



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3671/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Anglo American Exploration (Australia) Pty Ltd**

1.3. Property details

Property: Exploration Licence 69/2236
 Exploration Licence 69/2239
 Exploration Licence 69/2378
 Local Government Area: Ngaanyatjarraku
 Colloquial name: Mt Blyth Exploration

1.4. Application

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

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
<p>Beard vegetation associations have been mapped at a 1:250,000 scale for the whole of Western Australia. Three Beard vegetation associations have been mapped within the application areas (GIS Database; Shepherd, 2007):</p> <p>19: Low woodland; mulga between sandridges;</p> <p>236: Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex; and</p> <p>252: Hummock grasslands, shrub steppe; mulga and mallee over soft spinifex.</p>	<p>Anglo America Exploration (Australia) Pty Ltd (Anglo America) has applied to clear up to 30 hectares of native vegetation within a purpose permit boundary totalling approximately 3,651 hectares. The application areas are comprised of two tracks totalling 23 kilometres in length and five distinct polygons areas to undertake mineral exploration. Three of the polygons are located close to each other in the centre of Exploration Licence 69/2236. One of the polygons is located in the western portion of Exploration Licence 69/2236, and one of the polygons if located centrally between Exploration Licences 69/2378 and 69/2239.</p> <p>Anglo America (2010) has advised that drill pads will be cleared using a lowered blade. Access tracks will be cleared by vehicles and drilling equipment driving over vegetation. Mature trees will be avoided where possible. Topsoil and vegetative material will be stripped and stockpiled for use during rehabilitation activities (Anglo America, 2010).</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p> <p>To</p> <p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).</p>	<p>Given the remoteness and vastness of some of the areas applied to clear it is likely that there has been very minimal disturbance and therefore, areas are likely to be in 'Excellent' condition. Where disturbances do exist, mainly from historic exploration and feral animals such as camels, vegetation may be in 'Good' condition.</p>

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 areas occur within the Central subregion of the Great Victoria Desert Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database); and the Man-Musgrave Block subregion of the Central Ranges IBRA bioregion (GIS Database).

At a broad scale, the vegetation of the application area has been mapped as Beard vegetation associations 19: Low woodland; mulga between sandridges, 236: Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex and 252: Hummock grasslands, shrub steppe; mulga and mallee over soft spinifex (GIS Database). According to Shepherd (2007), these vegetation associations are common and widespread both locally and regionally, and remain largely uncleared.

It is acknowledged that there has been no on-site flora study conducted over the application areas, however, there are no known records of Declared Rare Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities within the application areas (GIS Database; Western Botanical, 2009). Given the widespread availability of similar vegetation communities and landforms throughout the local and regional areas, the application areas are not likely to support a higher level of floristic diversity than surrounding areas.

The presence and abundance of weeds is unknown in the application area. The introduction or spread of weeds may impact the biodiversity of the area (CALM, 1999). Potential impacts to biodiversity as a result of the spread of weeds may be minimised by the implementation of a weed management condition.

The biodiversity of the application area is difficult to quantify with the limited information provided by the applicant and the general paucity of biological information in the bioregion. However, based on the widespread availability of similar vegetation communities and landforms, the application areas are not considered to support a higher biological diversity than the adjoining local or regional areas.

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

Methodology CALM (1999)
Shepherd (2007)
Western Botanical (2009)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Threatened Ecological Sites

(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 areas occur within the Central subregion of the Great Victoria Desert Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database); and the Man-Musgrave Block subregion of the Central Ranges IBRA bioregion (GIS Database). Both of these bioregions retain approximately 99.9% of their pre-European vegetation (see table) (GIS database; Shepherd, 2007). Analysis of aerial imagery demonstrates that the local area remains largely uncleared. The vegetation communities and associated fauna habitats are considered common and widespread in the local area, and throughout the Great Victoria Desert IBRA region.

The scale and nature of the proposed clearing activities render it unlikely to result in the loss of significant habitat for fauna indigenous to Western Australia.

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

Methodology Shepherd (2007)
GIS Database:
- Blackstone 1.25m Orthomosaic
- Cooper 1.25m Orthomosaic
- IBRA WA (Regions - Sub Regions)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal may be at variance to this Principle**

According to available databases, there are no records of Declared Rare Flora (DRF) within the application areas. A search of the Department of Environment and Conservation's Threatened Flora database identified one species of DRF, *Conospermum toddii*, to occur within a 50 kilometre radius of the application areas (Western Botanical, 2009), and a record of the DRF species *Acacia denticulosa* is known from within 200

kilometres of the application areas (GIS Database).

Conospermum toddii is a spreading shrub to two metres high with white and yellow flowers from July to October. The species is known to inhabit yellow sand and on sand dunes (Western Australian Herbarium, 2010). *Acacia denticulosa* is an erect spindly shrub to four metres, with yellow flowers from September to October. The species is known to inhabit sand, loam, clays and granite outcrops and is rarely seen on sandplains (Western Australian Herbarium, 2010).

The significance of the vegetation within the application area for the continued existence of DRF is difficult to quantify with the limited information provided by the applicant and the general paucity of biological information in the bioregion.

Based on the above, the proposed clearing may be at variance to this Principle. Potential impacts to DRF as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

Methodology Western Australian Herbarium (2010)
Western Botanical (2009)
GIS Database:
- Declared Rare and Priority Flora List

(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

According to available databases, there are no Threatened Ecological Communities (TEC's) within the application areas (GIS Database). The nearest TEC has been recorded approximately 530 kilometres west of the application areas. The proposed clearing activities are not likely to impact on any known TEC.

