

Mandora Cattle Company Pty Ltd

Mandora Station Irrigated Fodder Production Project – Stage 1

Conservation significant vertebrate fauna assessment

December 2017



Broome Bird Observatory

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## 1. Introduction

### Project description

Mandora Cattle Company Pty Ltd is applying for a 500 ha diversification permit for a small stand and graze fodder production project on Mandora Station. The project will require a 3 GL water licence to be used across the two locations; a two stage project comprising four pivots installed over several years. The initial conceptual plan and first stage is for two pivots on the one location, using 1.5 GL.

The first stage of the project will clear a total of 150 ha for two 40 ha pivots with 10 ha buffers, as well as associated laneways and fences.

In order to determine the potential impacts to conservation significant fauna relating to the Stage 1 development, a Level 1 survey was required within the application area. Mandora Cattle Company Pty Ltd commissioned Broome Bird Observatory to undertake a conservation significant fauna assessment within the proposed clearing area.

### Study area

The application area is located on Mandora Station, adjacent to the Great Northern Highway, approximately 25 km southwest of Sandfire Roadhouse (Figure 1.1).



CAPE BERTHOLET  
 COULOMB POINT  
 KENNEDYS COTTAGE  
 WATERBANK  
 BROOME  
 ROEBUCK BAY  
 THANGOO

PORT SMITH  
 LAGRANGE BAY  
 CAPE BOSSUT  
 FRAZIER DOWNS

NITA DOWNS  
 ANNA PLAINS

EIGHTY MILE BEACH  
 WALLAL DOWNS  
 MANDORA  
 SANDFIRE ROADHOUSE  
 EIGHTY MILE BEACH CARAVAN PARK

CAPE KERAUDREN  
 PARDOO ROADHOUSE

NIMINGARRA  
 BLACK HILL  
 MUCCAN  
 CALLAWA

**Legend**

- Locality
- Road
- ▭ Study area



## Location of study area

Figure 1.1      Drawn: 10/12/2017  
 UTM: Zone 51





## 2. Methodology

### Adhering guidelines

This survey was undertaken as part of the Environmental Impact Assessment process in WA and is required to address the following government legislation and guidelines:

- EPA Guidance Statement No. 56: Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia (EPA 2002a);
- EPA Position Statement No. 3: Terrestrial Biological Surveys as an Element of Biodiversity Protection (EPA 2002b);
- Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA and DEC 2010);
- Greater Bilby specific survey guidelines within Survey guidelines for Australia's Threatened Mammals (DSEWPac 2011).

### Literature review and database searches

Prior to the field survey, a search of government databases was undertaken to determine vertebrate fauna of conservation significance previously recorded in the vicinity of the study area. A search with a 10 - 50 km buffer surrounding the proposed clearing area was conducted on three databases (Table 2.1).

Table 2.1. Vertebrate fauna database searches

Database	Search radius	Search centre point
Department of Biodiversity, Conservation and Attractions NatureMap	Records within 40 km of search centre point	19° 48' 55" S, 120° 51' 33" E
Department of the Environment and Energy EPBC Act Protected Matters Database	Records within 50 km of search centre point	19° 48' 55" S, 120° 51' 33" E
Atlas of Living Australia	Records within 10 km of search centre point	-19.81526, 120.85928

In addition, eight previous assessments reporting on conservation significant fauna within the region were consulted, and presented in Table 2.2.

Table 2.2. Previous regional conservation significant fauna assessments relevant to the project.

Assessment	Survey type
Nita Downs Greater Bilby and Spectacled Hare-wallaby Assessment (Broome Bird Observatory 2017)	Targeted Greater Bilby and Spectacled Hare-wallaby assessment
Assessment of the Bilby <i>Macrotis lagotis</i> on Wallal Downs Station; Homestead and Chirup project areas (Bamford Consulting Ecologists 2016)	Targeted Greater Bilby assessment



