



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5038/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Onslow Metals Pty Ltd

1.3. Property details

Property: Mining Lease 08/272
Local Government Area: Shire of Ashburton
Colloquial name: Range Quarry Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 July 2012

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. One Beard vegetation association has been mapped within the application area (GIS Database; Government of Western Australia, 2011):

585: Mosaic: Shrublands; snakewood & *Acacia victoriae* scrub / Hummock grasslands, shrub-steppe; kanji over soft spinifex & *Triodia basedowii*.

A flora and vegetation survey of the application area was conducted by Newman Environmental (2011) in May 2011. This survey identified one vegetation association within the application area:

Open Corymbia Woodland – Emergent *Corymbia zygophylla* and *Acacia ancistrocarpa*, *Acacia bivenosa* and *Acacia inaequilatera* sparse low open woodland over *Senna artemisioides* subsp. *oligophylla*, *Senna artemisioides* subsp. *helmsii* and *Acacia trachycarpa* mixed shrubs and *Aristida holathera* subsp. *holathera*, *Enneapogon caerulescens*, *Triodia wiseana*, *Triodia basedowii* and *Triodia lanigera* hummock grassland.

Clearing Description Onslow Metals is proposing to clear up to 11.8 hectares of native vegetation within a broader boundary of approximately 84 hectares for the purpose of undertaking mineral production activities.

Clearing will be conducted by mechanical means and will be stockpiled for use in rehabilitation.

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment The application area is located within the Pilbara region of Western Australia and is situated approximately 70 kilometres south south-east of Onslow.

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

The application area occurs within the Roebourne (PIL4) subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *Acacia pyrifolia* and *Acacia inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands (CALM, 2002). Ephemeral drainage lines support *Eucalyptus*

victrix or *Corymbia hamersleyana* woodlands (CALM, 2002). Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

Numerous flora and vegetation surveys have been conducted over the application area. The most recent survey was conducted by Newman Environmental (2011) in May 2011 which covered the tenement under application and another adjacent tenement. This survey identified 49 flora species from 28 genera and 17 families within the application area, therefore suggesting that floral diversity is not high (Onslow Metals, 2012).

Three flora and vegetation surveys, conducted by Jims Weeds, Seeds & Trees in 2004, Botanica (2007) and Newman Environmental (2011), have been conducted over the application area (Onslow Metals, 2012). None of these surveys have identified any Threatened or Priority Flora within the application area (Newman Environmental, 2011).

According to available databases there are no known Threatened or Priority Ecological Communities within the application area (GIS Database).

Three weed species, *Cenchrus ciliaris*, *Portulaca olearia* and *Vachellia farnesiana*, were recorded by Newman Environmental (2011) during a flora and vegetation survey of the application area and a nearby tenement. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey of the application area was conducted by Egernia (2011) in June 2011. This survey identified one main fauna habitat, open spinifex shrubland with scattered *Acacia* and occasional *Eucalyptus* species, with little variation across the majority of the application area (Egernia, 2011). No notable fauna habitats, such as wetlands or woodlands, were recorded within the application area (Egernia, 2011).

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

Methodology Botanica (2007)
CALM (2002)
Egernia (2011)
Newman Environmental (2011)
Onslow Metals (2012)
GIS Database:
- IBRA WA (regions – subregions)
- Threatened Ecological Sites Buffered

(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

A fauna survey of the application area was conducted by Egernia (2011) in June 2011. This survey identified one main fauna habitat, open spinifex shrubland with scattered *Acacia* and occasional *Eucalyptus* species, with little variation across the majority of the application area (Egernia, 2011). No notable fauna habitats, such as wetlands or woodlands, were recorded within the application area (Egernia, 2011).

The fauna survey conducted by Egernia (2011) identified the potential for the following four conservation significant fauna species to occur within the application area:

- Peregrine Falcon (*Falco peregrinus*) Schedule 4 – is likely to visit the area, however preferred nesting habitat of ledges on cliffs, rocky outcrops and quarries are not present within the application area;

- Rainbow Bee-eater (*Merops ornatus*) Migratory – likely to utilise the application area for foraging and sandy bank areas around old diggings may be utilised for nesting;

- Western Pebble-mound Mouse (*Pseudomys chapmani*) Priority 4 – two inactive mounds were recorded within the application area. This species occurs on gentle slopes of rocky ranges where the ground is covered by stony mulch and vegetated by hard Spinifex, often with sparse overstorey of eucalypts and scattered shrubs (Van Dyck & Strahan, 2008). A decline in this species occurred prior to 1970, likely to be caused by the introduction of foxes and exotic herbivores (Van Dyck & Strahan, 2008). This species is considered to be secure in its remaining range where foxes are rare and preferred habitat is little utilised by exotic herbivores (Van Dyck & Strahan, 2008); and

- Australian Bustard (*Ardeotis australis*) Priority 4 – this species occurs over much of Western Australia. Given the range and the mobility of this species, it is likely to avoid areas of disturbance.

No core habitat for any conservation significant fauna species has been recorded within the application area. The Peregrine Falcon, Rainbow Bee-eat and Australian bustard are all highly mobile and have the ability to

easily egress from any disturbance. The Western Pebble-mound Mouse is considered unlikely to still occur within the application area as only inactive mounds were recorded during the fauna survey conducted by Egernia (2011). It is therefore considered unlikely that the proposed clearing will impact on the conservation of any fauna species.

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

Methodology Egernia (2011)
Van Dyck & Strahan (2008)

(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

There are no known records of Threatened Flora within the application area (GIS Database). A targeted Threatened and Priority Flora survey was conducted over the application area by Jims Seeds Weeds & Trees in 2004 (Onslow Metals, 2012). Additionally, Botanica (2007) conducted a flora and vegetation survey of the application area in 2007. During these surveys, no Threatened Flora were identified.

