



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4480/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Alcoa of Australia Limited

1.3. Property details

Property: Alumina Refinery (Pinjarra) Agreement Act 1969, Lot 251 on Deposited Plan 35963
Local Government Area: Shire of Murray
Colloquial name: Myara Construction Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.014		Mechanical Removal	Powerline construction and maintenance activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 25 August 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association is mapped as occurring within the application area (GIS Database):

Beard vegetation association 4: medium woodland; Marri and Wandoo.

Alcoa World Alumina Australia (Alcoa) conducted a flora survey of the application area in June 2011. This survey identified the following vegetation community within the application area (Alcoa, 2011):

- The vegetation community is a ridge hill shelf vegetation with Marri and some Wandoo over Jarrah forest understorey species to about 1 metre tall including *Xanthorrhoea preissii*, *Hakea lissocarpa* and *Trymalium floribundum*.

Clearing Description

Alcoa of Australia Limited (2011) proposes to clear up to 0.014 hectares of native vegetation. The application area is located approximately 10 kilometres east of Pinjarra (GIS Database).

The purpose of the proposed clearing is for the construction and maintenance of powerlines (Alcoa of Australia Limited, 2011). A 10 metre clearance of vegetation around powerlines is required for safety purposes (Alcoa of Australia Limited, 2011).

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);

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

Comment

The vegetation condition rating is derived from a flora survey conducted by Alcoa in June 2011. The vegetation of the application area is reported to be moderately degraded with a cleared access road running along the south-east edge and a cleared stockpile area on the north-west boundary (Alcoa, 2011).

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 is located within the Northern Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) subregion (GIS Database). The Northern Jarrah Forest subregion comprises of duricrusted plateau of the Yilgarn Craton (CALM, 2002). At a broad scale vegetation is described across the subregion as Jarrah-Marri forest in the west with Bullich and Blackbutt in the valleys grading to Wandoo and Marri woodlands in the east with Powder bark on breakaways (CALM, 2002). CALM (2002) reports that the majority of diversity in the communities occurs on lower slopes or near granite soils where there are rapid changes in site conditions. CALM (2002) reports that the Northern Jarrah Forest region has moderate species richness with 400 – 600 species per kilometre.

Alcoa (2011) conducted a flora survey of the application area in June 2011. This survey recorded 19 plant species from 16 families within the application area. Given the small size of the proposed clearing area and the existing disturbance within it, the application area is not expected to host high flora diversity.

No weed species were recorded within the application area during the flora survey (Alcoa, 2011). The

presence of weed species would lower the biodiversity value of the area. It is important 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.

There were no Threatened Ecological Communities, Priority Ecological Communities, Declared Rare Flora or Priority Flora recorded within the application area (Alcoa, 2011). Given the degraded nature and small size of the proposed clearing area (0.014 hectares), the application area is not expected to be host to a large diversity of flora or fauna species.

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

Methodology Alcoa (2011)
CALM (2002)
GIS Database:
- IBRA WA (Regions - Subregions)

(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

Alcoa (2011) conducted a fauna search during the flora survey conducted in June 2011. No vertebrate fauna species were seen within the application area during the survey.

Alcoa (2011) states that the trees in the application area are not large enough to be suitable nest sites for the conservation significant Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*), Baudin's Black Cockatoo (*Calyptorhynchus baudini*) or Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*), although they may forage throughout the region.

Given the small size of the proposed clearing area (0.014 hectares) and its degraded nature, the vegetation within the application area is not likely to be significant habitat for any fauna species.

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

Methodology Alcoa (2011)

(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 no Declared Rare Flora have previously been recorded within the application area (GIS Database).

Alcoa (2011) conducted a flora survey of the application area in June 2011. No Declared Rare Flora were recorded within the application area during the flora and vegetation assessment (Alcoa, 2011).

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

Methodology Alcoa (2011)
GIS Database
- Declared Rare and Priority Flora List (Consvcode)

(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 (TECs) within the area applied to clear (GIS Database). The nearest known TEC is located approximately 4 kilometres south-west of the application area (GIS Database).