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

Methodology GIS Database:
- Threatened Ecological Sites
- Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The application areas occur within the Central subregion of the Great Victoria Desert Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database); and the Man-Musgrave Block subregion of the Central Ranges IBRA bioregion (GIS Database). Both of these bioregions retain approximately 99.9% of their pre-European vegetation (see table) (GIS database; Shepherd, 2007).

The vegetation of the application areas have been mapped as Beard vegetation associations 19: Low woodland; mulga between sandridges, 236: Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex and 252: Hummock grasslands, shrub steppe; mulga and mallee over soft spinifex (GIS Database). According to Shepherd (2007) approximately 100% of Beard vegetation associations 19 and 252, and approximately 99% of Beard vegetation association 236 remain at both the state and bioregional level (see table).

According to the Bioregional Conservation Status of Ecological Vegetation Classes, the conservation status for the Great Victoria Desert Bioregion and Beard vegetation associations 19, 236 and 252 is of "Least Concern" (Department of Natural Resources and Environment, 2002) (see table).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Great Victoria Desert	21,794,205	21,784,757	~99.9	Least Concern	8.5
IBRA Bioregion – Central Ranges	4,706,191	4,700,091	~99.9	Least Concern	0
Beard veg assoc. – State					
19	4,385,295	4,384,243	~100	Least Concern	0.1
236	1,626,899	1,617,261	~99.4	Least Concern	No information available
252	141,311	141,311	~100	Least Concern	No information available
Beard veg assoc. – Great Victoria Desert Bioregion					
19	2,866,597	2,866,296	~100	Least Concern	No information available
236	1,619,192	1,612,226	~99.6	Least Concern	No information available
252	109,254	109,254	~100	Least Concern	No information available
Beard veg assoc. - Central Ranges					
19	902,980	902,363	~99.9	Least Concern	0
252	31,721	31,721	~100	Least Concern	0

* Shepherd (2007)

** 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.

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2007)
GIS Database:
- IBRA Australia
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

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

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

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

Methodology GIS Database:
- 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

Anglo America has applied to clear up to 30 hectares for the purpose of mineral exploration. Disturbance associated with access tracks will be restricted to vehicles and drilling equipment driving over vegetation or using existing access tracks, and drill pads will be cleared using a lowered blade (Anglo America, 2010). The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the nature and scale of the proposed activities, the clearing is not likely to result in appreciable land degradation.

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

Methodology Anglo America (2010)

(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

The application areas are not located within a conservation area or Department of Environment and Conservation managed land (GIS Database). The nearest conservation area is Gibson Desert Nature Reserve which is situated approximately 130 kilometres north-west of the application areas (GIS Database). Given the distance separating Gibson Desert Nature Reserve and the application areas, the proposed clearing is not likely to impact the Gibson Desert Nature Reserve.

The application area occurs within the Ranges of the Western Desert Environmentally Sensitive Area (Register of National Estate) (GIS Database). According to the Australian Heritage Database (2009) the Ranges of the Western Desert are a system of ranges with many gorges and valleys. The ranges are dominated by spinifex steppe, mulga and mallee scrub (Australian Heritage Database, 2009). Despite the area being on the Register of the National Estate for natural values, it is considered that the proposed clearing is low impact and of a small scale and will not significantly impact on the environmental values of the area.

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

Methodology Australian Heritage Database (2009)
GIS Database:
- DEC Tenure
- Environmentally Sensitive Areas

(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 watercourses or wetlands within the application areas (GIS Database). Any surface water within the application areas is likely to only remain for short periods following significant rainfall events. The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application areas.

The application areas are not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

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

Methodology GIS Database:
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(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

Anglo America (2010) has applied to clear up to 30 hectares within approximately 3,651 hectares for the purpose of mineral exploration. Given the low impact nature of the proposed clearing activities, it is not likely to cause or exacerbate the incidents or intensity of floods.

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

Methodology Anglo America (2010)

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one Native Title Claim over the areas under application (WC04/003). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the tenements have 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 Sites of Aboriginal Significance within the areas applied to clear (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.

The clearing permit application was advertised on 22 March 2010 by the Department of Mines and Petroleum, inviting submissions from the public. No submissions were received in relation to this application.

Methodology GIS Database
- Native Title Claims
- Sites of Aboriginal Significance

Officer Chris HEARY

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and the proposed clearing may be at variance to Principle (c), is not likely to be at variance to Principles (a), (b), (d), (f), (g), (h), (i) and (j) and is not at variance to Principle (e).

5. References

- Anglo America Exploration (Australia) Pty Ltd (2010). Application for a Clearing Permit (Purpose Permit) to clear Native Vegetation, Documentation Accompanying Clearing Permit Application for CPS 3671/1, Prepared by Anglo America Exploration (Australia) Pty Ltd, December 2009.
- Australian Heritage Database (2009). <http://www.environment.gov.au/cgi-bin/ahdb/search.pl> (Accessed 5 March 2010).
- CALM (1999). Environmental Weed Strategy for Western Australia, Department of Conservation and Land Management, 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.
- Keighery, B.J. (1994). Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Western Australian Herbarium (2010). FloraBase - The Western Australian Flora. Western Australian Herbarium - Department of Environment and Conservation. Available online from: <http://florabase.dec.wa.gov.au/> Accessed 1 February 2010.
- Western Botanical (2009). Review of Flora and Vegetation of the Mt Blythe Tenements, Anglo American Exploration, Prepared for Anglo American, Prepared by Western Botanical, June 2009.

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.
DoIR	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** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna. Department of Conservation and Land Management, Como, Western Australia*} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which

are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(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.