

Clearing Permit Decision Report

1. Application detai	ils				
1.1. Permit applica	tion details				
Permit application No.:	5809/3				
Permit type:	Purpos	Purpose			
I.2. Proponent det	ails				
Proponent's name:		Minjar Gold Pty Ltd			
		,			
I.3. Property detail Property:		Mining Lease 59/380			
Toperty.		Lease 59/425			
	-	Lease 59/431			
	•	Lease 59/460			
		Miscellaneous Licence 59/135			
ocal Government Area:		Shire of Perenjori Minjar Gold Project			
Colloquial name:	iviinjar	Gold Project			
4. Application					
Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:		
65		Mechanical Removal	Mineral Production and Associated Activities		
I.5. Decision on ap	plication				
Decision on Permit Applio	-				
Decision Date:	11 Dec	ember 2014			
2. Site Information					
2.1. Existing enviro	onment and in	formation			
	area (GIS Datab 355: Shrublands 420: Shrublands 434: Shrublands The application several prospec <u>MUGS LUCK</u>	 getation in a regional context. The following Beard vegetation associations are located within the application a (GIS Database): Shrublands; bowgada and jam scrub with scattered York gum and red mallee; Shrublands; bowgada and jam scrub; and Shrublands; <i>Acacia quadrimarginea</i> and jam scrub with scattered York gum and <i>Allocasuarina huegeliana</i>. e application area comprises two separate areas. One is known as Mugs Luck and the second comprises reral prospects including Blackdog, Highland Chief/Bobby McGee, Trench and Camp (Southern Deposits). IGS LUCK Weral flora and vegetation surveys have been conducted over Mugs Luck and the Minjar Gold tenements. 			
	Environmental C from a Woodma along the easter Flora survey. Th September 2012 the following ter Woodlands				
	Scrub of mixed	species over Herbs on red loar			
	red loamy-clay.		chii subsp. plenissima over Thicket of mixed Acacia species on		
			Acacia ramulosa var. ramulosa over a Low Scrub of mixed species el.		
		Open Scrub of mixed Acacia s esperia on red silty-clay with g	species over Heath dominated by <i>Thryptomene costata</i> or <i>Aluta</i> ravel.		
		Scrub dominated by <i>Melaleuc</i> on red loamy-clay on rocky gro	a hamata, Allocasuarina acutivalvis ?subsp. prinsepiana and und.		
	6. T6: Scrub to I	Heath of mixed Acacia and Ere	mophila species, with emergent Eucalyptus species on red clay-		

loam on lower slopes and water-gaining flats.

Melaleuca Thicket

7. maT1: *Melaleuca atroviridis* thicket, over *Acacia effusifolia* scattered shrubs, over mixed open seasonal herbland. Occurred on minor drainage lines with orange brown clay.

Acacia Scrub

8. aeS2: Acacia effusifolia (Acacia quadrimarginea) scrub, over Acacia tetragonophylla open shrubland, over scattered seasonal herbs. Occurred on flat plains with orange brown clay-loam.

Acacia Open Scrub

9. aqOS5: Acacia quadrimarginea open scrub, over *Thryptomene costata* open heath, over *Borya sphaerocephala* and seasonal mixed herbland. Occurred on slopes and hill crests with orange brown clay-loam associated with basalt.

Eucalyptus Open Woodland

10. elsOW1: Eucalyptus loxophleba subsp. supralaevis open woodland, over mixed Acacia ramulosa var. ramulosa, Eremophila oldfieldii subsp. oldfieldii, Exocarpos aphyllus open scrub, over Ptilotus obovatus var. obovatus scattered low shrubs over scattered seasonal herbs. Occurred on flat plains with orange brown clay-loam.