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

Methodology Botanica (2007)
Onslow Metals (2012)
GIS Database:
- Threatened and priority Flora

(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 Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is located approximately 135 kilometres west of the application area (GIS Database).

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

Methodology 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 at variance to this Principle

The application area is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Government of Western Australia (2011) reports that approximately 99.58% of the pre-European vegetation remains within the Pilbara bioregion.

The vegetation within the application area has been broadly mapped as the following Beard vegetation association:

585: Mosaic: Shrublands; snakewood & *Acacia victoriae* scrub / Hummock grasslands, shrub-steppe; kanji over soft spinifex & *Triodia basedowii*.

According to the Government of Western Australia (2011) approximately 99.99% of vegetation type 585 remains within the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,427	17,729,352	~99.58	Least Concern	~6.32
Beard vegetation associations - State					
585	145,571	145,559	~99.99	Least Concern	~23.44
Beard vegetation associations - Bioregion					
585	144,812	144,801	~99.99	Least Concern	~23.53

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be a remnant of native vegetation in an area that has been extensively cleared.

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (regions – subregions)
- Pre-European Vegetation

(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**
A flora and vegetation survey of the application area conducted by Botanica (2007) did not identify any vegetation growing in association with watercourses or wetlands.

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

Methodology Botanica (2007)

(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 intersects the following two land systems (GIS Database):

The Stuart Land System is characterised by gently undulating stony plains supporting hard and soft spinifex grasslands and snakewood shrublands (Van Vreeswyk et al., 2004). This land system is generally resistant to erosion except for some lower plains and drainage tracts which are slightly to moderately susceptible (Van Vreeswyk et al., 2004).

The Uaroo land system is characterised by broadly sandy plains supporting shrubby hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). This land system is generally not susceptible to erosion, however some erosion is present on drainage tracts (Van Vreeswyk et al., 2004).

Both the Stuart and Uaroo land systems are generally not susceptible to erosion, however both have some susceptibility to erosion within drainage tracts. There are no drainage tracts present within the application area, therefore the proposed clearing is not likely to cause appreciable land degradation (Botanica, 2007; GIS Database).

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

Methodology Botanica (2007)
Van Vreeswyk et al. (2004)
GIS Database:
- Hydrography, linear
- Rangeland Land System Mapping

(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 application area is located within the Cane River Conservation Park (GIS Database). Advice sought from the Department of Environment and Conservation (DEC) (2012) recommended a number of measures relating to rehabilitation, mine closure and increased traffic through the Conservation Park. These impacts will be addressed under relevant *Mining Act 1978* approvals.

Conservation values of the Cane River Conservation Park may also be adversely impacted by the spread of weed species. Potential impacts to the conservation values of the Cane River Conservation Park as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology DEC (2012)
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

A flora and vegetation survey of the application area conducted by Botanica (2007) did not identify any vegetation growing in association with watercourses or wetlands. It is therefore considered unlikely that the proposed clearing will impact on the quality of any surface water.

According to available GIS Databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is the Cane River Water Reserve which is located approximately 47 kilometres north of the application area at its closest point (GIS Database). Given the distance separating the application area and the nearest water supply, the proposed clearing is not likely to impact on the quality of the Cane River Water Reserve.

The application area experiences an arid (semi-desert) tropical climate with highly variable rainfall, falling mainly in summer (CALM, 2002). Groundwater within the application area has low salinity levels of between 1,000 to 3,000 milligrams per litre Total Dissolved Solids (TDS) (GIS Database). It is considered unlikely that the proposed clearing of 11.8 hectares of native vegetation within this climate would cause local groundwater salinity levels to alter significantly.

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

Methodology Botanica (2007)
CALM (2002)
GIS Database:
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Area (PDWSA)

(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

The application area experiences an arid (semi-desert) tropical climate with an average annual rainfall of approximately 286.1 millimetres (BoM, 2012; CALM, 2002). This region is subject to cyclonic activity and sporadic thunderstorm events, during which local flooding is common. It is considered unlikely that the proposed clearing of 11.8 hectares of native vegetation will cause or exacerbate the incidence or intensity of flooding in this area.

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

Methodology BoM (2012)
CALM (2002)

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

Comments

There is one Native Title Claim (WC99/45) over the area under application (GIS Database). This claim was determined by the Federal Court of Australia on 18 September 2008. However, 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*.

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 on 24 October 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Determined by the Federal Court

4. References

- BoM (2012) BoM Website - Climate Averages by Number, Averages for MINDEROO. www.bom.gov.au/climate/averages/tables.shtml (Accessed 9 July 2012)
- Botanica (2007) Flora and Vegetation Survey of the Turtle and Range Project. (M08/272 & M08/273). Unpublished report dated June 2007 prepared for Onslow Metals Pty Ltd. Botanica Consulting.
- DEC (2012) Consultation on Conservation Management Plan - Onslow Metals Pty Ltd - Range Project M08/272 and L08/72. Advice received on 9 July 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- 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.
- Egernia (2011) Vertebrate Fauna Desktop Assessment for Cane River proposed exploration area, Onslow, WA. Unpublished report prepared for Keith Lindbeck and Associates dated June 2011. Egernia Environmental.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Newman Environmental (2011) Onslow Metals Turtle and Range Deposits Level 1 Flora Survey. Unpublished report dated June 2011.
- Onslow Metals (2012) Range Quarry Project Supporting Document for Clearing Permit Application M08/272. Unpublished report dated April 2012. Onslow Metals Pty Ltd.
- Van Dyck, S. and Strahan, R. (2008) The Mammals of Australia Third Edition. Published by Reed New Holland, Sydney.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

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