



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5336/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Cliffs Asia Pacific Iron Ore Pty Ltd**

1.3. Property details

Property: Mining Lease 04/235
Local Government Area: Shire of Derby-West
Colloquial name: Cockatoo Island

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.07		Mechanical Removal	Rehabilitation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 November 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 and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area:

Beard vegetation association 8001: Grasslands, curly spinifex, low tree savanna; bloodwood (*Eucalyptus dichromophloia*) & woollybutt over curly spinifex on islands (Government of Western Australia, 2011; GIS Database).

Clearing Description Cliffs Asia Pacific Iron Ore Pty Ltd is proposing to clear up to 2.07 hectares of native vegetation for the purpose of rehabilitation.

The vegetation will be cleared using a bulldozer and chain. The vegetation and topsoil 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:

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment The application area is located in the Mitchell subregion of Western Australia, on Cockatoo Island, and is situated approximately 133 kilometres north of the Derby town site (GIS Database).

The vegetation condition was inferred from aerial photography (GIS Database).

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 is located within the Buccaneer Archipelago within the Mitchell subregion of the Northern Kimberley Interim Biogeographical Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by savannah woodland over high Sorghum grasses and hummock grasses on shallow sandy soils on outcropping and riparian closed forests of *Melaleuca* and *Pandanus* occur along drainage lines. A prominent feature is the rugged sunken coastline with extensive Mangal occurring in estuaries and deep, sheltered embayments. Numerous small patches of monsoon rainforest are scattered through the district.

A search on the Department of Environment and Conservation's Threatened and Priority Flora databases

revealed seven flora taxa that may potentially occur within a 10 kilometre radius of the application area (DEC, 2012). There are no Threatened Flora species, Priority Flora species, Threatened Ecological Communities or Priority Ecological Communities recorded within the application area (GIS Database). No weed species were identified within the application area (DEC, 2012). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition. Analysis of aerial imagery identified the condition of the vegetation to be 'degraded' to 'good' (GIS Database; Keighery, 1994).

Given the small scale of the proposed clearing (2.07 hectares) for the purpose of rehabilitation, it is considered unlikely that the proposed clearing will impact upon an area of high biodiversity.

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

Methodology CALM (2002)
DEC (2012)
GIS Database:
- IBRA WA (regions - subregions)
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora
- Yampi 50cm Orthomosaic - Landgate 2004

(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**
No fauna surveys were undertaken over the application area. A search of the Department of Environment and Conservation's NatureMap database identified two conservation significant fauna species that may occur within the application area; the Water-rat (*Hydromys chrysogaster*) (DEC - Priority 4) and Eastern Curlew (*Numenius madagascariensis*). Several other migratory birds may be occasional visitors to the application area (DEC, 2012). Given the small size of the proposed clearing (2.07 hectares), it is 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 DEC (2012)

(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**
According to available databases, there are no records of Threatened Flora within the application area (GIS Database). A search of the Department of Environment and Conservation's Threatened and Priority Flora databases identified no Threatened Flora species as occurring within a 10 kilometre radius of the application area (DEC, 2012).

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

Methodology DEC (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**
A search of the available databases shows that there are no Threatened Ecological Communities situated within 100 kilometres 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 falls within the Northern Kimberley IBRA bioregion (GIS Database). The vegetation within the application area is recorded as:

Beard vegetation association 8001: Grasslands, curly spinifex, low tree savanna; bloodwood (*Eucalyptus dichromophloia*) & woollybutt over curly spinifex on islands (Government of Western Australia, 2011; GIS Database).

Beard vegetation association 8001 retains approximately 97%, of its pre-European extent within the bioregion (Government of Western Australia, 2011). The surrounding area has been extensively cleared, however the area proposed to be cleared is not a significant remnant of native vegetation.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Northern Kimberley	8,328,975	8,194,664	~98.39	Least Concern	14.56
Beard vegetation associations - State					
8001	237,440	203,757	~85.81	Least Concern	-
Beard vegetation associations - Bioregion					
8001	517,839	198,298	~97.03	Least Concern	-

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

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

According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation within the application area is not considered to be growing in association with any watercourse or wetland.

