

Clearing Permit Decision Report

1. Application details

Permit application details

Permit application No.: 786/2

Permit type: Purpose Permit

1.2. **Proponent details**

Proponent's name: Barrick (PD) Australia Limited (formally Placer Dome Asia Pacific Limited)

Property details

Mining Leases 27/41, 27/47, 27/59, 27/72, 27/73, 27/114, 27/196, 27/414, 27/415 Property:

> Prospecting Licences 27/1826, 27/1827, 27/1828, 27/1829, 27/1830, 27/1831, 27/1832, 27/1833, 27/1834, 27/1835, 27/1836, 27/1837, 27/1838, 27/1839, 27/1840, 27/1842, 27/1844

Local Government Area: City of Kalgoorlie/Boulder

Colloquial name: Perilya Tenements

Application

Clearing Area (ha) No. Trees **Method of Clearing** For the purpose of: Mineral Exploration

Mechanical Removal 100

Site Information

Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard Vegetation Association 20:

Low woodland; mulga mixed with Allocasuarina cristata and Eucalyptus sp.

Beard Vegetation Association 540:

Succulent steppe with open low woodland: sheoak over saltbush (Shepherd, 2007).

Clearing Description

The application is for mineral exploration activities over several mining and prospecting leases, located approximately 20 kilometres north/northwest of Kalgoorlie. The proposal is to clear up to 100 hectares over a total area of approximately 2,038 hectares.

The clearing will occur over a period of 5 years, with up to 20 hectares of active clearing at any one time. Cleared land will be rehabilitated at the completion of the exploration activities (MBS Environmental, 2005).

Vegetation within the area applied to clear is approximately 90% Beard Veg. Assoc. 20, and approximately 10% Beard Vegetation Association 540 (GIS Database).

Vegetation Condition

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment

The application area is located within the Kanowna pastoral lease, and the entire area has been grazed. The Goldfields region has a history of land and vegetation disturbance from grazing, woodcutting, mining and mineral exploration activities (MBS Environmental, 2005).

Clearing permit CPS 786/1 was granted to Placer Dome Asia Pacific Limited by the Department of Industry and Resources (now Department of Mines and Petroleum (DMP)) on 9 November 2005, and is valid from 9 December 2005 to 31 December 2010. The clearing permit authorised the clearing of 100 hectares of native vegetation. An application for an amendment to clearing permit CPS 786/1 was received by DMP on 9 December 2009. The proponent has requested the company name on the permit be changed from Placer Dome Asia Pacific Limited to the new company name of Barrick (PD) Australia Limited. The proponent has also requested that the reporting date on the permit is changed to the 28 February and the duration of the permit is extended to the 31 December 2011. A number of tenements over which CPS 786/1 was granted have sinced expired and the amended permit will cover some new tenements. The area to be cleared and permit boundary will remain unchanged.

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 falls within the Kanowna Pastoral Lease and is in a region which has a long history of disturbance from grazing, and mineral exploration and mining activities (MBS Environmental, 2005).

Limited information is available in the form of past flora or fauna surveys and database records to comprehensively determine the biodiversity value of the vegetation proposed to be cleared (CALM, 2005). However, there have been a number of flora surveys in the vicinity of the application area which can be drawn upon to infer the floristic community composition and regional representativeness of the vegetation. MBS Environmental (2005) have asserted that the plant communities found at the Perilya tenements are widespread and common throughout the region and are not representative of an area of outstanding floristic diversity. Furthermore, previous studies by van Etten (2005a; 2005b) on other Barrick (PD) Australia Limited tenements in the Kalgoorlie West Operations area, in which the Perilya tenements occur, revealed a low variability between the vegetation communities present, and a level of species richness which is generally low to medium compared to other communities/areas in Western Australia (CALM, 2005).

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

Methodology CALM (2005)

MBS Environmental (2005)

van Etten (2005a) van Etten (2005b).

(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

The application area falls within the Kanowna pastoral lease (GIS Database), and the vegetation has been subjected to varying degrees of disturbance from grazing and mining activities (MBS Environmental, 2005).

No fauna species of conservation significance have been recorded in the vicinity of the application area (MBS Environmental, 2005). However several species of conservation significance are considered to potentially occur: Malleefowl (*Leipoa ocellata*) ('Vulnerable' under the *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999* and Schedule 1 'Fauna that is rare or is likely to become extinct', *Wildlife Conservation* (*Specially Protected Fauna*) *Notice 2008*), *Branchinella denticultata* (a crustacean) (Department of Environment and Conservation Priority 1 listing), Hooded Plover (*Charadrius rubricollis rubricollis*) (Department of Environment and Conservation Priority 4 listing), and four 'migratory' birds under the *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999*: Great or White Egret (*Ardea alba*), Cattle egret (*Ardea ibis*), Slender-billed Thornbill (western) (*Acanthiza iredalei*), Forktailed swift (*Apus pacificus*) and Rainbow bee-eater (*Merops ornatus*) (MBS Environmental, 2005).