SOUTHERN DEPOSITS

Several flora and vegetation surveys have been conducted over the Southern Deposits. Vegetation mapping is sourced from a flora and vegetation survey undertaken by Woodman in September 2003 (Woodman, 2003). Targeted Threatened and Priority Flora surveys were conducted by APM in November 2011 and September and October 2012 (APM, 2011; APM, 2012). According to APM (2013a), the following seven vegetation communities occur within the Southern Deposits application area:

Woodlands

1. W1: Open Low Woodland of mixed *Eucalyptus* species over Thicket to Scrub of *Acacia* species over a Dwarf Scrub of mixed species over Herbs on red loamy soils with gravel.

2. W2: Open Low Woodland of *Eucalyptus salmonophloia* and *Eucalyptus loxophleba* subsp. *supralaevis* over Open Scrub on red silty clay with quartz pebbles.

3. W4: Low Woodland of *Eucalyptus sheathiana* and *Eucalyptus ?striaticalyx* over Low Scrub of mixed shrubs over Open Herbs on red loamy-clay on rocky ground.

4. W9: Low Woodland to Scrub dominated by Allocasuarina acutivalvis ?subsp. prinsepiana on red-brown soils on rocky ground.

Thickets and Scrubs

5. T1: Thicket to Dense Thicket dominated by Acacia ramulosa var. ramulosa over a Low Scrub of mixed species over Herbs on red loamy soils with some gravel.

6. T3: Thicket to Open Scrub of mixed Acacia species over Heath dominated by *Thryptomene costata* or *Aluta* aspera subsp. *hesperia* on red silty-clay with gravel.

7. T4: Thicket to Scrub dominated by *Melaleuca hamata*, *Allocasuarina acutivalvis* ?subsp. *prinsepiana* and *Acacia* species on red loamy-clay on rocky ground.

Clearing Description Minjar Gold Project.

Minjar Gold Pty Ltd (Minjar) proposes to clear up to 165 hectares of native vegetation within a total boundary of approximately 257.43 hectares, for the purpose of mineral production and associated activities. The project area is located approximately 70 kilometres north east of Perenjori, within the Shire of Perenjori.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

to

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment

The application area comprises two separate areas (approximately 7 kilometres apart). One is known as Mugs Luck (55 hectares) and the second area comprises several prospects including Blackdog, Highland Chief/Bobby McGee, Trench and Camp and is known as the Southern Deposits. The purpose of the application is to allow for the expansion of existing pits and waste rock landforms, and additional road construction. These pits form part of the larger Minjar Gold Project which involves development of new and expansion of previous mining operations over a 50 kilometre strike line.

The proposed clearing is for pit development, waste rock dumps, temporary run of mine (ROM) pads, haul and access roads and abandonment bunds (APM, 2013b). Clearing will be by mechanical means. Vegetation and topsoil will be stockpiled for use in rehabilitation and will be utilised progressively as required (APM, 2013b).

Vegetation condition rating was determined by Woodman (2003, 2004) and APM using various vegetation condition scales (APM, 2013b). These ratings were converted to the Keighery (1994) scale.

The flora and vegetation survey undertaken by APM in 2012 was conducted at the end of below average winter rainfall, hence conditions for field survey were not ideal and the below average rainfall appeared to affect the emergence of many spring herbs (APM, 2012). The rainfall also appeared to have been patchy across the tenements as the diversity and abundance of spring herbs differed greatly between habitats of similar soil, land form and vegetation composition (APM, 2012). However, many plants were in flower during the field survey

(APM, 2012).

It is estimated that the Woodman 2004 flora and vegetation survey only recorded approximately 65 to 70% of species present due to the time of the year the survey was conducted (Summer) (APM, 2013b).

CPS 5809/1 was granted on 16 January 2014 and authorised the clearing of 135.01 hectares within a boundary of 187 hectares. CPS 5809/2 was granted on 26 June 2014 and authorised the clearing of 138 hectares of native vegetation within a boundary of 188.3 hectares.

3. Assessment of application against clearing principles

Comments

On 13 October 2014, Minjar applied to amend CPS 5809/2 for the purpose of increasing the area to be cleared to 165 hectares and the permit boundary to 257.43 hectares. This is an increase of 27 and 69.13 hectares respectively. This increase is due to an altered pit design, waste rock dump, and road layout at both the Mugs Luck and Southern Deposits.

