



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6499/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Monument Murchison Pty Ltd

1.3. Property details

Property: Mining Lease 51/116
Mining Lease 51/117
Mining Lease 51/177
Mining Lease 51/178
Mining Lease 51/252
Local Government Area: Shire of Cue
Shire of Meekatharra
Colloquial name: Burnakura Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
300		Mechanical Removal	Mineral Production and Associated Infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 April 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The clearing permit application area has been broadly mapped as Beard vegetation associations:

18: Low woodland; mulga (*A. aneura*)
39: Shrublands; mulga (*A. aneura*) scrub

A flora and vegetation survey conducted by Animal Plant Mineral Consulting (APM, 2015) over the application area identified the following nine vegetation types:

AaFP: *Acacia aptaneura* mid-dense tree/shrubs over *Eremophila galeata* very sparse shrubs over *Eragrostis* sp. sparse grasses.

AiFP: *Acacia incurvaneura* sparse tree/shrubs over *Eremophila galeata* very sparse shrubs over mixed sparse grasses.

AayFP: *Acacia ayersiana* sparse to very sparse tree/shrubs over *Acacia grasbyi* very sparse shrubs over *Ptilotus drummondii* very sparse low shrubs over mixed sparse to isolated grasses.

AsFP: *Acacia sibilans* very sparse shrubs over *Sclerolaena cuneata* sparse chenopod shrubs over *Enneapogon caerulescens* very sparse grasses.

Sd/MeFP: Open Tall Shrubland of *Acacia acuminata* with an Open Mid Shrubland of *Dodonaea inaequifolia* and Sparse Low Shrubland of *Mirbelia microphylla* on upper steep slopes.

AayDL: *Acacia ayersiana* mid-dense tree/shrubs over sparse mixed shrubs over sparse to mid-dense mixed grasses.

AaDL: *Acacia aptaneura* mid-dense tree/shrubs over *Eremophila forsetii* sparse shrubs over *Aristida contorta* mid-dense grasses.

Aa/AcDL: *Acacia caesaneura/A. leptocarpa* mid-dense tree/shrubs over very sparse mixed grasses.

ApH: *Acacia pruinocarpa* mid-dense tree/shrubs over mixed chenopod shrubs.

Clearing Description

Burnakura Project

Monument Murchison Pty Ltd proposes to clear up to 300 hectares of native vegetation within a total boundary of approximately 2,230 hectares, for the purpose of mineral production and associated activities. The project is located approximately 12 kilometres east of Cue, in the Shire of Cue and Meekatharra.

Vegetation Condition

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

to

Degraded: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994).

Comment

Vegetation condition was determined by APM (2015) using the Keighery scale.

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 Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Murchison bioregion is characterised by low hills and mesas separated by flat colluvium and alluvial plains (GIS Database). Vegetation is predominantly Mulga low-woodlands (APM, 2015).

A flora and vegetation survey was conducted by Animal Plant Mineral Consulting Pty Ltd (APM) over the application area in 2014 (APM, 2015). A total of 98 flora taxa (including subspecies and varieties) representing 15 families and 21 genera were recorded from the application area during the flora and vegetation survey (APM, 2015).

No Threatened or Priority Ecological Communities, Threatened or Priority flora or vegetation associations of restricted distribution were recorded within the application area during the flora and vegetation survey (APM, 2015).

A total of five introduced flora species were recorded within the application area during the flora and vegetation survey (APM, 2015). These included *Acetosa vesicaria* (Ruby Dock), *Aerva javanica* (Kapok Bush), *Chenopodium murale* (Nettle-leaf Goosefoot), *Citrullus lanatus* (Pie Melon) and *Solanum nigrum* (Black Berry Nightshade). None of these introduced flora species are Declared Pest or listed as Weeds of National Significance (APM, 2015). Potential impacts on biological diversity from weeds may be minimised by the implementation of a weed management condition.

A fauna habitat assessment was conducted by APM over the application area during the flora and vegetation survey. No significant fauna habitats were recorded within the application area however five species of conservation significance (Rainbow Bee-eater, Peregrine Falcon, Fork-tailed Swift, Australian Bustard and Bush Stone-curlew) were determined as having the potential to occur within the application area. None of these species are expected to be restricted to the application area or rely exclusively on fauna habitats present within the application area.

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

Methodology APM (2015)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened Fauna
- Threatened Ecological Sites Buffered

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

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

A fauna habitat assessment was conducted by APM over the application area during the flora and vegetation survey (APM, 2015). No significant fauna habitats were recorded within the application area (APM, 2015).

The following three fauna habitats were recorded within the application area:

Open mulga tree/shrubland on plains

Clay/loam plains with open mulga tree/shrubs which have thicket areas of denser mulga. Very little grass or herb cover and very little leaf litter due to intense cattle disturbance.

Drainage

Incised minor drainage lines or localised surface patterns of overland flow. Shallow incised channels tend to form on plains with skeletal soils containing a high proportion of regolith. Dense vegetation of Acacia species. The vegetation is less dense where the drainage bisects the plains with shallow soils.

Alienated

Areas exposed to previous mining activities, including; mining pits with steep sides and water at the bottom, waste rock dumps, roads, drill lines, brushpiles and buildings. The condition of the remaining vegetation community is completely degraded.

The fauna habitats within the application area were not considered to be unique and extended beyond the proposed application area therefore it is considered unlikely that the proposed clearing will comprises the whole or a part of, or is necessary for the maintenance of, a 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 APM (2015)
GIS Database:
- Aerial Imagery
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

(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**

There are no records of Threatened Flora within the application area (GIS Database).

