



1. Application details

1.1. Permit application details

Permit application No.: 1035/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: WMC Resources Ltd (Owned and Oper by BHP Billiton)

1.3. Property details

Property: LOT 100 ON PLAN 212288

Local Government Area: City Of Kalgoorlie/Boulder

Colloquial name:

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 9: medium woodland; Coral Gum (<i>Eucalyptus torquata</i>) and Goldfields Blackbutt (<i>E. lesoefii</i>) (Shepherd et al 2001, Hopkins et al 2001).	The area under application consists of 10ha which is wedged between existing mining infrastructure on both the northern and southern boundaries of the proposed clearing. The vegetation under application has been disturbed to some degree, by previous mining and pastoral activities (BHP Billiton 2005). The area under application can be described as slopes of low undulating hills which supports mosaic of <i>Eucalyptus lesoefii</i> , <i>E. griffithsii</i> , <i>E. torquata</i> , <i>E. yilgarnensi</i> , <i>E. salubris</i> , <i>Casuarina pauper</i> over range of shrubs including <i>Melaleuca pauperiflora</i> , <i>Eremophila glabra</i> , <i>Acacia hemiteles</i> , <i>Acacia burkitti</i> , <i>Atriplex vesicaria</i> , <i>Atriplex nummularia</i> , <i>Senna artemisioides</i> subsp <i>filifolia</i> , <i>Olearia muelleri</i> , <i>Ptilotus obovatus</i> , <i>Scaveola spinescens</i> , <i>Westringia rigida</i> and a range of <i>Sclerolaena</i> , <i>Maireana</i> and <i>Asteraceae</i> species (BHP Billiton 2005).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of good was used for this assessment as the vegetation has been described as being in good to degraded condition (BHP Billiton 2005). From the aerial photograph provided by the proponent, the vegetation does appear to retain some of its basic structure, therefore good was given as the condition.
	All of the vegetation within the area under application is well represented in the surrounding region (Shepherd et al 2001, Hopkins et al 2001).		

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 area under application has been subjected to historical disturbance from both mining and pastoral activities

and is adjacent to existing mining activities bordering both the northern and southern boundaries (BHP Billiton 2005). In addition, the vegetation proposed to be cleared is common and widespread in the region (BHP Billiton 2005, Shepherd et al 2001, Hopkins et al 2001). Given the level of disturbance, both historical and present, it is unlikely that the area under application is of higher biodiversity value than that in surrounding less disturbed areas. Therefore the clearing as proposed is not likely to be at variance to this Principle.

Methodology BHP Billiton (2005) (DoE Trim Ref EI4963)
Shepherd et al (2001)
Hopkins et al (2001)

(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

Over 100 species have been observed and captured as part of systematic sampling of the entire nickel minesite (Ninnox Wildlife Consulting 1996). The Mallefowl and the Peregrine Falcon are two fauna species of conservation significance that have the potential to occur within the area under application (Ninnox Wildlife Consulting 1996). However the area under application is 'wedged' between existing areas of mining infrastructure and has been disturbed by this and other mining activities (BHP Billiton 2005). In addition, a number of fauna surveys that have been conducted at the minesite indicate that faunal diversity at the control sites, located away from the minesite, is greater than that closer to the mines (Ninnox Wildlife Consulting 1996). The vegetation under application is also common and widespread to the region.

Given the above, it is considered that the clearing as proposed is not likely to significantly restrict the habitat available to fauna within the region.

Methodology Ninnox Wildlife Consulting (1996)
BHP Billiton (2005) (DoE Trim Ref EI4963)

(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 or Priority have been identified from the numerous studies of the Kalgoorlie Nickel Smelter Area (BHP Billiton 2005). In addition, the nearest known occurrence of a species of conservation significance is the Priority 1 species *Eremophila praecox* which is located 12km north of the area under application. It is unlikely that the clearing as proposed would have a significant impact on these populations.

Methodology BHP Billiton (2005) (DoE Trim Ref EI4963)
GIS Databases:
- Declared Rare and Priority Flora - CALM 01/07/05

(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 occurrences of Threatened Ecological Communities within 130km of the area under application. Numerous studies of the area under application and the surrounding nickel mine have not identified any communities that resemble any listed Threatened Ecological Communities (BHP Billiton 2005). As such, it is considered that the clearing as proposed is not likely to be at variance to this Principle.

Methodology BHP Billiton (2005) (DoE Trim Ref EI4963)
GIS Databases:
- Threatened Ecological Communities - CALM 15/07/03

(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 likely to be at variance to this Principle

The State Government is committed to the National Objectives and Targets that includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000). In relation to this application, the vegetation proposed to be cleared is comprised of Beard vegetation association 9 which has approximately 250,894ha or 99.7% remaining (Shepherd et al 2001, Hopkins et al 2001). It has also been noticed in various studies conducted within the area of the Kalgoorlie Nickel Smelter, that the vegetation in this area is common and widespread throughout the region (BHP Billiton 2005). Therefore, it is considered that the clearing as proposed is not at variance to this Principle.