Alcoa (2011) reports that no TECs were identified within the survey area during the flora survey.

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

Methodology Alcoa (2011)
GIS Database:
- 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 likely to be at variance to this Principle

The application area falls within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 55.8% of the pre-European vegetation still exists within this bioregion (see table below). The vegetation within the application area is recorded as the following Beard vegetation association (Shepherd, 2009):

Beard vegetation association 4: medium woodland; Marri and Wandoo.

At the bioregion and subregion level, this vegetation association is classified as Depleted with approximately 30% remaining at the bioregion level and approximately 35% at the subregion level. However, the vegetation association is fairly well represented in nature reserves with approximately 14% of this association protected in reserves at the bioregion level and approximately 18.4% at the subregion level.

Given the small amount of native vegetation to be removed (0.014 hectares), the proposed clearing is unlikely to affect the conservation status of this vegetation association.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion - Jarrah Forest	4,506,657	2,514,550	~55.8	Least Concern	~14 (24.7)
IBRA Subregion - Northern Jarrah Forest	1,898,781	1,157,899	~61	Least Concern	~10 (16.4)
Local Government - Murray	170,576	93,361	~55	Least Concern	n/a
Beard vegetation associations - State					
4	1,022,713	310,603	~30.4	Depleted	~4.4 (14.4)
Beard vegetation associations - Bioregion					
4	1,054,280	317,912	~30.1	Depleted	~4.4 (14.3)
Beard vegetation associations - subregion					
4	614,201	215,888	~35.15	Depleted	~6.6 (18.4)

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)

(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 proposed clearing area (GIS Database).

Alcoa (2011) reports that there was no vegetation growing in, or in association with, a watercourse or wetland within the application area.

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

Methodology Alcoa (2011)
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

The application area is located on ridge hill shelf vegetation immediately adjacent to a refinery (Alcoa, 2011). The application area has been previously disturbed and the mine site lies against the western edge of the application area and a cleared track runs along the eastern boundary. Given the small amount of proposed clearing (0.014 hectares), and the degraded nature of the application area, the proposed clearing is unlikely to exacerbate or cause appreciable land degradation

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

Methodology Alcoa (2011)

(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 proposed clearing is not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is the Marrinup State Forest located approximately 1 kilometre east of the application area (GIS Database).

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

Methodology 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

There are no permanent or ephemeral watercourses or wetlands within the application area (GIS Database).

Given the small amount of native vegetation to be removed (0.014 hectares), the proposed clearing is not likely to cause deterioration in the quality of surface or underground water.

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

Methodology 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

According to available databases there are no watercourses or wetlands within the proposed clearing area (GIS Database).

Given that the proposed clearing area is located adjacent to an active mining area and has been previously disturbed, it is unlikely that the removal of 0.014 hectares of native vegetation will 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 is one Native Title Claim (WC98/58) over the area under application (GIS Database). This claim has been registered with the 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*.

According to available databases there are 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 Aboriginal Sites of Significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the *EPBC Act*). The proponent may be required to refer the project to the

(Federal) Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) for environmental impact assessment under the *EPBC Act*. The proponent is advised to contact SEWPAC for further information regarding the notification and referral responsibilities under the *EPBC Act*.

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 was advertised on 18 July 2011, inviting submissions from the public. One submission was received regarding an offset for the proposed clearing. The above assessment has deemed that the environmental impacts that would result from the proposed clearing would not be significant enough to necessitate an offset condition being placed on the clearing permit.

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

4. References

- Alcoa (2011) Fauna and Flora Survey Pinjarra Refinery Stacker Power Line Upgrade. Alcoa World Alumina Australia WA Mining, Western Australia.
- Alcoa of Australia Limited (2011) Clearing Permit Application Supporting Documentation. Alcoa of Australia Limited, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, 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. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), 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 (now DEC), Western Australia
DoIR	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 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.