

Clearing Permit Decision Report

1. Application details

1.1. Permit application details						
Permit application No.:	5075/1					
Permit type:	Purpose Permit					
1.2. Proponent details						
Proponent's name:	Cobra Mining Limited					
1.3. Property details						
Property:	Mining Lease 20/54					
Local Government Area:	Shire of Cue					
Colloquial name:	White Well Gold Project					
1.4. Application						
Clearing Area (ha) No. 1 50	Trees Method of Clearing For the purpose of: Mechanical Removal Mineral Production					
1.5. Decision on application						
Decision on Permit Application:	Grant					
Decision Date:	19 July 2012					
2. Site Information						

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application Vegetation Description Clearing Description

Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area:

18: Low woodland; mulga (*Acacia aneura*) (GIS Database).

A flora and vegetation survey was conducted over the application area in March 2012 by a botanist from Botanica Consulting. Six vegetation communities were mapped within the application area and these are described below (Botanica Consulting, 2012):

Low woodland of *Acacia aneura* over low scrub of *Eremophila forrestii* subsp. *forrestii* over open low grass of *Monachather paradoxus/Aristida contorta*.

Low woodland of *Acacia caesaneura* over low scrub of *Eremophila jucunda* subsp. *jucunda* over open low grass of *Eriachne flaccida*/*Aristida contorta*.

Open low woodland of *Acacia aneura* over open low scrub of *Thryptomene decussata* over open low grass of *Aristida contorta*.

Low woodland of *Acacia aneura* over open dwarf scrub of *Ptilotus obovatus/Maireana triptera* on rehabilitated waste landform.

Low woodland of *Acacia aneura* over scrub of *Acacia ramulosa* over low open grass *Monachather paradoxus*.

Forest of Acacia aneura over low scrub of Acacia ramulosa/Eremophila forrestii subsp. forrestii over open low grass of Monachather paradoxus/Eragrostis eriopoda in creekline. Cobra Mining Limited has applied to clear up to 50 hectares within an application area of approximately 167 hectares for the purpose of mineral production. The clearing is for the development of the existing White Well Project and will include a mine void, tailings, process plant, workshops and offices, camp, haul roads, water dams, topsoil stockpiles, caprock stockpiles and waste rock dumps.

The application area is located approximately 30 kilometres east of Cue.

Vegetation will be cleared using bulldozers. Vegetation and topsoil will be stockpiled for later use in rehabilitation.

Vegetation Condition

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

Comment

The vegetation condition was assessed by a botanist from Botanica Consulting. Five of the six vegetation communities were rated as being in 'good' condition. The vegetation community located on a rehabilitated waste rock landform was not assigned a condition rating (Botanica Consulting, 2012).

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 Eastern Murchison (MUR1) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is characterised by its internal drainage and extensive areas of elevated red desert sandplains and minimal dune development (CALM, 2002). Vegetation is dominated by Mulga woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation association 18, which has approximately 99.8% of its Pre-European vegetation extent remaining (Government of WA, 2011; GIS Database). A flora and vegetation survey of the application area was undertaken by a Botanica Consulting botanist in March 2012. A total of 60 plant taxa, belonging to 29 genera from 16 families, were recorded from the application area (Botanica Consulting, 2012). The flora was considered diverse but not restricted, with it occurring across the region (Botanica Consulting, 2012).

No Threatened Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded during the flora and vegetation survey or have previously been recorded within the application area (Botanica Consulting, 2012; GIS Database).

One introduced flora species was recorded within the application area, Prickly Paddy Melon (*Cucumis myriocarpus*) (Botanica Consulting, 2012). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitats present within the application area have been identified as being common and widespread in the general area and the faunal assemblage identified as potentially present is unlikely to be different to that found in similar habitats located elsewhere in the region (Harewood, 2012). Harewood (2012) concluded that the application area is unlikely to contain habitat of high ecological significance from a faunal perspective or contain faunal assemblages that are ecologically significant.

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

Methodology Botanica Consulting (2012)

CALM (2002) Government of WA (2011) Harewood (2012) GIS Database:

- IBRA WA (Regions Sub Regions)
- Pre-European Vegetation
- Threatened and Priority Flora
- 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 targeted fauna surveys have been conducted over the application area. A Level 1 fauna survey was conducted by a zoologist which involved a desktop study, a reconnaissance survey of fauna habitat in the application area and opportunistic fauna sightings during the reconnaissance site visit (Harewood, 2012).

The broad scale fauna habitats within the application area are mainly based on the vegetation communities described by Botanica Consulting (2012). The broad fauna habitats are:

- Low woodland of Acacia aneura over scrub of Acacia ramulosa over low open grass Monachather paradoxus;
- Low woodland of Acacia aneura over low scrub of Eremophila forrestii subsp. forrestii over open low
 grass of Monachather paradoxus/Arista contorta;
- Low woodland of Acacia caesaneura over low scrub of Eremophila jucunda subsp. jucunda over open low grass of Eriachne flaccida/Aristida contorta;
- Low woodland of Acacia aneura over open dwarf scrub of Ptilotus obovatus/Maireana triptera on rehabilitated waste landform;
- Forest of Acacia aneura over low scrub of Acacia ramulosa/Eremophila forrestii over open low grass of Monachather paradoxus/Eragrostis eriopoda in creekline;
- Open low woodland of Acacia aneura over open low scrub of Thryptomene decussata over open low grass of Aristida contorta; and
- Decommissioned open cut mine flooded with freshwater (Harewood, 2012).

