservation and Attractions Conservation Priority List, Federal - Listed under Environmental Protection and Biodiversity Conservation Act 1999, Recorded - Recorded during the current field survey, * - Introduced species

Conservation Status: CR - Critically Endangered, EN - Endangered, VU - Vulnerable, MI - Migratory, CD - Conservation Dependent fauna, OS - Other Specially Protected fauna, MA - Marine, P - Listed as Priority by DBCA.

Family	Scientific Name	Common Name	Conservation Status		Site																				Other	Total						
			State	Federal	Trap01	Trap02	Trap03	Trap04	Trap05	Trap06	Trap07	Trap08	Trap09	Trap10	Bat01	Bat02	Bat03	Bat04	Bat05	Bat06	Bat07	Bat08	Cage01	Cage02			Cam01	Cam02	Cam03	Cam04	Cam05	
Amphibians																																
Pelodyadidae	<i>Cyclorana maini</i>	Sheep Frog																													1	1
Birds																																
Acanthizidae	<i>Acanthiza uropygialis</i>	Chestnut-rumped Thornbill				1																				1					2	
	<i>Gerygone fusca</i>	Western Gerygone			1	1																									2	
	<i>Smicronis brevirostris</i>	Weebill			1																										1	
Accipitridae	<i>Accipiter fasciatus</i>	Brown Goshawk		MA																									4		4	
	<i>Aquila audax</i>	Wedge-tailed Eagle																												4	4	
	<i>Haliastur sphenurus</i>	Whistling Kite		MA						1																	38		56	95		
	<i>Milvus migrans</i>	Black Kite																									1			1		
Acrocephalidae	<i>Acrocephalus australis</i>	Australian Reed Warbler		MA																								8	1	9		
Alcedinidae	<i>Dacelo leachii</i>	Blue-winged Kookaburra																										1	1	2		
	<i>Todiramphus pyrrhopygius</i>	Red-backed Kingfisher								2																					2	
Anatidae	<i>Anas superciliosa</i>	Pacific Black Duck																									1	1	8	10		
	<i>Aythya australis</i>	Hardhead									20																				20	
	<i>Chenonetta jubata</i>	Australian Wood Duck (Wood Duck, Maned Duck)																								15		2		17		
	<i>Dendrocygna eytoni</i>	Plumed Whistling Duck																											30	30		
	<i>Malacorhynchus membranaceus</i>	Pink-eared Duck																								20				20		
Ardeidae	<i>Ardea pacifica</i>	White-necked Heron																								11	4			15		

Family	Scientific Name	Common Name	Conservation Status		Site																				Other	Total					
			State	Federal	Trap01	Trap02	Trap03	Trap04	Trap05	Trap06	Trap07	Trap08	Trap09	Trap10	Bat01	Bat02	Bat03	Bat04	Bat05	Bat06	Bat07	Bat08	Cage01	Cage02			Cam01	Cam02	Cam03	Cam04	Cam05
	<i>Egretta novaehollandiae</i>	White-faced Heron																										2	1		3
Artamidae	<i>Artamus cinereus</i>	Black-faced Woodswallow					3				3												2					1		10	19
	<i>Artamus minor</i>	Little Woodswallow																				3							4		7
	<i>Cracticus nigrogularis</i>	Pied Butcherbird							1																		1		2	4	
	<i>Cracticus torquatus</i>	Grey Butcherbird								1																	1			2	
Cacatuidae	<i>Cacatua sanguinea</i>	Little Corella							8	2												6			1			4		21	
	<i>Eolophus roseicapilla</i>	Galah				10	1					3		1														3	19	37	
	<i>Nymphicus hollandicus</i>	Cockatiel				3																							2	5	
Campephagidae	<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike		MA					1																		1		6	8	
Caprimulgidae	<i>Eurostopodus argus</i>	Spotted Nightjar		MA																							1			1	
Casuariidae	<i>Dromaius novaehollandiae</i>	Emu								1																			1	2	
Charadriidae	<i>Elseyornis melanops</i>	Black-fronted Dotterel																									1			1	
Columbidae	<i>Geopelia cuneata</i>	Diamond Dove									2																		11	13	
	<i>Geopelia striata placida</i>	Peaceful Dove																									2		3	5	
	<i>Geophaps plumifera</i>	Spinifex Pigeon																				8							2	10	
	<i>Ocyphaps lophotes</i>	Crested Pigeon				2						1																1	13	17	
	<i>Phaps chalcoptera</i>	Common Bronzewing				1																					2		2	5	
Corvidae	<i>Corvus orru</i>	Torresian Crow				2			3	1																		4	1	11	
Cuculidae	<i>Centropus phasianinus</i>	Pheasant Coucal																										2		2	
	<i>Chalcites basalis</i>	Horsfield's Bronze Cuckoo		MA					1			1																		2	
Estrildidae	<i>Emblema pictum</i>	Painted Finch																				4				3				7	
	<i>Neochmia ruficauda</i>	Star Finch																										3		3	