The majority of the rare, threatened or vulnerable taxa identified as potentially occurring in the application area are known to have widespread regional distributions, and there are very few species which are restricted to the Eastern Murchison Biogeographical subregion (CALM, 2005).

MBS Environmental (2005) report that the fauna habitats represented in the application area are widespread in the region. The proposed clearing of up to 20 hectares at any one time, over a period of five years, is not likely to have any significant impact on the fauna habitats in the region (CALM, 2005).

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

Methodology CALM (2005)

MBS Environmental (2005)

GIS Database

- Pastoral Leases

(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 any populations of Declared Rare or Priority flora within the vicinity of the area applied to be cleared (GIS Database). The nearest known Priority Flora species is a population of *Eremophila praecox* (Priority 1), which occurs approximately 17 kilometres southwest of the application area (GIS Database).

No known flora surveys have been undertaken within the application area. However, several surveys have been conducted in nearby areas, which represent similar vegetation types. Surveys of the Kanowna Belle mining area (immediately adjacent to the eastern edge of the application area) were conducted in 1993 by Mattiske and Associates, and in 2005 by van Etten. A survey of the Crossroads Project (approximately 1 kilometre west) was conducted by Botanica Consulting in 2008. A survey of the Paddington mining area (approximately 7 kilometres to the west/northwest of the application area) was conducted by van Etten in 2005.

No species of Declared Rare or Priority flora were recorded in any of these surveys (Botanica Consulting, 2008; MBS Environmental, 2005; Mattiske et al, 1993 as cited in MBS Environmental, 2005; van Etten, 2005a; van Etten, 2005b). One Declared Rare Flora species; *Gastrolobium graniticum*, was considered likely to occur in

the area (Mattiske et al, 1993, as cited in MBS Environmental, 2005), however this species was not found during any of the nearby surveys (Botanica Consulting, 2008; Mattiske et al, 1993, as cited in MBS Environmental, 2005; MBS Environmental, 2005; van Etten, 2005a; van Etten, 2005b).

The vegetation types applied to clear are widespread and well represented in the region (GIS Database; MBS Environmental, 2005; van Etten, 2005a; van Etten 2005b). Therefore the proposed clearing of small areas (up to a total of 100 hectares) distributed over an area of approximately 2,038 hectares is not likely to have any significant impact on Rare or Priority flora in the region.

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

Methodology Botanica Consulting (2008)

MBS Environmental (2005)

van Etten (2005a) van Etten (2005b).

GIS Database

- Declared Rare and Priority Flora List
- Pre-European Vegetation

(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 Threatened Ecological Communities within at least 50 kilometres of the area proposed to clear (CALM, 2005; GIS Database).

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

Methodology

CALM (2005)

GIS Database

- Threatened Ecological Sites

(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 vegetation applied to clear is well represented in the region (Botanica Consulting, 2008; MBS Environmental, 2005; van Etten, 2005a; van Etten, 2005b), and the clearing is unlikely to significantly reduce the overall representation of these vegetation associations on a regional scale (CALM, 2005).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA bioregion – Murchison	28,120,558	28,120,558	~100	Least Concern	1.1
Beard Veg Assoc. – State					
20	1,295,105	1,295,105	~100	Least Concern	13.3
540	202, 424	202,424	~100	Lease Concern	27.8
Beard Veg Assoc. – bioregion					
20	1,174,262	1,174,262	~100	Least Concern	8.9
540	70,369	70,369	~100	Least Concern	0

^{*} Shepherd (2007)

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

Methodology

Botanica Consulting (2008)

CALM (2005)

Deptartment of Natural Resources and Environment (2002)

MBS Environmental (2005)

Shepherd (2007) van Etten (2005a)

^{**} Department of Natural Resources and Environment (2002)

van Etten (2005b)

(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 may be at variance to this Principle

According to available databases there are no permanent watercourses or wetlands within the application area (GIS Database). There are two seasonal watercourses running through the application area (GIS Database). One watercourse leads into a system of salt lakes immediately to the north of the area under application. At the southern edge of this salt lake system is a small salt pan which is located on the northern boundary of the area under application (GIS Database).

Barrick (PD) Australia Limited has designed management strategies to minimise any disturbance to creekbeds, banks and fringing vegetation. These strategies include: avoiding drilling in creek beds; utilising existing creek crossings wherever possible; locating any new creek crossings where natural conditions provide for minimal bed and bank disturbance; locating tracks and drill pads to minimise erosion of watercourse beds and slopes; and avoiding watercourse areas when the creeks are flowing (MBS Environmental, 2005).

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

Methodology

MBS Environmental (2005)

GIS Database

- Hydrograpy, Lakes (course scale, 1M GA)
- 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 topography of the area is gently undulating with occasional ranges of low hills (GIS Database; MBS Environmental, 2005). The level to gently inclined plains with calcareous loamy earths and red loamy earth soils typically support Salmon Gum and Gimlet woodland over Salt Bush and Blue Bush understorey (DAWA, 2005).