Assessment	Survey type
Fauna assessment of the Pardoo Direct Shipping Ore Project (Bamford Consulting Ecologists 2007)	Level 1 fauna assessment
Sheffield Resources Thunderbird Project Targeted Greater Bilby Assessment ( <i>ecologia</i> 2016)	Targeted Greater Bilby assessment
Main Roads Cape Leveque Road Upgrade Targeted Greater Bilby Assessment (GHD 2013)	Targeted Greater Bilby assessment
Targeted Greater Bilby assessment of the Landcorp WA industrial development near Crab Creek Road, Broome (Envisage Environmental Services 2015)	Targeted Greater Bilby assessment
Browse Bilby Review (SKM 2012)	Desktop assessment
Peer review of Browse Bilby Review (Envisage Environmental Services 2012)	Desktop assessment

### Conservation significant fauna

After the results of the literature review and database searches were completed, a list of 13 potentially occurring conservation significant fauna was compiled (Table 2.3).

Table 2.3. Potentially occurring conservation significant fauna based on database searches.

Species	WA Ranking	EPBC Act Ranking
<b>Mammals</b>		
Northern Quoll ( <i>Dasyurus hallucatus</i> )	EN	EN
Greater Bilby ( <i>Macrotis lagotis</i> )	VU	VU
Ghost Bat ( <i>Macroderma gigas</i> )	VU	VU
Spectacled Hare-wallaby ( <i>Lagorchestes conspicillatus leichardtii</i> )	P3	-
Northern Marsupial Mole ( <i>Notoryctes caurinus</i> )	P4	-
<b>Reptiles</b>		
Airlie Island Ctenotus ( <i>Ctenotus angusticeps</i> )	VU	VU
<b>Birds</b>		
Night Parrot ( <i>Pezoporus occidentalis</i> )	CR	EN
Princess Parrot ( <i>Polytelis alexandrae</i> )	P4	VU
Oriental Cuckoo ( <i>Cuculus optatus</i> )	IA	IA
Barn Swallow ( <i>Hirundo rustica</i> )	IA	IA
Grey Wagtail ( <i>Motacilla cinerea</i> )	IA	IA
Yellow Wagtail ( <i>Motacilla flava</i> )	IA	IA
Rainbow Bee-eater ( <i>Merops ornatus</i> )	IA	Ma

Note: conservation significant waterbirds were excluded from these results, as suitable habitats for such species are not expected to occur within the proposed clearing area boundary.



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## Sampling methods

The following sampling techniques were used to survey for conservation significant mammals identified in the desktop assessment as potentially occurring:

### 1. Transect searches for sign

The proposed clearing permit boundary was traversed at 200m intervals (east-west orientation) in its entirety in search of sign. For the Greater Bilby, this included searching for old or active burrows, scat, diggings and tracks, while for the Spectacled Hare-wallaby, this included searching for vegetated denning sites (in grass tussocks), scats and tracks.

Where diggings or sign was located, further searches took place in the immediate surrounds to try locate additional evidence of either species' presence.

GPS coordinates and photos were taken at all sites where sign was detected.

### 2. Two-hectare plot searches for sign.

Five 2ha plot searches were conducted within the proposed clearing permit boundary. Each 2ha plot involved searching an area (200m x 100m) for sign (burrows, diggings, scats, tracks and vegetated denning sites) for a minimum of 20 minutes. A 2ha plot survey datasheet was obtained from DPaW (Broome office) for use during the field survey, to ensure consistency with other surveys within the region.

Habitat assessments were conducted at each of the five 2ha plot sites, as well as at two sites outside of the proposed clearing permit boundary to provide context.

## Survey timing

The field survey was conducted on the 26 November 2017. This timing corresponded with the late dry season, when burrows and diggings were easily visible within the vegetation.

## Study team

The survey was undertaken by Nigel Jackett (Table 2.4), who has extensive experience conducting formal fauna surveys within Western Australia, including targeted surveys for conservation significant fauna in the West Kimberley and Pilbara.