Family	Scientific Name	Common Name	Conservation Status		Site																				Other	Total					
			State	Federal	Trap01	Trap02	Trap03	Trap04	Trap05	Trap06	Trap07	Trap08	Trap09	Trap10	Bat01	Bat02	Bat03	Bat04	Bat05	Bat06	Bat07	Bat08	Cage01	Cage02			Cam01	Cam02	Cam03	Cam04	Cam05
	<i>Taeniopygia guttata</i>	Zebra Finch			35							2		50									20					103		81	291
Falconidae	<i>Falco berigora</i>	Brown Falcon				2	1																				3		2	8	
	<i>Falco cenchroides</i>	Australian Kestrel (Nankeen Kestrel)		MA								2																	1		3
Locustellidae	<i>Cincloramphus cruralis</i>	Brown Songlark																				1									1
	<i>Poodytes carteri</i>	Spinifexbird									1																	2			3
Maluridae	<i>Amytornis whitei whitei</i>	Pilbara Grasswren																									1		1		2
	<i>Malurus assimilis</i>	Purple-backed Fairywren				1																1		1		1		8			12
Meliphagidae	<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater								1												1									2
	<i>Gavicalis virescens</i>	Singing Honeyeater			2	2			1	2																	1	1	3		12
	<i>Lacustroica whitei</i>	Grey Honeyeater																										2			2
	<i>Lichmera indistincta</i>	Brown Honeyeater																											4		4
	<i>Manorina flavigula</i>	Yellow-throated Miner								1																1	1	1	1		5
	<i>Ptilotula keartlandi</i>	Grey-headed Honeyeater			3							1																			4
	<i>Ptilotula penicillata</i>	White-plumed Honeyeater								1																1	3	15	5		25
Meropidae	<i>Merops ornatus</i>	Rainbow Bee-eater		MA	1						2															5	3		2	2	15
Monarchidae	<i>Grallina cyanoleuca</i>	Magpie-lark		MA					1																2	2	13	11	5		34
Oreocidae	<i>Oreoica gutturalis</i>	Crested Bellbird							3																		1		2		6
Otididae	<i>Ardeotis australis</i>	Australian Bustard				2		1																					3		6
Pachycephalidae	<i>Colluricincla harmonica</i>	Grey Shrikethrush																							1	1			1		3
	<i>Pachycephala rufiventris</i>	Rufous Whistler				2	1		1	1																1			2		8
Pardalotidae	<i>Pardalotus rubricatus</i>	Red-browed Pardalote				2						1															2		1		6