The soils are slightly susceptible to soil erosion if protective vegetative cover is removed (DAWA, 2005). Impedence of natural drainage can cause accelerated soil erosion and loss of native vegetation downslope, through water starvation. Similarly, disturbance of drainage lines and their flows can cause soil erosion (DAWA, 2005).

Provided the proposed management strategies are implemented, the proposed land clearing is not likely to cause any significant land degradation (DAWA, 2005).

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

Methodology

DAWA (2005)

MBS Environmental (2005)

GIS Database - Topographic Contours, Statewide

(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

According to available databases, The nearest Department of Environment and Conservation (DEC) managed area is the Bullock Holes Timber Reserve, located approximately 18 kilometres to the east/northeast of the eastern boundary of the application area (GIS Database).

The proposed clearing is not likely to impact on the environmental and conservation values of any listed DEC managed areas (CALM, 2005).

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

Methodology

CALM (2005)

GIS Database

- DEC Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments Proposal is not likely to be at variance to this Principle

According to available databases, there are no permanant watercourses or waterbodies within the area applied to be cleared (GIS Database).

The proposed exploration drilling is likely to intercept the highly saline water table at some sites (MBS Environmental, 2005). However, the sparse nature of the proposed clearing is not likely to cause deterioration in the quality of any surface or underground water.

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

Methodology MBS Environmental (2005)

GIS Database

- Hydrography, linear

(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 area applied to clear is located in an arid region, and is not associated with any permanent watercourse (GIS Database). The proposed clearing of up to 100 hectares, over a total area of approximately 2,038 hectares, is not likely to 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 GIS Database

- Hydrography, linear

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

Comments

There are two Native Title Claims over the application area (GIS Database). These claims (WC98/27 and WC99/29) has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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*.

According to available databases there are no 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 Sites of Aboriginal 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.

Clearing permit CPS 786/1 was granted to Placer Dome Asia Pacific Limited by the Department of Industry and Resources (now Department of Mines and Petroleum (DMP)) on 9 November 2005, and is valid from 9 December 2005 to 31 December 2010. The clearing permit authorised the clearing of 100 hectares of native vegetation. An application for an amendment to clearing permit CPS 786/1 was received by DMP on 9 December 2009. The proponent has requested the company name on the permit be changed from Placer Dome Asia Pacific Limited to the new company name of Barrick (PD) Australia Limited. The proponent has also requested that the reporting date on the permit is changed to the 28 February and the duration of the permit is extended to the 31 December 2011. A number of tenements over which CPS 786/1 was granted have sinced expired and the amended permit will cover some new tenements. The area to be cleared and permit boundary will remain unchanged.

Methodology GIS Database

- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The amended proposal has been assessed against the Clearing Principles, and may be at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j), and is not at variance to Principle (e).

Should an amended permit be granted, it is recommended that conditions be imposed on the permit for the purposes of weed management, retention of topsoil and vegetative material, record keeping and permit reporting.

5. References

- Botanica Consulting (2008) Flora and Vegetation Survey of the Cross Roads Area, Unpublished report for Barrick Kanowna, Boulder, Western Australia.
- CALM (2005) Land clearing proposal advice. Advice to Program Manager, Native Vegetation Assessment Branch,
 Department of Industry and Resources (DoIR). Department of Conservation and Land Management, Western
 Australia.
- DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture 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.
- Keighery, BJ (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MBS Environmental (2005) Purpose Permit Application Assessment of Clearing Principles Prepared for Placer Dome Perilya Tenements. Martinick Bosch Sell Pty Ltd, Western Australia.
- 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.
- van Etten, E. (2005a) Vegetation and Flora of Kanowna Belle Mining Area. A report prepared for Placer Dome Inc. by Centre for Ecosystem Management, Edith Cowan University, Western Australia.
- van Etten, E. (2005b) Vegetation and Flora of the Paddington Mining Area. A report prepared for Placer Dome Inc. by Centre for Ecosystem Management, Edith Cowan University, Western Australia.

6. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government.

CALM Department of Conservation and Land Management, Western Australia.

DAFWA Department of Agriculture and Food, Western Australia.

DA Department of Agriculture, Western Australia.

DEC Department of Environment and Conservation

DEH Department of Environment and Heritage (federal based in Canberra) previously Environment Australia

DEP Department of Environment Protection (now DoE), 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, Western Australia.

DolR Department of Industry and Resources, Western Australia.

DolA Department of Land Administration, Western Australia.

DoW Department of Water

EP Act Environment Protection Act 1986, Western Australia.

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System.

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 Rights in Water and Irrigation Act 1914, Western Australia.

s.17 Section 17 of the Environment Protection Act 1986, Western Australia.

TECs Threatened Ecological Communities.

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 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 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.
- 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.
- **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
- **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.
- **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.