



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5409/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **La Mancha Resources Australia Pty Ltd**

1.3. Property details

Property: Mining Lease 15/830
 Local Government Area: Shire of Coolgardie
 Colloquial name: Mungari Well Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
 Decision Date: 21 February 2013

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. Three Beard vegetation associations have been mapped within the application area (GIS Database):

- 125: Bare areas; salt lakes;
- 468: Medium woodland; salmon gum & goldfields blackbutt; and
- 540: Succulent steppe with open low woodland; sheoak over saltbush.

A flora and vegetation survey of the application area was conducted by Botanical Consulting (2010) in April and September 2010. This survey identified the following for vegetation communities within the application area (Botanica Consulting, 2010):

- 1 – Mixed *Eucalyptus* Woodland;
- 2 – *Eucalyptus gracilis* Woodland;
- 3 – Samphire Vegetation; and
- 4 – *Casuarina* Shrubland.

Clearing Description La Mancha Resources Australia Pty Ltd has applied to clear up to 280 hectares of native vegetation within a 668 hectare boundary. The purpose of the proposed clearing is for mineral production activities and facilities such as a processing mill, tailing storage facility, waste landform extension and an open pit cutback.

Vegetation Condition Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);
 To
 Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment The application area is located within the Coolgardie region of Western Australia and is situated approximately 19 kilometres west of Kalgoorlie.

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 proposed clearing is located approximately 19 kilometres west of Kalgoorlie within the Eastern Goldfield subregion of the Coolgardie Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by gently undulating plains interrupted in the west with low hills and a series of large playa lakes in the western half (CALM, 2002). The vegetation is dominated by Mallees, *Acacia* thickets and shrub-heaths on sandplains, diverse Eucalyptus woodlands occur around salt lakes, on ranges, and in valets, and dwarf shrublands of samphire around salt lakes (CALM, 2002).

A flora and vegetation survey of the application area was conducted by Botanica Consulting (2010) in April and September 2010. This survey identified a total of 82 plant taxa from 42 genera and 22 families (Botanica Consulting, 2010) within a 637.7 hectare survey area. A flora survey of a nearby area conducted by Mattiske Consulting in 2002 identified 120 plant taxa within a 1,050 hectare area (Botanica Consulting, 2010). It is therefore considered likely that the application area contains similar levels of floral diversity to the surrounding areas.

According to available databases there are no Threatened or Priority Ecological Communities within the application area (GIS Database).

According to available databases there are no Threatened or Priority Flora species within the application area (GIS Database). Botanica Consulting (2010) did not identify any Threatened or Priority flora during a flora and vegetation survey of the application area.

Botanica Consulting (2010) did not identify any introduced flora species within the application area. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. It is therefore important to ensure that weed species are not introduced to the application area as a result of the proposed activities. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey over part of the application area was conducted by Terrestrial Ecosystems (2010) in March 2010. This survey identified that the fauna habitat in areas adjacent the existing mining operations is of low value while areas further from the existing operations is of moderate to high value (Terrestrial Ecosystems, 2010). The habitats within the application area, however, are common locally and likely to support similar levels of faunal diversity to that of the application area (Terrestrial Ecosystems, 2010).

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

Methodology

Botanica Consulting (2010)
CALM (2002)
Terrestrial Ecosystems (2010)
GIS Database:
- IBRA WA (regions – subregions)
- Threatened and Priority Flora
- 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 survey over part of the application area was conducted by Terrestrial Ecosystems (2010) in March 2010. The following three fauna habitats were identified within the surveyed area (Terrestrial Ecosystems, 2010):

- Open eucalypt woodland with an understory of shrubs on red clay soils;
- Samphire flats around saline low areas with low shrubs on a red sandy substrate; and
- Highly disturbed areas around the open pit and areas of early mining activity.

Based on the habitats present, a desktop survey and a site inspection, Terrestrial Ecosystems (2010) identified eleven fauna species as potentially occurring within the application area.

