

## **Clearing Permit Decision Report**

## 1. Application details

1.1. Permit application details							
Permit application No.: Permit type:	4691/1 Purpose	4691/1 Purpose Permit					
1.2. Proponent detai	ils						
Proponent's name:	Cliffs A	Cliffs Asia Pacific Iron Ore Pty Ltd					
1.3. Property details		1. 77405					
Local Government Area:	Miscella Shire of	Miscellaneous Licence 77/195 Shire of Yilgarn					
Colloquial name:	Windarli	Windarling Range Airstrip Project					
1.4. Application							
<b>Clearing Area (ha)</b> 0.12	No. Trees	Method of Clearing Mechanical Removal	For the purpose of: Turnaround Bay				
1.5. Decision on application							
Decision Date:	12 Febr	Grant 12 February 2012					
0 Cite Information							
2. Site mormation							
2.1. Existing enviror	nment and inf	ormation					
2.1.1. Description of the	e native vegeta	ation under application	al familie and a la a f Maratama Anator Parana a an ar an ar fail ta la ala at				
vegetation Description	vegetation in a re	I vegetation associations have been mapped for the whole of Western Australia and are useful to look at ation in a regional context. One Beard vegetation association has been mapped within the application area:					
	Beard vegetation association 435: Shrublands; Acacia neurophylla, A. beauverdiana and A. resinomarginea thicket (Shepherd, 2009; GIS Database).						
	Cliffs Asia Pacific on 25 July and 2 <sup>-</sup>	sia Pacific Iron Ore Pty Ltd (2011) conducted a flora survey of the application area and surrounding areas July and 21 August 2011, and described one vegetation community of the application area:					
	Shrublar	Shrubland of Acacia effusifolia over Shrubland of mixed species on yellow-brown sandy loam.					
Clearing Description	Cliffs Asia Pacific a carpark turnaro safer ingress of v	Iron Ore Pty Ltd is proposing to und bay at the Windarling airstri ehicle traffic.	clear up to 0.12 hectares of native vegetation for the extension of p carpark to accommodate a fleet of larger buses and provide				
	The vegetation will be cleared using a dozer. The vegetation and topsoil will be stockpiled separately for use in rehabilitation.						
Vegetation Condition	Very Good: Vege	tation structure altered; obvious	signs of disturbance (Keighery, 1994).				
Comment	The application a 90 kilometres sou	rea is located in the Southern C uth of the Koolyanobbing town si	ross subregion of Western Australia and is situated approximately te (GIS Database).				
	The vegetation co (2011).	ondition was derived from a vege	etation survey conducted by Cliffs Asia Pacific Iron Ore Pty Ltd				

## 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 Southern Cross (COO2) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as diverse *Eucalyptus* woodlands (*Eucalyptus salmonophloia, E. Salubris, E. transcontinentalis, E. longicornis*) rich in endemic eucalypts occur around these salt lakes, on the low greenstone hills, valley alluvials and broad plains of calcareous earths (CALM, 2002). The salt lake surfaces support dwarf shrublands of samphire. The granite basement outcrops at mid-leves in the landscape and supports swards of *Borya constricta*, with stands of *Acacia acuminate* and *Eucalyptus loxophleba*. Upper levels in the landscape are the eroded remnants of a lateritic duricrust yielding yellow sandplains, gravelly sandplains and laterite breakaways. Mallees (*Eucalyptus*)

*leptopoda, E. platycorys* and *E. scyphocalyx*) and scrub-heaths (*Allocasuarina corniculata, Callitris preissii, Melaleuca uncinata* and *Acacia beauverdiana* occur on these uplands, as well as on sand lunettes associated with playas along the broad valley floors, and sand sheets around the granite outcrops. The scrubs are rich in endemic acacias and Myrtaceae (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation association 435, which has approximately 98% of its pre-European vegetation extent remaining in the bioregion (Shepherd, 2009; GIS Database). Several flora and vegetation surveys have been conducted encompassing the application area (Western Botanical, 2004 and 2005; Cliffs Asia Pacific Iron Ore Pty Ltd, 2011b). The flora surveys conducted by Western Botanical (2004; 2005) identified three Priority flora species outside the application area. A more intense survey of the application area was undertaken by Cliffs Asia Pacific Iron Ore Pty Ltd (2011b) during July and August 2011. A total of 12 vascular plant taxa belonging to seven families were recorded within the application area (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011b). No Declared Rare Flora, Priority Flora species, Threatened Ecological Communities or weeds were identified in the application area (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011b).

The application area is within the boundary of the Priority Ecological Community (PEC) Windarling Ranges vegetation complex (banded ironstone formation) (GIS Database). The vegetation within the application area lies off the higher ridges on the surrounding plains (GIS Database). Given this PEC is associated with banded ironstone formation, it is not expected that this PEC will be impacted by the proposed clearing.