Table 2.4 Project staff

Name	Qualification	Project role
Nigel Jackett	B. Env. Sc. (Hons)	Project management, survey design, field survey, reporting



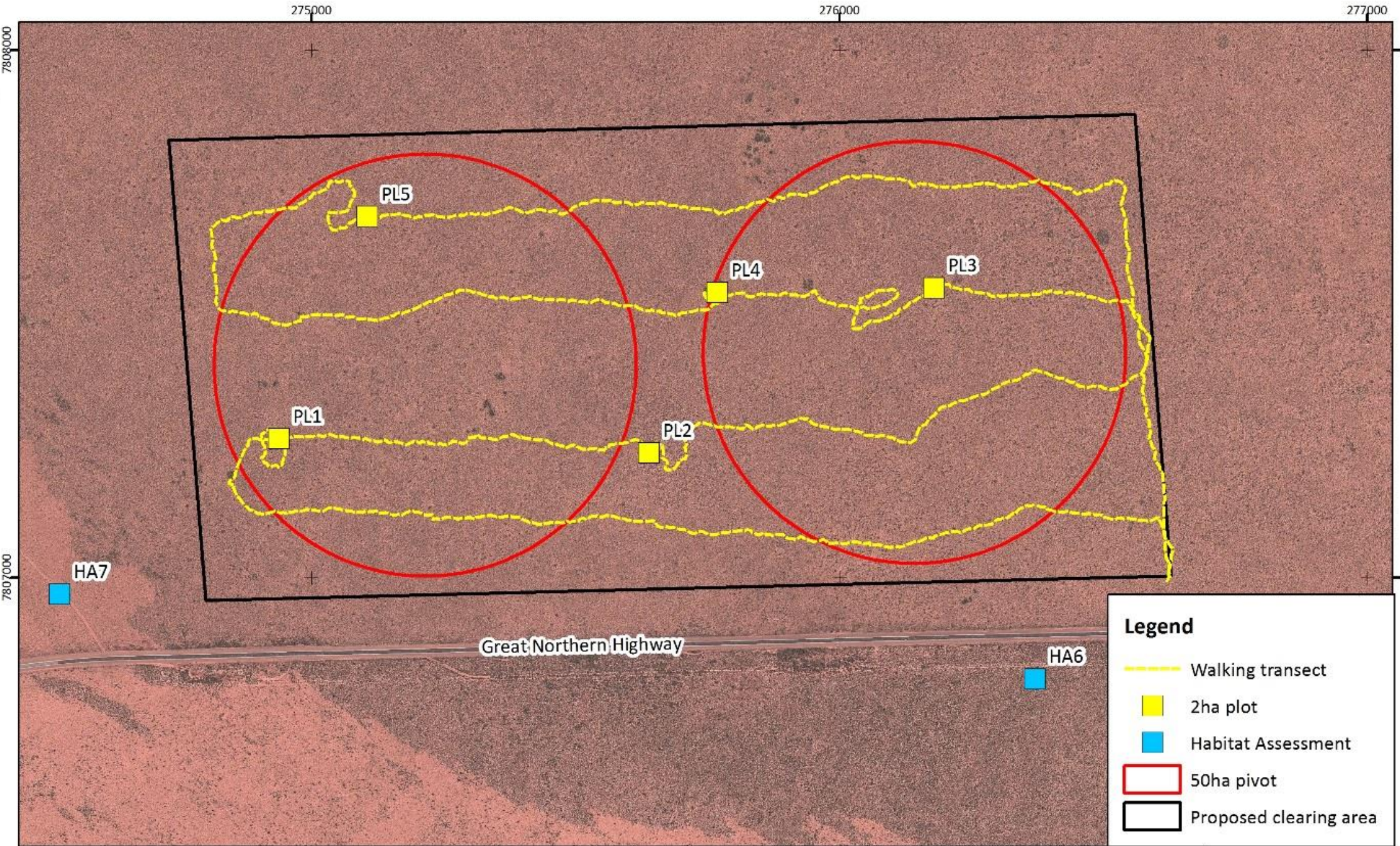


## Survey effort

The total search time expended within and adjacent to the proposed clearing area is shown in Table 2.5. The walking transect route and location of 2ha plots are displayed in Figure 2.1.