Malleefowl (*Leipoa ocellata*) Schedule 1 and Vulnerable – this species has been identified within the local area by Bamford et al. (cited in Terrestrial Ecosystems, 2010) and by staff from La Mancha Resources Australia Pty Ltd. Terrestrial Ecosystems (2010) did not record any suitable habitat for this species within the application area. This species is therefore considered unlikely to occur within the application area.

Jalmenus aridus (Butterfly) Priority 1 – this species has been recorded at one location approximately 20 kilometres south east of the application area. It is known from only one colony on a single *Acacia* tree with subsequent searches failing to find additional colonies. It is therefore considered unlikely that this species

occurs within the application area.

Shy Heathwren (*Hylacola cautus whitlocki*) Priority 4 – the proposed clearing is located near to the eastern most section of the known range for this species. This species may potentially utilise the application area however, the proposed clearing represents a small fraction of similar habitat within the area. The proposed clearing is therefore unlikely to significantly impact upon this species.

Central Long-eared Bat (*Nyctophilus timoriensis*) sp. 1) Priority 4 – this species is distributed across the southern and central wheatbelt, Great Victoria Desert and Nullabor coast. The application area represents a very small fraction of suitable habitat for this species. The proposed clearing is therefore unlikely to significantly impact upon this species.

The Western Rosella (Mallee) (*Playcercus icterotis xanthogenys*) Schedule 1; Rainbow Bee-eater (*Merops ornatus*) Migratory; Peregrine Falcon (*Falco peregrinus*) Schedule 4; Crested Bellbird (*Oreoica gutturalis gutturalis*) Priority 4; Australian Bustard (*Ardeotis australis*) Priority 4; Crested Shrike-tit (south-western subspecies) Priority 4; and White-browed Babbler (*Pomatostomus superciliosus ashbyi*) Priority 4 are all highly mobile species and the proposed clearing represents a small fraction of similar habitat within the area. The proposed clearing is therefore unlikely to significantly impact upon these species.

Given the high mobility of the majority of these species and the common nature of the fauna habitats present within the application area, the proposed clearing is considered unlikely to have a significant impact on the conservation of any conservation significant fauna species.

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

Methodology Terrestrial Ecosystems (2010)

(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 Threatened Flora species within the application area (GIS Database).

A flora and vegetation survey of the application area conducted by Botanica Consulting (2010) did not identify any Threatened Flora species within the application area.

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

Methodology Botanica Consulting (2010)
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 known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is located approximately 310 kilometres north north-west of the application area (GIS Database). At this distance there is little likelihood of any impact to the TEC as a result of the proposed clearing.

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

Methodology 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 is located within the Coolgardie Interim Biogeographical Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 98.19% of the pre-European vegetation remains within the Coolgardie bioregion (Government of Western Australia, 2011).

The vegetation within the application area has been broadly mapped as Beard vegetation associations:

125: Bare areas; salt lakes;

468: Medium woodland; salmon gum & goldfields blackbutt; and

540: Succulent steppe with open low woodland; sheoak over saltbush.

Approximately 98.78%, 98.63% and 97.11% of Beard vegetation associations 125, 468 and 540, respectively, remain within the Coolgardie bioregion (see table below) (Government of Western Australia, 2011).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Extent in DEC Managed Lands %*
IBRA Bioregion - Coolgardie	12,912,205	12,677,932	~98.19	Least Concern	~15.80
Beard vegetation associations - State					
125	3,492,381	3,269,266	~93.61	Least Concern	~7.36
468	592,022	583,903	~98.63	Least Concern	~23.15
540	202,424	200,159	~99.88	Least Concern	~28.18
Beard vegetation associations - Bioregion					
125	545,718	539,092	~98.79	Least Concern	~6.43
468	583,358	575,361	~98.63	Least Concern	~22.72
540	75,811	73,620	~97.11	Least Concern	~0.00

* Government of Western Australia (2011)

** Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be 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)
Government of Western Australia (2011)
GIS Database:
- IBRA WA (regions – subregions)
- 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 at variance to this Principle

According to available databases there are no permanent wetlands or watercourses within the application area (GIS Database). A flora and vegetation survey of the application area conducted by Botanica Consulting (2010) identified numerous playas within the *Eucalyptus gracilis* vegetation community. This vegetation community, however, is not considered to be riparian vegetation.

