



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4423/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Gondwana Resources Ltd

### 1.3. Property details

Property: Exploration Licence 77/1362  
Local Government Area: Shire of Yilgarn  
Colloquial name: Parker Range Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.42		Mechanical Removal	Mineral Exploration

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 21 July 2011

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

##### Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Four Beard vegetation associations are located within the application area (GIS Database):

**Beard vegetation association 141:** medium woodland; York Gum, Salmon Gum and Gimlet;

**Beard vegetation association 1068:** medium woodland; Salmon Gum, Morrel, Gimlet and *Eucalyptus sheathiana*;

**Beard vegetation association 1148:** shrublands; scrub-heath in the Coolgardie region; and

**Beard vegetation association 1413:** shrublands, *Acacia*, *Casuarina* and *Melaleuca* thicket.

A Level 1 flora and vegetation survey of the application area was conducted by Astron Environmental Services in November 2010. This survey identified the following vegetation communities within the application area (Astron Environmental Services, 2010):

##### Vegetation Association 1: Sandplain

Low open woodland of *Eucalyptus leptopoda* over Tall Open Shrubland of *Callitris preissii*, *Grevillea Caiguna* and *Exocarpus aphyllus* over Low Shrubland of *Acacia inaequiloba*, *Adenanthos argyreus* and *Banksia audax* over Hummock Grassland of *Triodia desertorum* over Very Open Herbland/ Sedgeland of *Gahnia ancistrophylla*, *Lepidosperma viscidum* and *Lepidobolus preissiana*.

##### Vegetation Association 2: Heathland

The Heathland vegetation comprised a Tall Open Scrub of *Allocasuarina campestris* over *Acacia beauverdiana*, *Melaleuca acuminatum* subsp. *acuminatum* and *Leptospermum fastigiatum* over Scattered Sedges of *Lepidosperma viscidum*.

##### Vegetation Association 3: Woodland

Woodland of *Eucalyptus salubris*, *Eucalyptus flocktoniae* and *Eucalyptus salmonophloia* in variable vegetative cover combinations over Tall Shrubland of *Exocarpus aphyllus*, *Melaleuca pauperiflora* subsp. *fastigiatum* and *Santalum acuminatum* over Low Open Shrubland generally comprising: *Acacia colletioides*, *Acacia merrallii* and *Eremophila scoparia* over Scattered Herbs: *Daucus glochidiatus*, *Dianella revoluta* and *Solanum hoplopetalum*.

##### Clearing Description

Gondwana Resources (2011) proposes to clear up to 1.42 hectares of native vegetation. The application area is located approximately 40 kilometres south-east of Marvel Loch (GIS Database).

The purpose of the proposed clearing is exploration (Gondwana Resources, 2011). Clearing will be conducted with a front end loader (Gondwana Resources, 2011).

**Vegetation Condition** Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994);

to

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

**Comment** The vegetation condition rating is derived from a flora and vegetation survey conducted by Astron Environmental Services in November 2010. The majority of the application area has been previously cleared for tracks and drill lines and therefore, the majority of clearing under this proposal will be to re-establish these tracks.

### 3. Assessment of application against clearing principles

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

**Comments** **Proposal may be at variance to this Principle**

The application area is located within the Southern Cross subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). CALM (2002) reports that high species and ecosystem diversity in this subregion is focussed around banded ironstone ranges, ephemeral flora communities of tertiary sandplain scrubs and valley floor woodlands. This subregion is itself a biogeographic interzone between the South West and Eremaean Botanical Provinces (CALM, 2002).

A flora and vegetation survey was conducted over the application area in November 2010 (Astron Environmental Services, 2010). This survey identified a total of 77 vascular flora species representing 53 genera from 27 families (Astron Environmental Services, 2010). The most common families were *Myrtaceae*, *Proteaceae*, *Fabaceae* and *Chenopodiaceae* (Astron Environmental Services, 2010).

No weed species were recorded within the application area during the flora and vegetation survey (Astron Environmental Services, 2010). The presence of weed species would lower the biodiversity value of the proposed clearing area. It is important to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

No Declared Rare Flora were recorded within the survey area (Astron Environmental Services, 2010). Astron Environmental Services (2010) reports that one individual of the Priority 4 species, *Eremophila caerulea* subsp. *merrallii* was recorded during the flora and vegetation survey of the application area. This species has numerous populations throughout the Wheatbelt and Goldfields region with some of the populations being of quite high abundance (Western Australian Herbarium, 2011). Given this, it is unlikely that the removal of one plant will affect the conservation status of this species.