Table 2.5. Search effort expended within each pivot area

Survey area	Transect search effort (person hours)	Transect distance (km)	2ha plots completed	Habitat assessments	2ha plot search effort (person hours)	Total search effort (person hours)
Inside proposed clearing area	2:11	9.7	5	5	1:40	3:51
Outside proposed clearing area	-	-	-	2	-	-
<b>Total</b>	<b>2:11</b>		<b>5</b>	<b>7</b>	<b>1:40</b>	<b>3:51</b>



Location of walking transects and 2 ha plots

Figure 2.1

Drawn: 19/07/2017  
UTM: Zone 51





### 3. Results

#### Two-hectare plot survey results

A single, broad fauna habitat was recorded throughout the proposed clearing area, comprising an open to very open shrubland of *Acacia* spp., *Grevillea pyramidalis*, *Melaleuca* sp., *Gardenia pyriformis* and *Erythrophleum chlorostachys* over low, moderately open to dense *Triodia* sp. hummock grassland on a sand-loam plain with scattered leaf litter. Habitat descriptions and fauna sign at each of the 2ha plot sites within the proposed clearing area are listed below.

**2ha plot 1:** *Grevillea pyramidalis*, *Acacia* spp. and *Melaleuca* sp. open shrubland over dense *Triodia* sp. hummock grassland on sand-loam plain.

Location (UTM): 51 S/274938mE/7807263mN  
Size of open sand patches: Majority <1m  
Size of animal tracks visible: Small – large animals (e.g. rodents, small birds)  
Leaf litter cover: <25%  
Time since fire: 1-5 years

Species within 2ha plot	Sign present	Age of most recent sign
<i>Varanus gouldii</i>	Burrows, diggings	<1 week



**2ha plot 2:** *Acacia stellaticeps*, *Acacia* sp., and *Grevillea pyramidalis* open shrubland over low, moderately dense *Triodia* sp. hummock grassland on sand-loam plain.

Location (UTM): 51 S/275638mE/7807236mN  
Size of open sand patches: Majority <1m  
Size of animal tracks visible: Medium – large animals (e.g. small macropod, cat, bilby, goannas)  
Leaf litter cover: 25-50%  
Time since fire: 1-5 years



Species within 2ha plot	Sign present	Age of most recent sign
<i>Varanus gouldii</i>	Burrows, diggings	<1 week



**2ha plot 3:** *Erythrophleum chlorostachys*, *Gardenia pyriformis*, *Acacia stellaticeps*, *Grevillea pyramidalis* and *Melaleuca* sp. open shrubland over moderately dense *Tridodia* sp. hummock grassland on sand-loam plain.

Location (UTM): 51 S/276179mE/7807550mN  
 Size of open sand patches: Majority <1m  
 Size of animal tracks visible: Medium – large animals (e.g. small macropod, cat, bilby, goannas)  
 Leaf litter cover: <25%  
 Time since fire: 1-5 years

Species within 2ha plot	Sign present	Age of most recent sign
<i>Varanus gouldii</i>	Burrows, diggings	<1 week





**2ha plot 4:** *Gardenia pyriformis, Acacia stellaticeps, Grevillea pyramidalis* and *Hakea* sp. open shrubland over moderately dense *Triodia* sp. hummock grassland on sand-loam plain.

Location (UTM): 51 S/275768mE/7807541mN  
 Size of open sand patches: Majority <1m  
 Size of animal tracks visible: Medium – large animals (e.g. small macropod, cat, bilby, goannas)  
 Leaf litter cover: <25%  
 Time since fire: 1-5 years

Species within 2ha plot	Sign present	Age of most recent sign
<i>Varanus gouldii</i>	Diggings	<1 week



**2ha plot 5:** *Gardenia pyriformis, Acacia stellaticeps, Grevillea pyramidalis* and *Hakea* sp. open shrubland over moderately dense *Triodia* sp. hummock grassland on sand-loam plain.

Location (UTM): 51 S/275106mE/7807687mN  
 Size of open sand patches: Majority <1m  
 Size of animal tracks visible: Medium – large animals (e.g. small macropod, cat, bilby, goannas)  
 Leaf litter cover: <25%  
 Time since fire: 1-5 years

Species within 2ha plot	Sign present	Age of most recent sign
<i>Varanus gouldii</i>	Diggings	<1 week



### Conservation significant fauna recorded during field survey

No evidence of conservation significant fauna occurring within the study area was detected during the field survey (Table 3.1). Fauna recorded during the field survey are listed in Appendix 1.