The fauna habitats within the application area are considered to be common and widespread within the subregion and faunal assemblages are unlikely to be different to that found in similar habitat located elsewhere in the region (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011a). There were no habitat types of high ecological significance identified within the application area (Cliffs Asia Pacific Iron Ore Pty Ltd 2011a; GIS Database). The clearing of 0.12 hectares of native vegetation is unlikely to have a significant impact in a regional and local context.

Given the small amount of native vegetation to be cleared, and that there has been previous disturbance, the application area is not expected to have a higher biodiversity than surrounding areas.

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

#### Methodology CALM (2002)

Cliffs Asia Pacific Iron Ore Pty Ltd (2011a) Cliffs Asia Pacific Iron Ore Pty Ltd (2011b) Shepherd (2009) Western Botanical (2004) Western Botanical (2005) GIS Database: - IBRA WA (regions - subregions)

- Pre-European Vegetation
- 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

No fauna surveys were undertaken within the application area and the fauna habitats present within the application area have not been recorded. The vegetation type of the application area has been inferred from aerial photography and a flora survey, and broad fauna habitat type may be inferred from these (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011a). The major vegetation type can be described as Shrubland of *Acacia effusifolia* over Shrubland of mixed species (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011a; 2011b).

Aerial photography suggests that the described vegetation type is locally common and occurs adjacent to the application area (GIS Database). It could therefore be expected that the fauna habitat/s are also common and occur outside of the application area. There are large areas of intact vegetation outside the application area (GIS Database). The amount of vertebrate fauna that may be present in the application area is considered to be minimal due to the airstrip adjacent to the application area (Cliffs Asia Pacific Iron Ore Pty Ltd, 2011b).

Given the small area proposed to be cleared (0.12 hectares), the lack of significant faunal habitat (GIS Database) and the low impact nature of clearing, it is not likely that the proposed clearing will have any significant impact on biodiversity at a regional scale.

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

Methodology Cliffs Asia Pacific Iron Ore Pty Ltd (2011a) Cliffs Asia Pacific Iron Ore Pty Ltd (2011b) GIS Database: - Jackson 50cm Orthomosaic - Landgate 2007

- Threatened Fauna

(c) Native rare flo	vegetation should n ra.	ot be cleared if	it includes, or	is necessar	y for the contin	nued existence of,		
Comments	<b>Proposal is not likely to be at variance to this Principle</b> According to available databases, there are no records of Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases identified no DRF species as occurring within a 20 kilometre radius of the application area (DEC, 2011).							
	Cliffs Asia Pacific Iron 25 July and 21 Augus	Ore Pty Ltd (2011 t 2011. No DRF w	1a) conducted a v ere recorded with	egetation and in the survey	flora survey of th area.	e application area on		
	Based on the above, t	the proposed clear	ring is not likely to	be at varianc	e to this Principle			
Methodology	Cliffs Asia Pacific Iron Ore Pty Ltd (2011a) DEC (2011) GIS Database: - Declared Rare and Priority Flora List							
(d) Native mainter	vegetation should n nance of a threatene	ot be cleared if ed ecological co	it comprises th ommunity.	he whole or	a part of, or is	necessary for the		
Comments	Proposal is not like A search of the availa within 100 kilometres Based on the above, t	ely to be at vari ble databases sho of the application the proposed clea	iance to this Pr ows that there are area (GIS Databa ring is not likely to	inciple no Threatene se). be at variance	ed Ecological Com e to this Principle	nmunities situated		
Methodology	GIS Database: - Threatened Ecologic	cal Sites Buffered	<u> </u>					
(e) Native	vegetation should n	ot be cleared if	it is significan	t as a remna	ant of native ve	getation in an area		
Comments	<ul> <li>Proposal is not at variance to this Principle The application area falls within the Coolgardie IBRA bioregion (GIS Database). The vegetation within the application area is recorded as: </li> <li>Beard vegetation association 435: Shrublands; <i>Acacia neurophylla, A. beauverdiana</i> and <i>A. resinomarginea</i> thicket (Shepherd, 2009; GIS Database). According to Shepherd (2009), Beard vegetation association 435 retains approximately 76% of its pre-European extent. Therefore, the area proposed to be cleared is not a significant remnant of native vegetation in an area that has been extensively cleared.</li></ul>							
		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	~98.42	Least Concern	10.87		
	Beard vegetation as - State	sociations	1	<u>.</u>	<u></u>			
	435	994,575	759,385	~76.35	Least Concern	13.45		
	Beard vegetation associations - Bioregion							
	435	738,211	730,227	~98.92	Least Concern	17.59		
	* Shepherd (2009) ** Department of N	) Natural Resources	and Environment	t (2002) Ince to this Pri	nciple			
Methodology	Department of Natura Shepherd (2009) GIS Database:	I Resources and E	Environment (2002	2)				

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- IBRA WA (regions - subregions)