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

Methodology GIS Database:
- Geodata, Lakes
- 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 is broadly mapped as the Precipice land system (GIS Database).

The Precipice land system is described as rocky mountainous sandstone country with narrow or restricted basalt valleys, low open woodlands with curly spinifex. Hills, ranges and plateaux contain eucalypt woodlands and spinifex. This land system has a low susceptibility to erosion (Payne et al., 2011). The small scale of clearing (2.07 hectares) is considered unlikely to cause any appreciable land degradation.

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

Methodology Payne et al. (2011)
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 may be at variance to this Principle

The application area is located within the Red Book Area 7.2 - Inshore Islands of the Buccaneer Archipelago (GIS Database). The Buccaneer Archipelago lies at the head of King Sound, north of Derby (Conservation Through Reserves Committee, 1978). Koolan and Cockatoo Islands are among the principle islands of the Group and are well known as the site of iron ore mines. The Buccaneer Archipelago was added to the EPA Red Book to recommend biological surveys be conducted with a view to recommending the creation of specific reserves (EPA, 1993). A number of Islands within the Buccaneer Archipelago have been recommended for 'A' class and 'B' class Reserves. No recommendations were made regarding the potential for Cockatoo Island to be declared 'A' or 'B' class reserves. The purpose of the proposed clearing is to assist with the rehabilitation of the historical landfill on Cockatoo Island. It is therefore considered unlikely that the proposed clearing will significantly impact the conservation values of this area.

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

Methodology Conservation Through Reserves Committee (1978)
EPA (1993)
GIS Database:
- EPA Red Book 1976-91

(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

The application area is not located within a Public Drinking Water Source Area (GIS Database).

There are no permanent watercourses or water bodies within the application area (GIS Database). Any surface water within the application areas is likely to only remain for short periods following significant rainfall events. The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application areas.

Given the low impact nature of the proposed clearing activities, the proposed clearing is not likely to cause deterioration in the quality of any underground water.

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

Methodology GIS Database:
- Geodata, Lakes
- Hydrography, Linear
- Public Drinking Water Source Areas

(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 a dry hot tropical sub-humid climate, with an annual average rainfall of approximately 1,100 – 1,500 millimetres per year (CALM, 2002; BoM, 2012). Based on an average annual evaporation rate of 2,400 - 2,800 millimetres (BoM, 2012), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the small size of the proposed clearing (2.07 hectares) it is considered unlikely that the proposed clearing 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 BoM (2012)
CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There is one Native Title claim over the area under application. The claim WC99/7 was determined by the Federal Court on 26 May 2011. 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 application was advertised on 5 November 2012 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

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

4. References

- BoM (2012) Climate Statistics for Australian Locations. A Search for Climate Statistics for Cygnet Bay, Australian Government Bureau of Meteorology, viewed 14 November 2012, <http://reg.bom.gov.au/climate/averages/tables/cw_003057.shtml>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. North Kimberley 1 (NK1 - Mitchell subregion) Department of Conservation and Land Management, Western Australia.
- Conservation Through Reserves Committee (1978) Conservation Reserves in Western Australia, Report of the Conservation Through Reserves Committee on system 7 to the Environmental Protection Authority 1977. Western Australia.
- DEC (2012) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 14 November 2012, <<http://naturemap.dec.wa.gov.au>>.
- 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.
- EPA (1993) Red Book Status Report (1993) on the implementation of Conservation Reserves for Western Australia as Recommended by the Environmental Protection Authority (1976-1984).
- 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.
- Payne, A., & Schoknecht, N (2011) Technical Bulletin No. 98, Land systems of the Kimberley Region, Western Australia, Department of Agriculture and Food, 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:
- is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
 - 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.