Table 3.1. Evidence of potentially occurring conservation significant fauna recorded during the field survey

Species	Ranking (WA, EPBC)	Detection during field survey
<b>Mammals</b>		
Northern Quoll ( <i>Dasyurus hallucatus</i> )	EN, EN	Not detected
Greater Bilby ( <i>Macrotis lagotis</i> )	VU, VU	Not detected
Ghost Bat ( <i>Macroderma gigas</i> )	VU, VU	Not detected
Spectacled Hare-wallaby ( <i>Lagorchestes conspicillatus leichardtii</i> )	P3, n/a	Not detected
Northern Marsupial Mole ( <i>Notoryctes caurinus</i> )	P4, n/a	Not detected
<b>Reptiles</b>		
Airlie Island Ctenotus ( <i>Ctenotus angusticeps</i> )	VU, VU	Not detected
<b>Birds</b>		
Night Parrot ( <i>Pezoporus occidentalis</i> )	CR, EN	Not detected
Princess Parrot ( <i>Polytelis alexandrae</i> )	P4, VU	Not detected
Oriental Cuckoo ( <i>Cuculus optatus</i> )	IA, IA	Not detected
Barn Swallow ( <i>Hirundo rustica</i> )	IA, IA	Not detected
Grey Wagtail ( <i>Motacilla cinerea</i> )	IA, IA	Not detected
Yellow Wagtail ( <i>Motacilla flava</i> )	IA, IA	Not detected
Rainbow Bee-eater ( <i>Merops ornatus</i> )	IA, Ma	Not detected



## 4. Discussion

### Likelihood of occurrence and regional impact to conservation significant fauna

Based on the results of the field survey, and consideration of regional records of conservation significant fauna, an assessment of likelihood of occurrence within the proposed clearing area and potential impacts to regional populations was conducted (Table 4.1).

Table 4.1. Likelihood of occurrence and regional impact to conservation significant fauna

Species	Likelihood of occurrence	Regional impact to species
<b>Mammals</b>		
Northern Quoll ( <i>Dasyurus hallucatus</i> )	<b>Low</b> – Rocky habitats and drainage lines preferred by the species are absent from the study area and surrounding landscape.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Greater Bilby ( <i>Macrotis lagotis</i> )	<b>Low</b> – The low, dense spinifex found across the study area is not the preferred habitat of this species in the region. Study area lacks patches of <i>Acacia</i> with open ground cover known to be habitat in the region. No sign of recent or old burrows or diggings of Greater Bilby were found during the field survey, which involved transects	<b>Low</b> – It is unlikely a population of Greater Bilby exists within the study area. Individuals may pass through during local movements. However, based on the field survey results, the number of individuals expected to be impacted by the proposed clearing is very low.
Ghost Bat ( <i>Macroderma gigas</i> )	<b>Low</b> – No cave systems suitable for roosting area present within the proposed clearing area or surrounding landscape. As such, unlikely to use the study area for foraging due to distance.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Spectacled Hare-wallaby ( <i>Lagorchestes conspicillatus leichardtii</i> )	<b>Low</b> – The large tussocks or spinifex clumps this species dens within are not present within the proposed clearing area. Not recorded within 50 km of the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Northern Marsupial Mole ( <i>Notoryctes caurinus</i> )	<b>Low</b> – The loose sands, and in particular, sand dunes, that this species is known to inhabit are not found within the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
<b>Reptiles</b>		
Airlie Island Ctenotus ( <i>Ctenotus angusticeps</i> )	<b>Low</b> – A coastal species found mostly in the littoral zones containing coastal spinifex and/or samphire. This habitat is not present within the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.