	The opportunistic fauna survey recorded at total of 36 native fauna species comprising of six reptile, 28 bird, and two mammal species (Harewood, 2012). Evidence of three introduced mammal species was also observed (Harewood, 2012). No conservation significant species were recorded during the survey, although this is not an indication that a species is absent from the site (Harewood, 2012).
	The fauna habitats present within the application area have been identified as being common and widespread in the general area and the faunal assemblage identified as potentially present is unlikely to be different to that found in similar habitats located elsewhere in the region (Harewood, 2012). Based on habitat preferences, previous detailed survey results and current distributions it has been concluded that conservation significant fauna species are unlikely to utilise the application area except as transient individuals or vagrants (Harewood, 2012).
	Based on the above, the proposed clearing is not likely to be at variance to this Principle.
Methodology	Botanica Consulting (2012) Harewood (2012)
(c) Native rare flo	vegetation should not be cleared if it includes, or is necessary for the continued existence of, ra.
Comments	 Proposal is not likely to be at variance to this Principle According to available databases there are no known records of Threatened Flora within the application area (GIS Database). The nearest records of Threatened Flora, <i>Eremophila rostrata</i> subsp. <i>rostrata</i> and <i>Eremophila rostrata</i> subsp. <i>trifida</i>, are located approximately 30 kilometres west of the application area (GIS Database). A flora and vegetation survey of the application area was conducted by a botanist from Botanica Consulting in
	March 2012. No Threatened Flora were recorded during the survey (Botanica Consulting, 2012).
	Based on the above, the proposed clearing is not likely to be at variance to this Principle.
Methodology	Botanica Consulting (2012) GIS Database: - Threatened and Priority Flora
	vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the nance of a threatened ecological community.
Comments	Proposal is not likely to be at variance to this Principle A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC, Depot Springs stygofauna community, is located approximately 185 kilometres south-east of the application area (GIS Database).
	No TECs were identified during the flora and vegetation survey conducted by a Botanica Consulting botanist (Botanica Consulting, 2012).
	Based on the above, the proposed clearing is not likely to be at variance to this Principle.
Methodology	Botanica Consulting (2012) GIS Database: - Threatened Ecological Sites Buffered
	vegetation should not be cleared if it is significant as a remnant of native vegetation in an area s been extensively cleared.
Comments	Proposal is not at variance to this Principle
	The clearing application area falls within the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.7% of the pre-European vegetation remains (see table) (Government of WA, 2011; GIS Database). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).
	The vegetation of the clearing application area has been mapped as Beard vegetation association 18 'Low woodland; mulga (<i>Acacia aneura</i>)' (GIS Database). According to Government of WA (2011), over 99% of this vegetation association remains at a state and bioregional level (see table). This vegetation association would be given a conservation status of 'Least Concern' at both a state and bioregional level (Department of Natural Resources and Environment, 2002).
	The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

		Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves	
	IBRA Bioregion – Murchison	28,120,587	28,044,823	~99.7	Least Concern	1.1	
	Beard Veg Assoc. – State						
	18	19,892,305	19,843,823	~99.8	Least Concern	2.1	
	Beard Veg Assoc. – Bioregion	40,400,470	40,000,050	00.7	Logat	0.4	
	18	12,403,172	12,363,252	~99.7	Least Concern	0.4	
	* Government of WA ** Department of Natu	(2011) Iral Resources and	d Environment (20	002)			
	Based on the above, t	the proposed clear	ring is not at varia	nce to this Pri	nciple.		
Methodology	Department of Natural Resources and Environment (2002) Government of WA (2011) GIS Database: - IBRA WA (Regions - Subregions) - Pre-European Vegetation						
	vegetation should n ated with a watercou			n, or in asso	ciation with, a	n environment	
Comments	 Proposal is at variance to this Principle There are no permanent wetlands or watercourses within the application area, however there are two minor, non perennial watercourses (GIS Database). Botanica Consulting (2012) identified one vegetation community within the application area as being associated with minor ephemeral watercourses: Forest of <i>Acacia aneura</i> over low scrub of <i>Acacia ramulosalEremophila forrestii</i> subsp. <i>forrestii</i> over open low grass of <i>Monachather paradoxus/Eragrostis eriopoda</i> in creekline. This vegetation community covered approximately 15% of the application area (Botanica Consulting, 2012). Based on the above, the proposed clearing is at variance to this Principle. However, vegetation associated with minor drainage lines is widespread in the locality (GIS Database) and there is unlikely to be significant impacts on any watercourse or wetland. Botanica Consulting (2012) GIS Database: 						
	- Hydrography, Llnea						
	vegetation should n gradation.	ot be cleared if	the clearing of	the vegeta	tion is likely to	cause appreciable	
Comments	Proposal may be a According to available Database).			sects the Junc	lee and Wiluna L	and Systems (GIS	
	The Jundee System is groved vegetation; mi hardpan plains are no drainage zones which	nor sandy banks; t normally suscep	and supports scat tible to erosion un	tered mulga s less severely	hrublands (Curry degraded, excep	et al., 1994). The transformed to the transformed t	
	The Wiluna Land System is characterised by low greenstone hills with occasional lateritic breakaways a broad stony slopes, lower saline stony plains and broad drainage tracts (Curry et al., 1994). It supports mulga shrublands with patches of halophytic shrubs (Curry et al., 1994). The land units sandy surfaced gravelly plains, alluvial fans and plains and drainage floors are mildly to moderately susceptible to accel erosion when degraded (Curry et al., 1994). The land system shows some localised erosion as a result mining activities (Curry et al., 1994).						
	Erosion of topsoils is a 2012). Cobra Mining development and area degradation as a resu	Limited (2012) will as will be rehabilita	l be clearing progr ated upon comple	ressively to mition of mining	inimise bare clea activities. Poten	red areas prior to	