- Pre-European Vegetation



(i) Native in the	vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration quality of surface or underground water.
Comments	<ul> <li>Proposal is not likely to be at variance to this Principle</li> <li>The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The application area is located within the proclaimed Goldfields groundwater area under the <i>Rights in Water and Irrigation Act 1994</i> (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.</li> <li>Groundwater within the application area is saline, between 7,000 - 14,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Given that the groundwater is already saline, any clearing is unlikely to have an</li> </ul>

Solids (TDS) (GIS Database). Given that the groundwater is already saline, any clearing is unlikely to have an effect on groundwater quality. There are no permanent or ephemeral waterbodies located within the application area (GIS Database). Given there is a low average rainfall (252.8 millimetres) and there are no watercourses within the application area, the proposed clearing is not likely to cause sedimentation or deteriorate the quality of surface water in the nearby areas (BoM, 2011; GIS Database).

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

#### Methodology BoM (2011)

- 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 an arid to semi-arid warm Mediterranean climate with mainly winter rainfall, with an annual average rainfall of approximately 525.8 millimetres per year (CALM, 2002; BoM, 2011). Based on an average annual evaporation rate of 2,400 - 2,800 millimetres (BoM, 2011), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the size of the area to be cleared (0.12 hectares) compared to the size of the Swan Avon Yilgarn catchment area (5,836,045 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently 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 (2011)
  - CALM (2002)
  - GIS Database:
  - Hydrographic Catchments Catchments
  - Hydrography, Linear

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

#### Comments

There are no Native Title claims over the area under application. 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 is no registered Aboriginal Site 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 14 November 2011 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application regarding Aboriginal heritage issues. A written response was provided on the matters raised.

#### Methodology GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Filed at the Federal Court

## 4. References

BoM (2011) Climate Statistics for Australian Locations. A Search for Climate Statistics for Cashmere Downs, Australian Government Bureau of Meteorology, viewed 7 December 2011,

<a href="http://reg.bom.gov.au/climate/averages/tables/cw\_012022.shtml">http://reg.bom.gov.au/climate/averages/tables/cw\_012022.shtml</a>>

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Coolgardie 2 (COO2 Southern Cross subregion) Department of Conservation and Land Management, Western Australia.
- Cliffs Asia Pacific Iron Ore Pty Ltd (2011a) Yilgarn Operations Windarling Range Airstrip Windarling Airstrip Turnaround Bay, Application for Clearing Permit (Area Permit). Unpublished report prepared for Cliffs Asia Pacific Iron Ore Pty Ltd, October 2011.
- Cliffs Asia Pacific Iron Ore Pty Ltd (2011b) Windarling Airstrip Carpark Extension Flora and Vegetation Survey. Unpunlished report prepared for Cliffs Asia Pacific Iron Ore Pty Ltd.
- DAFF (2008) Department of Agriculture, Fisheries and Forestry Digital Atlas of Australian Soils (Archive Data), viewed 8 December 2011, <a href="http://www.daff.gov.au/brs/data-tools/daas-download">http://www.daff.gov.au/brs/data-tools/daas-download</a>>.
- DEC (2011) NatureMap Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 1 December 2011, <a href="http://naturemap.dec.wa.gov.au">http://naturemap.dec.wa.gov.au</a>.
- 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.

Schoknecht, N (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3.

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 Botanical (2004) Flora, Vegetation and Significant Species of the proposed airstrip site, Windarling Region. December 2003 and May 2004. Unpublished report prepared by Cliffs Asia Pacific Iron Ore Pty Ltd.
- Western Botanical (2005) Survey for Significant Flora within the Proposed Airstrip, Windarling. May/June 2005. Unpublished report prepared by Cliffs Asia Pacific Iron Ore Pty Ltd.

## 5. Glossary

#### Acronyms:

BoM CALM DAFWA DEC DEH DEP DIA DLI DMP DoE DoIR DOLA DOV EP Act EPBC Act GIS ha IBRA	Bureau of Meteorology, Australian Government Department of Conservation and Land Management (now DEC), Western Australia Department of Agriculture and Food, Western Australia Department of Environment and Conservation, Western Australia Department of Environment and Heritage (federal based in Canberra) previously Environment Australia Department of Environment Protection (now DEC), Western Australia Department of Indigenous Affairs Department of Indigenous Affairs Department of Mines and Petroleum, Western Australia Department of Mines and Petroleum, Western Australia Department of Environment (now DEC), Western Australia Department of Industry and Resources (now DMP), Western Australia Department of Industry and Resources (now DMP), Western Australia Department of Vater Environmental Protection Act 1986, Western Australia Environment Protection and Biodiversity Conservation Act 1999 (Federal Act) Geographical Information System Hectare (10,000 square metres) 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 s.17 TEC	Rights in Water and Irrigation Act 1914, Western Australia Section 17 of the Environment Protection Act 1986, Western Australia 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 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 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 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.