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

Methodology Botanica Consulting (2010)
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 lies within the Coolgardie bioregion (GIS Database), on Yilgarn Craton's 'Eastern Goldfields Terrains' (CALM, 2002). Landforms of the Coolgardie bioregion include granite rocky outcrops, low greenstone hills, laterite uplands and broad plains (Bastin, G., and the ACRIS Management Committee, 2008). A series of large playa lakes in the western half are the remnants of an ancient major drainage line. The vegetation is of mallees, acacia thickets and shrub-heaths on sandplains. Diverse eucalypt woodlands occur around salt lakes, on ranges, and in valleys, and salt lakes support dwarf shrublands of samphire (CALM, 2002). Overgrazing by stock and rabbits is the major cause of land degradation and the Eastern Goldfields subregion is not likely to be susceptible to erosion (Morton, Short & Barker, 1995).

Given the size of the proposed clearing (280 hectares) it is important to minimise the amount of time the land is

left open. Potential degradation as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology Bastin, G., and the ACRIS Management Committee (2008)
CALM (2002)
Morton, Short & Baker (1995)
GIS Database:
- IBRA WA (Regions - Subregions)

(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 is not located within a conservation area (GIS Database). The nearest conservation area is Kurrawang Nature Reserve located approximately 8 kilometres south east of the application area (GIS Database). At this distance the proposed clearing is considered unlikely to impact on the values of any 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

According to available databases the application area is not located within a Public Drinking Water Source Area (GIS Database). There are no permanent wetlands or water bodies within the application area (Botanica Consulting, 2010; GIS Database).

The application area experiences a semi-arid climate with rainfall predominantly in the winter months (CALM, 2002). The application area receives an average annual rainfall of approximately 264 millimetres with an average annual evaporation rate of 2,800 millimetres (BoM, 2013; GIS Database). Any water pooling on the surface is therefore likely to be short lived.

The application area has saline (14,000-35,000 milligrams/Litre Total Dissolved Solids (TDS)) groundwater (GIS Database). The proposed clearing of native vegetation is considered unlikely to increase the levels of salinity within the area.

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

Methodology BoM (2013)
Botanica Consulting (2010)
CALM (2002)
GIS Database:
- Evaporation Isopleths
- 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 application area experiences a semi-arid climate with rainfall predominantly in the winter months (CALM, 2002). The application area receives an average annual rainfall of approximately 264 millimetres with an average annual evaporation rate of 2,800 millimetres (BoM, 2013; GIS Database). Any water pooling within the application area is therefore considered likely to be short lived.

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

Methodology BoM (2013)
CALM (2002)
GIS Database:
- Evaporation Isopleths

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

Comments

There is one Native Title Claim (WC10/14) over the area under application (GIS Database). This claim has been Filed at the Federal Court 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*.

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 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 7 January 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

Methodology

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims – Filed at the Federal Court

4. References

- Bastin, G., and the ACRIS Management Committee (2008). Rangelands 2008 - Taking the Pulse; Coolgardie Bioregion. Published on behalf of the Australian Collaborative Rangeland Information System (ACRIS) Management Committee by the National Land and Water Resources Audit, Canberra.
- BoM (2013) BoM Website - Climate Averages by Number, Averages for KALGOORLIE www.bom.gov.au/climate/averages/tables.shtml (Accessed 15 January 2013)
- Botanica Consulting (2010) Level 2 Flora and Vegetation Survey White Foil Area Tenement M15/830. Unpublished report prepared for La Mancha Resources dated September 2010.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management
- 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 (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). 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.
- Morton, S. R., Short, J. & Barker, R. D. (1995) Refugia for Biological Diversity in Arid and Semi-arid Australia, Department of the Environment, Sport and Territories, Canberra, ACT.
- Terrestrial Ecosystems (2010) Level 1 Fauna Risk Assessment for La Mancha Resources White Foil Gold Deposit Project Area. Unpublished report prepared for La Mancha Resources dated March 2010.

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	Environmental 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.