The amended application area does not include additional vegetation types to those occuring in the previous permit boundary (Woodman, 2004). There are no Threatened or Priority Ecological Communities recorded within the additional area (APM, 2012; GIS Database).

There is no additional habitat for the Threatened Flora species *Stylidium scintillans* within the additional area (APM 2014). Furthermore, a targeted survey for *Stylidium scintillans* was conducted by Terratree (2014) on 26 July 2014 over areas previously mapped as potential habitat for this species, and found no evidence of its occurrence. Given that control plots nearby indicated that *Stylidium scintillans* was in flower at the time of survey, the absence of this species within the application area was reported with confidence (Terratree, 2014).

The additional clearing has the potential to further impact on the following Priority Flora species (APM, 2014):

- Acacia diallaga (Priority 1 an additional 11 plants)
- Acacia karina (Priority 1 an additional 1 plant)
- Acacia subsessilis (Priority 3 an additional four plants)
- Allocasuarina tessellata (Priority 1 an additional 18 plants)
- Chamelaucium sp. Warriedar (Priority 1 an additional 35 plants)
- Chamelaucium sp. Yalgoo (Priority 1 an additional 67 plants)
- Grevillea scabrida (Priority 1 an additional 322 plants)
- Grevillea subtiliflora (Priority 3 an additional 18 plants)
- Hydrocotyle sp. Warriedar (Priority 1 an additional 1 plant)
- Micromyrtus trudgenii (Priority 3 an additional 3 plants)
- Persoonia pentasticha (Priority 3 an additional 32 plants)

The identification of *Chamelaucium* sp. Warriedar and *Chamelaucium* sp. Yalgoo is uncertain, given that both taxa were recorded in the same area and were recorded by separate consultants (i.e., a consultant either recorded *Chamelaucium* sp. Warriedar or *Chamelaucium* sp. Yalgoo during their field survey, not both) (APM, 2014). Therefore, the flora species present could be either one, or the other, or both (APM, 2014). There are 129 records for *Chamelaucium* sp. Warriedar at Mugs Luck, and 2177 individuals over three locations 7 kilometres south of Mugs Luck and east of Southern Deposits (APM, 2014; Terratree, 2014). The *Chamelaucium* sp. Yalgoo population at Mugs Luck is estimated at 114 individuals, and over 590 individuals at Southern Deposits (APM, 2014). *Chamelaucium* sp. Yalgoo has also been recorded in nearby tenements (APM, 2013b). If both recorded taxa are in fact only one species, the proposed clearing would not be likely to impact this species on a local or regional scale. If both species occur together in the Mugs Luck and Southern Deposits areas, the proposed clearing may have a larger local-scale impact on *Chamelaucium* sp. Yalgoo, as all individuals in the Mugs Luck area will be removed. However, Florabase records show that *Chamelaucium* sp. Yalgoo is known from the Avon Wheatbelt and Yalgoo bioregions (Western Australian Herbarium, 2014), and therefore this species may be more widespread than current records indicate.

The proposed clearing will remove all but one individual of *Grevillea subtiliflora* in the Mugs Luck area (APM, 2014). However, this species occurs in abundance outside the Southern Deposits clearing permit area (APM, 2013a; 2014)

The Department of Parks and Wildlife (DPaW) have advised that the additional clearing is not likely to have a significant impact on the conservation status or viability of local populations of Priority Flora species (DPaW, 2014).

The additional area includes 27 hectares of habitat suitable for the Shieldback Trapdoor Spider (*Idiosoma nigrum* - Schedule 1). Based on extrapolations from previous surveys, there are a further 6,372 spiders that may be impacted by the additional clearing (APM, 2014). The original clearing had the potential to impact over 23,000 spiders (APM, 2013a), compared to a revised total of 29,688 spiders within the amended application area (APM, 2014). In total, the application area comprises 139 hectares of suitable habitat for this species, comprising 14% of a total 934.95 hectares of suitable habitat that occurs in the wider area (APM, 2014; DPaW, 2014). The additional clearing will increase impacts to this species on a local scale, however based on the availability of habitat outside the application area, the level of impact may not be significant.