The flora and vegetation survey conducted by APM over the application area did not record any species of Threatened Flora (APM, 2015).

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

Methodology APM (2015)
GIS Database:
- Threatened and Priority Flora

(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 Threatened Ecological Communities within the application area (GIS Database).

The flora and vegetation survey conducted by APM over the application area did not record any Threatened Ecological Communities (APM, 2015).

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

Methodology APM (2015)
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 at variance to this Principle**

The application area falls within the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99% of the Pre-European vegetation remains (see table) (GIS Database; Government of Western Australia, 2013).

The vegetation of the application area has been mapped as the following Beard vegetation associations (GIS Database):

- 18:** Low woodland; mulga (*A. aneura*)
- 39:** Shrublands; mulga (*A. aneura*) scrub

Approximately 99% of Beard vegetation associations 18 and 39 remain at state level (Government of Western Australia, 2013). Therefore, the area proposed to be cleared is unlikely to represent a significant remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion - Murchison	28,120,586.77	28,120,586.77	~99.73	Least Concern	7.71
Beard vegetation associations - State					
18	19,892,304.78	19,843,727.37	~99.76	Least Concern	6.30
39	6,613,569.14	6,602,580.10	~99.83	Least Concern	12.13
Beard vegetation associations - Bioregion					
18	12,403,172.30	12,363,252.47	~99.68	Least Concern	4.97
39	1,148,400.31	1,138,064.63	~99.10	Least Concern	3.61

* Government of Western Australia (2013)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2013)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- 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

There are no permanent water bodies or watercourses within the application area (GIS Database).

No vegetation associated with a permanent watercourse or wetland was recorded within the application area during the flora and vegetation survey (APM, 2015).

There are two minor non-perennial drainage lines that intersect the application area (GIS Database). The surface flows of these drainage lines are likely to be dry most of the year therefore it is not expected the proposed clearing will have a detrimental effect on native vegetation growing in, or in association with a watercourse or wetland (GIS Database).

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

Methodology APM (2015)
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 may be at variance to this Principle

The application area is located within the Challenge, Jundee and Wiluna land systems which are characterised by poorly sorted clays, sand, silt and siliceous rock fragments (GIS Database).

The soil type within the application area is described as infertile red-brown sandy clays that are underlain by red brown siliceous hardpan (GIS Database).

Land degradation is widespread in the Murchison region and is mainly a result of overgrazing and the loss of perennial vegetation which has led to widespread soil erosion. Potential impacts from soil erosion may be minimised by the implementation of a staged clearing condition.

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

Methodology GIS Database:
- Rangeland Land System Mapping
- Soils, 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

The application area does not lie within any conservation areas (GIS Database).

The nearest conservation areas are the Wanjarri Nature Reserve which lies approximately 212 kilometres east of the application area and Toolonga Nature Reserve which is approximately 310 kilometres west of the application area (GIS Database). Given the distance between the application area and the Nature Reserves, the proposed clearing is not likely to impact the environmental values of these conservation areas.

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

The application area is not located within a Public Drinking Water Source Area (PDWSA) and there are no permanent water bodies or watercourses within the application area (GIS Database).

Groundwater salinity within the application area is between 1,000 and 3,000 milligrams/Litre Total Dissolved Solids (TDS) which is considered to be relatively fresh to brackish (GIS Database). The proposed clearing is not likely to cause groundwater or surface water quality within the application area to alter significantly.

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

Methodology GIS Database:
- Groundwater Salinity, Statewide
- 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

The climate of the Murchison region is mostly hot and dry, with highly variable rainfall throughout the year (BoM, 2015). The region has a semi-arid climate with hot summers and mild winters and an average rainfall of 300 millimetres a year.

There are no permanent bodies or watercourses within the application area (GIS Database). The proposed clearing within the application area is unlikely to cause or exacerbate the incidence of flooding or localised waterlogging (GIS Database).

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

Methodology BoM (2015)
GIS Database:
- Hydrography, linear

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

Comments

There is one Native Title Claim (WC1999/046) over the application area (GIS Database). This claim has been filed at the federal court on behalf of the claimant group. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is one registered Aboriginal Site 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 the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of Water, and the Department of Parks and Wildlife, 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 30 March 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application

- Methodology** GIS Database:
- Aboriginal Sites of Significance
 - Native Title Claims, Determined by the Federal Court
 - Native Title Claims, Filed at the Federal Court
 - Native Title Claims, Registered with the NNTT

4. References

- APM (2015) Vegetation Clearing Permit Application, Burnakura Project, February 2015. Report prepared by Animal Plant Mineral Consulting Pty Ltd for Monument Murchison Pty Ltd, Western Australia.
- BoM (2015) Bureau of Meteorology (WWW Document). Retrieved from <http://www.bom.gov.au> on 24 March 2015.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

- T** **Threatened species:**
 Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).
 Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.
- Rankings:**
 CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.
 EN: Endangered - considered to be facing a very high risk of extinction in the wild.
 VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
- X** **Presumed Extinct species:**
 Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

- IA Migratory birds protected under an international agreement:**
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.
- S Other specially protected fauna:**
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1 Priority One - Poorly-known species:**
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3 Priority Three - Poorly-known species:**
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**
- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
 - (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
 - (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5 Priority Five - Conservation Dependent species:**
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.