Methodology BHP Billiton (2005) (DoE Trim Ref EI4963)
Department of Natural Resources and Environment (2000)
EPA (2002)

(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

There are no surface water features within or adjacent to the area under application. The vegetation under application is not specifically associated with a wetland or watercourse, but rather associated with the high salt content of the soil. Therefore the clearing as proposed is not likely to be at variance to this Principle.

Methodology FloraBase - CALM Online Flora Database: <http://florabase.calm.wa.gov.au> (Accessed 14/03/2006)
GIS Databases:
- Hydrography, linear - DOE 01/02/04

(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 area under application has calcareous loamy soils which could make them less susceptible to wind erosion than sand-based soils. The area under application receives low annual rainfall and with no flow lines or other surface water features within the area under application, the risk of water erosion is considered to be low. The proposed clearing also has existing mining infrastructure bordering the northern and southern boundaries (BHP Billiton 2005).

Given the above, it is considered unlikely that the clearing as proposed would cause appreciable on or off site land degradation.

Methodology BHP Billiton (2005) (DoE Trim Ref EI4963)
GIS Databases:
- Soils, Statewide - DA 11/99
- Rainfall, Mean Annual - BOM 30/09/01

(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

Three conservation areas exist within 20km of the proposed clearing and include the Kurrawong Nature Reserve (12km to north west), the Lakeside Timber Reserve (8km to north east) and the Karamindie Forest (15km to south west). Due to the distance to these conservation areas, it is unlikely that the clearing as proposed would have a significant impact on these areas. In addition, the proposed clearing is bordered on the northern and southern boundaries by existing mining infrastructure and the vegetation within the area under application is common throughout the region. Therefore it is considered that the clearing as proposed is not likely to be at variance to this Principle.

Methodology Aerial photograph provided by the proponent (DoE Trim Ref EI4963)
GIS Databases:
- CALM Managed Lands and Waters - CALM 01/08/04

(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

There are no surface water features within or adjacent to the area under application. The low rainfall (300mm per annum) and high evaporation rate (2700mm per annum) is unlikely to cause large amounts of run-off except during infrequent high rainfall events. In relation to this application, run-off is likely to flow in an easterly direction towards a minor salt lake east of the area under application.

The groundwater within and surrounding the area under application is hyper-saline (Total Dissolved Salts >35,000mg/L) and occurs at depth. Therefore it is unlikely that any recharge as a result of the proposed clearing is unlikely to have a significant impact on the quality of the groundwater.

Given the above, the clearing as proposed is not likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrography, Linear - DOE 01/02/04
- Rainfall, Mean Annual - BOM 30/09/01
- Evaporation Isopleths - BOM 09/98
- Groundwater Salinity, Statewide - 22/02/00

(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

There are no surface water features within or adjacent to the area under application. The low rainfall (300mm per annum) and high evaporation rate (2700mm per annum) is unlikely to cause large amounts of run-off except during infrequent high rainfall events. Any run-off is likely to flow in an easterly direction towards a large salt lake, Lake Hannan, east of the area under application. This salt lake is over 600ha, and it is unlikely that the amount of run-off from the infrequent large rainfall events would cause or exacerbate the incidence of flooding.

Methodology GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Evaporation Isopleths - BOM 09/98
- Geodata, Lakes - GA 28/06/02

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

Comments No submissions have been received in relation to this application.

The proponent has an Environmental Protection Licence (L12/73, KG315). The landuse provided by the proponent for the proposed clearing is consistent with the licence. Correspondence from the DoE Kalgoorlie Office indicates that a works approval is not required for the intended landuse.

Methodology Correspondence from DoE Kalgoorlie Office (DoE Trim Ref EI5984)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	10	Grant	The area under application has been assessed and the clearing as proposed is not likely to be at variance to any of the clearing Principles. It has also been established that a works approval would not be required for the intended works.

5. References

BHP Billiton (2005) BHP Billiton Kalgoorlie Nickel Smelter Area Permit Application Extension of the Hot Slag Dump. DoE Trim Ref EI4963

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 (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

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

Ninnox Wildlife Consulting (1996) Fauna Survey of the Kalgoorlie Nickel Smelter Area and Rehabilitation Sites near Coolgardie, Western Australia. Prepared for Kalgoorlie Nickel Smelter Western Mining Corporation. DoE Trim Ref EI4963

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy

GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)