Family	Scientific Name	Common Name	Conservation Status		Site																				Total																	
			State	Federal	Trap01	Trap02	Trap03	Trap04	Trap05	Trap06	Trap07	Trap08	Trap09	Trap10	Bat01	Bat02	Bat03	Bat04	Bat05	Bat06	Bat07	Bat08	Cage01	Cage02		Cam01	Cam02	Cam03	Cam04	Cam05	Other											
	<i>Demansia rufescens</i>	Rufous Whipsnake																																		1	1					
	<i>Furina ornata</i>	Moon Snake																																		1	1					
	<i>Parasuta monachus</i>	Inland Hooded Snake				1				1																										2	2					
	<i>Pseudechis australis</i>	Mulga Snake																																	2	3						
	<i>Pseudonaja nuchalis</i>	Gwardar; Northern Brown Snake																																	1	1						
Gekkonidae	<i>Gehyra punctata</i>	Spotted Dtella																																	2	1	1	4				
	<i>Gehyra variegata</i>	Tree Dtella					1																													2	5	18				
	<i>Heteronotia binoei</i>	Bynoe's Gecko						1																												1	3	6				
Pygopodidae	<i>Delma butleri</i>	Unbanded Delma																																			1	1				
	<i>Delma nasuta</i>	Sharp-snouted Delma				1																															2	4				
	<i>Delma pax</i>	Peace Delma																																			1	1				
	<i>Lialis burtonis</i>	Burton's Legless Lizard				2																															1	3				
Scincidae	<i>Carlia munda</i>	Shaded-litter Rainbow-skink																																				2	2	1	5	
	<i>Carlia triacantha</i>	Desert Rainbow-skink																																				1	1			
	<i>Ctenotus ariadnae</i>	Ariadna's Ctenotus				1																																4	5			
	<i>Ctenotus grandis</i>	Grand Ctenotus				3																																5	8			
	<i>Ctenotus hanloni</i>	Nimble Ctenotus				2																																2	4			
	<i>Ctenotus helenae</i>	Clay-soil Ctenotus					1	1																														1	3			
	<i>Ctenotus leonhardii</i>	Leonhard's Ctenotus						1																														2	3			
	<i>Ctenotus pantherinus</i>	Leopard Ctenotus				5	2	1	12	3	2	2	9	12																									48			
	<i>Ctenotus quattuordecimlineatus</i>	Fourteen-lined Ctenotus				1	1																																1	3		
	<i>Ctenotus rutilans</i>	Rusty-shouldered Ctenotus																																				1	1			
	<i>Ctenotus saxatilis</i>	Rock Ctenotus																																				2	1	1	3	8

Family	Scientific Name	Common Name	Conservation Status		Detection Method																Total					
			State	Federal	ARU	Camera	Cage	Funnel	Pipe	Bucket	Elliot	Sighting	Hand capture	Burrow	Call	Egg	Feather	Mound	Nest	Remains		Scat	Skin	Tracks		
	<i>Lerista amicornum</i>	Friendly Slider								3	1													4		
	<i>Lerista bipes</i>	North-western Sandslider								30	18			2										50		
	<i>Lerista vermicularis</i>	Slender Duneslider									1													1		
	<i>Menetia greyii</i>	Common Dwarf Skink						1	6	2														9		
	<i>Morethia ruficauda</i>	Lined Firetail Skink											1											1		
	<i>Notoscincus ornatus</i>	Ornate Soil-crevice Skink								1	1													2		
	<i>Proablepharus reginae</i>	Western Soil-crevice Skink								1														1		
	<i>Tiliqua multifasciata</i>	Central Blue-tongue									1		1											2		
Typhlopidae	<i>Anilios ammodytes</i>	Sand-diving Blind Snake										2												2		
	<i>Anilios ganei</i>	Gane's Blind Snake	P1									1												1		
	<i>Anilios grypus</i>	Long-beaked Blind Snake						1																1		
	<i>Anilios pilbarensis</i>	Pilbara Blind Snake												1										1		
Varanidae	<i>Varanus brevicauda</i>	Short-tailed Pygmy Goanna						2						1										3		
	<i>Varanus bushi</i>	Pilbara Mulga Goanna								1				1										2		
	<i>Varanus eremius</i>	Pygmy Desert Goanna						8	5	4														17		
	<i>Varanus giganteus</i>	Perentie											1											1		
	<i>Varanus gouldii</i>	Bungarra or Sand Goanna						1			1													2		
	<i>Varanus panoptes</i>	Yellow-spotted Monitor											2											2		
	<i>Varanus tristis</i>	Racehorse Goanna					3																	3		
Fish																										
Actinopterygii	<i>Leiopotherapon unicolor</i>	Spangled Perch											30												30	
Invertebrates																										
Parastacidae	* <i>Cherax quadricarinatus</i>	Redclaw											2	2								1			5	



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