No Threatened Ecological Communities were recorded within the application area (Astron Environmental Services, 2010). The Woodland vegetation community within the application area fits the description of a component of the Parker Range Priority 3 Priority Ecological Community (PEC); namely the *Eucalyptus salmonophloia* and *Eucalyptus salubris* complex on broad flats (Astron Environmental Services, 2010). Given that the proposed clearing of 1.42 hectares is spread across three vegetation communities, and that the majority of clearing within the woodland community will be to re-establish an old track, it is unlikely that the clearing will affect the conservation status of this PEC.

The Jilbadji Nature Reserve is reported by the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) (2011) as being rich in animal species. The Jilbadji Reserve supports a very high diversity of reptiles and native mammals, with 38 species of reptiles and 15 species of mammals having been previously recorded (SEWPAC, 2011). The application area has been previously disturbed and Astron Environmental Services (2010), reports that much of this pre-disturbed area has not naturally regenerated. Given this, the application area is expected to have much lower fauna diversity than indicated above.

Based on the above, the proposed clearing may be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)  
CALM (2002)  
SEWPAC (2011)  
Western Australian Herbarium (2011)  
GIS Database:  
- IBRA WA (Regions - Subregions)

#### (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

**Comments** **Proposal is not likely to be at variance to this Principle**

Astron Environmental Services conducted a flora and vegetation survey of the application area and adjacent areas in November 2010. There were three fauna habitats recorded within the application area; Woodland, Heathland and Sandplain habitat (Astron Environmental Services, 2010). No large tree hollows or burrows, other than those of small reptiles, were located within the application area and the small burrows noted were

located in the windrows of existing historical exploration tracks (Astron Environmental Services, 2010).

None of the habitats identified are limited to the application area. Given the amount of excellent quality vegetation available throughout the Jilbadji Nature Reserve, the clearing of 1.42 hectares of previously disturbed vegetation is unlikely to have a significant impact on habitat for any fauna species.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

Astron Environmental Services (2010) conducted a Level 1 flora and vegetation survey over the application area in November 2010.

No Declared Rare Flora were recorded within the application area during the flora and vegetation assessment (Astron Environmental Services, 2010).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments Proposal is not likely to be at variance to this Principle**

There are no known Threatened Ecological Communities (TECs) within the area applied to clear (GIS Database). There are no known TECs within 200 kilometres of the application area (GIS Database).

Astron Environmental Services (2010) reports that no TECs were identified within the survey area during the flora and vegetation survey.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)

GIS Database:

- Threatened Ecological Sites Buffered

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments Proposal is not likely to be at variance to this Principle**

The application area falls within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 98.4% of the pre-European vegetation still exists within the Coolgardie bioregion (see table below). The vegetation within the application area is recorded as the following Beard vegetation associations (Shepherd, 2009):

**Beard vegetation association 141:** medium woodland; York Gum, Salmon Gum and Gimlet;

**Beard vegetation association 1068:** medium woodland; Salmon Gum, Morrel, Gimlet and *Eucalyptus sheathiana*;

**Beard vegetation association 1148:** shrublands; scrub-heath in the Coolgardie region; and

**Beard vegetation association 1413:** shrublands, *Acacia*, *Casuarina* and *Melaleuca* thicket.

According to Shepherd (2009) all these vegetation associations are classed as having a conservation status of 'Least Concern', with over 50% of these vegetation associations remaining within the bioregion. The proposed clearing of 1.42 hectares, spread across four vegetation associations, is unlikely to affect the conservation status of any of these associations.

The vegetation within the application area is not a remnant of vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Coolgardie	12,912,204	12,707,873	~98.4	Least Concern	~10.9
Beard vegetation associations - State					
141	1,158,760	959,027	~82.8	Least Concern	~12
1068	268,900	135,869	~50.5	Least Concern	~6.2
1148	260,384	257,533	~98.9	Least Concern	~17
1413	1,679,917	1,252,586	~74.6	Least Concern	~11
Beard vegetation associations - Bioregion					
141	883,086	859,069	~97.3	Least Concern	~15.6
1068	193,988	102,263	~52.7	Least Concern	~7.3
1148	254,932	1,041,677	~98.2	Least Concern	~16.8
1413	1,061,213	1,041,677	~98.2	Least Concern	~16.8

\* Shepherd (2009)

\*\* Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Department of Natural Resources and Environment (2002)  
Shepherd (2009)  
GIS Database:  
- IBRA WA (Regions - Subregions)

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments** **Proposal is not at variance to this Principle**  
According to available databases there are no watercourses or wetlands within the proposed clearing area (GIS Database).