Species	Likelihood of occurrence	Regional impact to species
<b>Birds</b>		
Night Parrot ( <i>Pezoporus occidentalis</i> )	<b>Low</b> – The samphire and old-growth (long unburnt) spinifex habitats where this species roosts and forages are absent.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Princess Parrot ( <i>Polytelis alexandrae</i> )	<b>Low</b> – The eucalypt /desert oak woodlands, often associated with sand dunes and salt lakes are not present. Not previously recorded within 50 km of the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Oriental Cuckoo ( <i>Cuculus optatus</i> )	<b>Low</b> – Riparian habitats preferred by this scarce migrant are not present within the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Barn Swallow ( <i>Hirundo rustica</i> )	<b>Low</b> – A species that generally associates with coastal or freshwater habitats. As such, unlikely to forage over the proposed study area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Grey Wagtail ( <i>Motacilla cinerea</i> )	<b>Low</b> – A vagrant to Australia, almost exclusively recorded near water, and therefore unlikely to occur within the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Yellow Wagtail ( <i>Motacilla flava</i> )	<b>Low</b> – An uncommon migrant of open shortgrass, and wetlands; both habitats not present within the proposed clearing area.	<b>Low</b> – Species unlikely to occur based on habitats present, and as such, the proposed clearing is unlikely to have a regional impact on the species.
Rainbow Bee-eater ( <i>Merops ornatus</i> )	<b>High</b> – A widespread species in north-western Australia, and can be found in most habitats. Small numbers of Rainbow Bee-eaters are likely to occur at times when foraging or migrating.	<b>Low</b> – A mobile species that can avoid disturbance. Not expected to breed within the clearing area due to lack of suitable sandy banks or open sand patches.





## Survey limitations

The potential limitations of the assessment are listed in Table 4.2. Given the few limitations encountered, the objectives of the study are considered to have been met.

Table 4.2. Survey limitations

Limitation	Relevant (yes/no)	Comment
Competency/experience of the consultant carrying out the survey	No	The consultant has extensive experience conducting targeted fauna surveys throughout Western Australia, including the Pindanland IBRA sub-region, where the consultant has conducted surveys for the potentially occurring fauna species previously.
Scope (what faunal groups were sampled and were some sampling methods not able to be employed because of constraints such as weather conditions)	No	The assessment considered habitat suitability for all potentially occurring conservation significant fauna. The transects and 2ha plots conducted during the field survey were deemed suitable for detecting conservation significant mammals such as Greater Bilby.
Proportion of fauna identified, recorded and/or collected	No	All diggings, scats and tracks and bird calls relevant to the survey could be identified in the field.
Sources of information e.g. previously available information (whether historic or recent) as distinct from new data	No	Targeted surveys for conservation significant fauna have been conducted within the Pindanland IBRA subregion, providing useful information on habitats within this area. Although limited distributional information is available for some species (e.g. Spectacled Hare-wallaby) within 50 km of the proposed clearing area, sufficient information is known on its biology to permit assessment of likelihood of occurrence.
Proportion of the task achieved and further work which might be needed	No	The proposed clearing area was surveyed for potentially occurring conservation significant fauna, providing sufficient information to determine the likelihood of conservation significant fauna occurring.
Timing/weather/season/cycle;	No	The field survey was conducted in November at the end of the dry season. The potentially occurring conservation significant mammals and reptiles, as well as some of the birds, are expected to be sedentary in the area. November is a suitable month for detecting northern hemisphere migrant birds.
Disturbances (e.g. fire, flood, accidental human intervention etc.) which affected results of survey.	No	There were no recent disturbances that may have impacted upon the results of the survey.
Intensity (in retrospect, was the intensity adequate)	No	The 200 m walking transects were deemed suitable in comprehensively surveying the proposed clearing area for the targeted fauna species. The open landscape allowed good visibility within the study area. The 2ha plots within each pivot further increased the likelihood of detecting either species.
Completeness (e.g. was relevant area fully surveyed)	No	The proposed clearing area was surveyed in their entirety, including the two proposed pivots.
Resources (e.g. degree of expertise available in animal identification to taxon level)	No	Sufficient information is known to allow identification of conservation significant mammal species, based on their tracks, burrows, denning sites and scats. The consultant also has extensive experience and resources relevant to the potentially occurring birds and reptiles.



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Limitation	Relevant (yes/no)	Comment
Remoteness and/or access problems	No	There were no access problems encountered during the field survey.
Availability of contextual (e.g. biogeographic) information on the region	No	There have been an increasing number of fauna surveys conducted within the Pindanland IBRA sub-region, so sufficient contextual information is available.



