



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4493/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Onslow Resources Ltd**

1.3. Property details

Property: Mining Lease 08/458
Mining Lease 08/461
Miscellaneous Licence 08/51
Local Government Area: Shire of Ashburton
Colloquial name: Ashburton River Sand and Shingle Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 15 September 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. One Beard vegetation association has been mapped within the application area (GIS Database; Shepherd, 2009):

589 - Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft Spinifex.

A level 2 flora and vegetation survey was conducted by staff from Pilbara Flora (2010) in early spring 2009 and autumn 2010. This survey identified three vegetation associations within the application area:

Eucalyptus victrix low open woodland on plains;
Eucalyptus camaldulensis var. obtusa with occasional Melaleuca argentea open forest on the Ashburton River banks; and
Scattered herbs and sedges in the Ashburton River bed.

Clearing Description Onslow Resources Ltd is proposing to clear up to 33 hectares of native vegetation for the purpose of stockpile areas and road access.

Vegetation Condition Pristine: No obvious signs of disturbance (Keighery, 1994);

To

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

Comment The application area is located within the Carnarvon region of Western Australia and is situated approximately 29 kilometres south 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 proposed clearing is located approximately 29 kilometres south of Onslow in the Cape Range subregion of the Carnarvon Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database).

A flora and vegetation survey of the mining tenements in which the application area lies was conducted by staff from Pilbara Flora (2010) in October 2009. A total of 107 flora taxa were recorded within the survey area, which is considered to be consistent for the size of the area surveyed (226.40 hectares) within the Cape Range subregion (Pilbara Flora, 2010).

A total of seven introduced flora taxa, *Argemone ochroleuca*, *Cenchrus ciliaris*, *Cenchrus setigera*, *Datura leichhardtii*, *Malvastrum americanum*, *Parkinsonia aculeata* and *Vachellia farnsiana* were recorded within the application area during the flora survey conducted by Pilbara Flora (2010). 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. Three of these species, *Argemone ochroleuca*, *Datura leichhardtii* and *Parkinsonia aculeata* are listed as a 'Declared Plant' species for most of the state under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Of these only *Parkinsonia aculeata* is listed as a 'Declared Plant' species within the Ashburton Municipal District of Western Australia (Priority 1 for the whole of Western Australia and Priority 2 for the Municipal District of Ashburton). Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

No Priority Ecological Communities (PECs) or Priority Flora species are known to occur within the application area (Pilbara Flora, 2010; GIS Database).

A fauna survey of the application area was conducted by Newland Environmental (2010) in March 2010. No unique or specialised fauna habitats were located within the application area (Newland Environmental, 2010). It is therefore considered unlikely that the application area would hold greater faunal diversity than other sites within the Carnarvon bioregion.

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

Methodology Newland Environmental (2010)
Pilbara Flora (2010)
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**

A desktop survey conducted by Newland Environmental (2010) identified the potential for 12 conservation significant fauna species to occur within the application area. A field survey of the Habitat types within the application area was undertaken by Newland Environmental (2010) in March 2010. The field survey identified potential habitat for the following 4 conservation significant species (Newland Environmental, 2010):

- Peregrine Falcon (*Falco peregrines*) – Schedule 4 –open woodland vegetation may provide roosting and nesting sites for this species;
- Grey Falcon (*Falco hypoleucos*) – Priority 4 –open woodland communities may potentially provide roosting and nesting sites for this species;
- Bush Stone-curlew (*Burhinus grallarius*) – Priority 4 –may occur in the riparian woodland areas and the floodplain shrubland areas; and
- Rainbow Bee-eater (*Merops ornatus*) – Migratory – may utilise the soft loamy and sandy soils in the riverbanks for burrowing.

According to a fauna survey conducted by Newland Environmental (2010), the habitats within the application area are generally in very poor condition. Given the relatively small scale of the proposed clearing, it is considered unlikely that any significant habitat for fauna indigenous to Western Australia will be impacted.

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

Methodology Newland Environmental (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**

No Declared Rare Flora (DRF) species are known to occur within the application area (GIS Database).

A flora and vegetation survey of the application area was conducted by Pilbara Flora (2010) in October 2009. No DRF species were recorded during this survey (Pilbara Flora, 2010).

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

Methodology Pilbara Flora (2010)
GIS Database:
- Declared Rare and Priority Flora List

(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 records of Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is approximately 92 kilometres west of the application area (GIS Database). At this distance, there is little likelihood of any impact to the TEC as a result of the proposed clearing.

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 Carnarvon Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 99.61% of the pre-European vegetation remains in the Carnarvon bioregion.