condition. Based on the above, the proposed clearing may be at variance to this condition. Methodology Cobra Mining Limited (2012) Curry et al. (1994) **GIS** Database: - Rangeland Land System Mapping Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on (h) the environmental values of any adjacent or nearby conservation area. Comments Proposal is not likely to be at variance to this Principle The application area is not located within a conservation reserve (GIS Database). The nearest conservation area is the ex-Lakeside pastoral lease, which is former leasehold proposed for conservation. It is located approximately 40 kilometres south-west of the application area (GIS Database). At this distance the proposed clearing is unlikely to have any impact on the proposed conservation area. Based on the above, the proposed clearing is not likely to be at variance to this Principle. Methodology **GIS** Database: - DEC Tenure Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration (i) in the quality of surface or underground water. Comments Proposal is not likely to be at variance to this Principle There are no permanent wetlands or watercourses within the application area, however there are two minor, non perennial watercourses (GIS Database). Minor non-perennial watercourses are common in the locality (GIS Database). The land systems of the application area are mildly to moderately susceptible to erosion when degraded (Curry et al., 1994) and the increased sedimentation may lead to some deterioration in the local surface water quality if not managed properly. Potential impacts to surface water quality as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition. According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Cue Water Reserve, which is approximately 17 kilometres to the west (GIS Database). The proposed clearing is unlikely to affect the water quality of the water reserve due to the distance between it and the application area. Based on the above, the proposed clearing is not likely to be at variance to this Principle. Methodology Curry et al. (1994) GIS Database: - Hydrography, Linear - Public Drinking Water Source Areas (PDWSAs) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the (i) incidence or intensity of flooding. Comments Proposal is not likely to be at variance to this Principle The application area is within the Murchison River catchment areas (GIS Database). Given the size of the area to be cleared (50 hectares) in relation to the size of the catchment area (10,380,649 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale. Based on the above, the proposed clearing is not likely to be at variance to this Principle. Methodology GIS Database: - Hydrographic Catchments - Catchments Planning instrument, Native Title, Previous EPA decision or other matter. Comments The clearing permit application was advertised on 11 June 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received regarding Threatened and Priority Flora. This matter is addressed in Principles (a) and (c). There are two Native Title Claims (WC99/10 and WC99/46) over the area under application (GIS Database). These claims have been registered with the National 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 in the vicinity of 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.

Methodology GIS Database:

- Aboriginal Sites of Significance

- Native Title Claims - Registered with the NNTT

4. References

Botanica Consulting (2012) Level 1 Flora and Vegetation Survey of White Well Mine. Report Prepared by Botanica Consulting for Cobra Mining Ltd.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Murchison 1 (MUR1 - East Murchison Subregion). Department of Conservation and Land Management, Western Australia.

Cobra Mining Limited (2012) Purpose Permit for Clearing of Vegetation Supporting Documentation White Well Gold Project. Report Prepared by Cobra Mining Limited, May 2012.

Curry, P.J., Payne, A.L., Leighton, K.A., Hennig, P. and Blood, D.A. (1994) Technical Bulletin - An Inventory and Condition Survey of the Murchison River Catchment and Surrounds, Western Australia, No. 84. Department of Agriculture, Government of Western Australia, Perth, Western Australia.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Government of WA (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.

Harewood, G. (2012) Terrestrial Fauna Survey (Level 1) of the White Well Project. Report Prepared by G. Harewood for Cobra Resources Limited, April 2012.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

5. Glossary

Acronyms:

BoM CALM DAFWA DEC DEH DEP DIA	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
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DolR	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 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.

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.
- Vulnerable: A native species which:

EN

VU

- (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.