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## 5. Conclusion

The main conclusions from the conservation significant fauna assessment were:

- No conservation significant fauna species were recorded during the field survey within the proposed clearing area.
- A single, broad fauna habitat was recorded throughout the proposed clearing area, comprising an open to very open shrubland of *Acacia* spp., *Grevillea pyramidalis*, *Melaleuca* sp., *Gardenia pyriformis* and *Erythrophleum chlorostachys* over low, moderately open to dense *Triodia* sp. hummock grassland on a sand-loam plain with scattered leaf litter.
- The results of the habitat assessments, walking transects and 2ha plots conducted during the field survey suggest there is low likelihood of conservation significant fauna occupying the proposed clearing area, except for the Rainbow Bee-eater that may forage or pass through the proposed clearing area during local movements.
- The proposed clearing is not expected to significantly impact any conservation significant fauna or their habitats occurring within the region.
- There were no limitations constraining the field assessment, with access to all areas within the proposed clearing permit boundary being unrestricted, and survey conditions being suitable.



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## 6. References

- Bamford Consulting Ecologists (2007) Fauna assessment of the Pardoo Direct Shipping Ore Project. Report prepared for Atlas Iron Limited.
- Bamford Consulting Ecologists (2016) Assessment of the Bilby *Macrotis lagotis* on Wallal Downs Station; Homestead and Chirup project areas. Report prepared for the Warrawagine Cattle Company.
- Broome Bird Observatory (2017) Nita Downs Station Irrigated Fodder Production Greater Bilby and Spectacled Hare-wallaby assessment. Unpublished report for Forshaw Pastoral Company Pty Ltd.
- DSEWPaC (2011) Survey guidelines for Australia's Threatened Mammals. Department of Sustainability, Environment, Water, Population and Communities.
- ecologia* Environment (2016) Thunderbird Project Targeted Greater Bilby Assessment. Report prepared for Sheffield Resources Ltd.
- GHD (2013) Cape Leveque Road Upgrade Targeted Greater Bilby Assessment. Report prepared for Main Roads Western Australia.
- SKM (2012) Browse Bilby Review. Consolidated information relating to the occurrence of the Bilby (*Macrotis lagotis*) in the vicinity of the Browse LNG precinct and the more broadly on the Dampier Peninsula. Report prepared for Woodside Energy Limited.
- EPA (2002a) Terrestrial Biological Surveys as an Element of Biodiversity Protection in Environmental Protection Authority, ed, Perth.
- EPA (2002b) Terrestrial Biological Surveys as an Element of Biodiversity Protection. Position Statement No. 3. Environmental Protection Authority, Western Australia.
- EPA and DEC (2010) *Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment*. Perth, Western Australia.
- Envisage Environmental Services (2012) Peer review of the Browse Bilby Review, a report detailing the consolidated information relating to the occurrence of the Bilby *Macrotis lagotis* near the proposed Browse LNG Precinct (close to James Price Point) and more broadly on the Dampier Peninsula. Report prepared for Woodside Energy Ltd
- Envisage Environmental Services (2015) Targeted Greater Bilby assessment of the Landcorp WA industrial development site near Crab Creek Road, Broome.



## Appendix 1. List of fauna species recorded during the field assessment

Common Name	Scientific Name	Count
<b>Mammals</b>		
large kangaroo/wallaby	<i>Macropus sp.</i>	•
*Camel	<i>Camelus dromedarius</i>	•
<b>Birds</b>		
Little Buttonquail	<i>Turnix velox</i>	2
White-winged Fairy-wren	<i>Malurus leucopterus</i>	3
Singing Honeyeater	<i>Gavicalis virescens</i>	3
Black-faced Woodswallow	<i>Artamus cinereus</i>	3
Horsfield's Bush Lark	<i>Mirafrja javanica</i>	10
<b>Reptiles</b>		
Slider sp.	<i>Lerista sp.</i>	•
Sand Goanna	<i>Varanus gouldii</i>	•

\* introduced fauna; • recorded by secondary evidence only