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

589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft Spinifex.

According to Shepherd (2009) approximately 100% of Beard vegetation association 589 remains within the Carnarvon bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Carnarvon	8,382,609	8,349,861	~99.61	Least Concern	~3.62
Beard vegetation associations - State					
589	809,754	809,637	~99.99	Least Concern	~1.60
Beard vegetation associations - Bioregion					
589	78,100	78,100	~100	Least Concern	~0

* Shepherd (2009)

** 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)
Shepherd (2009)
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 likely to be at variance to this Principle

The application area is adjacent to the Ashburton River and crosses the riverbank in five places (GIS Database). The Ashburton River is a non-perennial watercourse with occasional permanent water pools (GIS Database). During a flora and vegetation survey conducted by Pilbara Flora (2010) it was noted that there are no permanent water bodies within the application area.

A vegetation survey of the application area conducted by Pilbara Flora (2010) in October 2009 identified that the majority of the vegetation associated with the Ashburton River is degraded, with Buffel Grass dominating the understory. It is therefore considered unlikely that the proposed clearing will significantly impact upon any native vegetation growing in association with a watercourse or wetland.

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

Methodology Pilbara Flora (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 may be at variance to this Principle

The application area intersects the Nanyarra land system (GIS Database). This land system is characterised by alluvial plains supporting tall shrublands and low woodlands with prominent tussock grasses (Payne et al., 1998).

Payne et al. (1998) describe parts of the Nanyarra land system as being severely degraded, while other sections are now being stabilised by Buffel grass. Therefore it is likely that this land system, if left exposed for extended periods, would be prone to wind and water erosion. Potential degradation may be minimised by rehabilitation conditions implemented through approvals obtained under the *Mining Act 1978*.

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

Methodology Payne et al. (1998)
GIS Database:
- 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 not likely to be at variance to this Principle

The proposed clearing is not located within a conservation reserve (GIS Database). The nearest conservation reserve is the ex - Mount Minnie pastoral lease, located approximately 14 kilometres east of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

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

Methodology 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 may be at variance to this Principle

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, located approximately 40 kilometres north east of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the quality of the Cane River Water Reserve.

The groundwater salinity within the application area is approximately 7,000 – 14,000 milligrams/Litre total Dissolved Solids (TDS) (GIS Database). Given the relatively small scale of the clearing (33 hectares) within the Carnarvon Groundwater Province (111,311,088 hectares), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

The application area is located within and adjacent to the Ashburton River (GIS Database). One named waterhole, Ten Mile Pool, occurs within the Mining Lease M08/461 (Onslow Resources, 2011). According to available databases, Mining Lease M08/458 also crosses into a perennial natural pool (GIS Database). The proposed clearing may impact these natural water pools as the soil within the cleared areas may be exposed for an extended period of time, potentially leading to sedimentation within the natural pools. Rehabilitation

implemented under the *Mining Act 1978* may reduce potential impacts to these natural pools.

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

- Methodology** Onslow Resources (2011)
GIS Database:
- Groundwater Provinces
 - Groundwater Salinity, Statewide
 - Hydrography, linear
 - Public Drinking Water Source Areas (PDWSAs)

(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 is located within and adjacent to the Ashburton River in the Carnarvon IBRA bioregion of Western Australia (GIS Database). This region is subject to cyclonic activity and sporadic thunderstorms. It is likely that the Ashburton River may experience seasonal flooding during high rainfall periods however it is not likely that the proposed clearing will increase the incidence or intensity of this flooding.

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

- Methodology** GIS Database:
- Hydrography, linear
 - IBRA WA (regions – subregions)

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 has been registered with the Native Title Tribunal on behalf of the claimant group. 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 18 July 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

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

4. References

- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Newland Environmental (2010) Habitat Assessment for Vertebrate Fauna at Proposed Mining Areas on M08/458, M08/461, L0851 and L08/52, Ashburton River Sand and Shingle Project. Prepared for Onslow Resources Ltd. Unpublished Report dated December 2010.
- Onslow Resources (2011) Native Vegetation Clearing Permit Application - Ashburton River Sand and Shingle Project on M08/458, M08/461 and L08/51.
- Payne, A.L., Mitchell, A.A. and Holman, W.F. (1998) An Inventory and Condition Survey of Rangelands in the Ashburton River Catchment, Western Australia, Department of Agriculture, Western Australia.
- Pilbara Flora (2010) Flora and Vegetation Survey for the Onslow Tenement Project. Prepared for Onslow Resources Ltd. Unpublished Report dated March 2010.
- 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.

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.