The vegetation associations mapped by Astron Environmental Services (2010) are not associated with watercourses or wetlands.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology** Astron Environmental Services (2010)  
GIS Database:  
- Hydrography, linear

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
The application area contains areas of sandy soils that could be susceptible to erosion following removal of vegetation (Astron Environmental Services, 2010). Given the temporary nature of the proposed clearing, and considering that the clearing will be occurring across several narrow drill lines and tracks in an already disturbed area, it is considered unlikely that the removal of 1.42 hectares of native vegetation will exacerbate or cause appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal is at variance to this Principle**

The proposed clearing is located within the Jilbadji Nature Reserve (GIS Database). This reserve occupies an area of over 200,000 hectares. It is recognised for its endemic flora and fauna species and is a potentially important refuge for many fauna species including invertebrates and smaller vertebrates (SEWPAC, 2011).

The Department of Environment and Conservation (DEC) have approved Gondwana Resources' Conservation Management Plan for drilling within the Jilbadji Nature Reserve (DEC, 2011). This plan includes rehabilitation and weed management commitments. Gondwana Resources (2011) states that much of the clearing will involve re-clearing of old tracks.

The proposed clearing of 1.42 hectares for exploration purposes, within a nature reserve of over 200,000 hectares, is not likely to significantly impact upon the environmental values of this conservation area.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** DEC (2011)  
Gondwana Resources (2011)  
SEWPAC (2011)  
GIS Database:  
- DEC Tenure

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal is not likely to be at variance to this Principle**

There are no permanent or ephemeral watercourses or waterbodies within the application area (GIS Database).

Given that the application is to clear 1.42 hectares across several narrow drill lines and a track, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** GIS Database:  
- Hydrography, linear

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

**Comments Proposal is not likely to be at variance to this Principle**

According to available databases there are no wetlands or watercourses within the proposed clearing area (GIS Database).

A large proportion of the proposed clearing is to re-establish an old track (Astron Environmental Services, 2010). Given this prior disturbance and considering that the proposed clearing will occur across several drill lines and a narrow track, it is unlikely that the removal of 1.42 hectares of native vegetation will cause or exacerbate the incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Astron Environmental Services (2010)  
GIS Database:  
- Hydrography, linear

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**

There are no Native Title claims within the application area (GIS Database). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993*, and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process. Therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases there are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water to determine whether a Works Approval, Water Licence, Bed and Banks permit or any other licences or approvals are required for the proposed works.

The clearing permit was advertised by the Department of Mines and Petroleum on 27 June 2011, inviting submissions from the public. No submissions were received.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims

#### 4. References

- Astron Environmental Services (2010) Lindsays Prospect. Level 1 Vegetation and Flora Survey. November 2010. Unpublished report. Astron Environmental Services, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DEC (2011) Email advice to Environmental Officer. Department of Environment and Conservation, Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Gondwana Resources (2011) Clearing Permit Application Supporting Documentation. Gondwana Resources Limited.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- SEWPAC (2011) Jilbadji Nature Reserve, Forrestania - Southern Cross Rd, Barker Lake via Marvel Loch, WA, Australia. Department of Sustainability, Environment, Water, Population and Communities. <http://www.environment.gov.au/cgi-bin/ahdb/search.pl>.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Western Australian Herbarium (2011) Florabase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/>.

#### 5. Glossary

##### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental Protection Act 1986, Western Australia
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI Act</b>	Rights in Water and Irrigation Act 1914, Western Australia
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia
<b>TEC</b>	Threatened Ecological Community

##### Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at

least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

- P3 Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4 Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

**{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-**

- Schedule 1 Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2 Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3 Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4 Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

**{CALM (2005). Priority Codes for Fauna. Department of Conservation and Land Management, Como, Western Australia} :-**

- P1 Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2 Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3 Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4 Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5 Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

**Categories of threatened species (Environment Protection and Biodiversity Conservation Act 1999)**

- EX Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W) Extinct in the wild:** A native species which:  
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or  
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN Endangered:** A native species which:  
(a) is not critically endangered; and  
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

**VU**

**Vulnerable:** A native species which:

- (a) is not critically endangered or endangered; and
- (b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

**CD**

**Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.