The additional area is also located within the former Warriedar pastoral lease which has been purchased by the Department of Parks and Wildlife (GIS Database). The additional clearing is not likely to have any significant impacts on the environmental values of the former Warridar lease area.

The assessment of the proposed clearing against the clearing principles is consistent with the assessment in clearing permit decision reports CPS 5809/1 and CPS 5809/2.

Methodology APM (2012)

APM (2013a) APM (2013b) APM (2013b) DPaW (2014) Terratree (2014) Western Australian Herbarium (2014) Woodman (2004) GIS Database: - DEC Tenure - Threatened Ecological Sites Buffered

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

Comments

There are two native title claims over the area under application: WC1996/098 and WC2012/005 (GIS Database). One claim has been filed at the Federal Court and the other 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 no registered 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.

The larger Minjar Gold Project was referred to the Environmental Protection Authority (EPA) and the Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) (now Department of the Environment). DSEWPAC published a referral decision of 'not a controlled action if undertaken in a particular manner' on 3 April 2013. The manner in which the project must be undertaken is set out in the notification of referral decision document published on DSEWPAC's website. It is the proponent's responsibility to comply with DSEWPAC's decision.

The EPA published a decision of 'Not Assessed – Public Advice Given' on 15 April 2013. Public advice was given on terrestrial fauna, flora and vegetation and rehabilitation and closure factors. The terrestrial fauna and flora and vegetation factors were considered during the assessment of the clearing permit application. Rehabilitation and closure are considered under the *Mining Act 1978* applications.

The Department of Parks and Wildlife (DPaW) (2013) has advised that where it is likely that impacts on threatened species cannot be avoided, a permit or licence to take must be obtained pursuant to the requirements of the *Wildlife Conservation Act 1950*.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, Department of Parks and Wildlife 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 27 October 2014 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology DPaW (2013)

GIS Database:

- Aboriginal Sites of Significance

- Native Title Claims Filed at the Federal Court
- Native Title Claims Registered with the NNTT

4. References

APM (2011) Minjar Gold Biological Survey Minjar Gold Mine Expansion Flora and Vegetation Assessment November 2011. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Minjar Gold Pty Ltd dated November 2011.

APM (2012) Minjar Gold Mine Expansion Level 1 Flora and Vegetation Assessment and Targeted Search for Flora of Conservation Significance Austin, Blackdog, Camp, Highland Chief, Keronima, Mugs Luck, Riley and Trench. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Minjar Gold Pty Ltd dated August - October 2012.

APM (2013a) Further Information provided to the assessing officer by Animal Plant Mineral on 6, 16 and 20 December 2013 and 7 January 2014.

APM (2013b) Minjar Gold Pty Ltd Clearing Permit (Purpose Permit) Application Supporting Information Application for a Native

Page 4

Vegetation Clearing Permit (Purpose Permit) for the Minjar Gold Southern Deposits Expansion Project South Murchison Region, Western Australia Mugs Luck - M59/431, L59/133 and L59/135 Blackdog, Highland Chief / Bobby McGee, Trench and Camp - M59/425, M59/460 and L59/133. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Minjar Gold Pty Ltd dated August 2013.

APM (2014) Supporting information for clearing permit amendment application CPS 5809/3.

DPaW (2013) Advice to the assessing officer for clearing permit application CPS 5809/1 and Flora Data Information. Received on 12 and 26 November and 13 December 2013 and 7 January 2014.

DPaW (2014) Advice to the assessing officer for clearing permit application CPS 5809/3. Received 28 November 2014.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Western Australian Herbarium (2014) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au (Accessed November 2014).

Woodman (2003) Vegetation Survey of the Highland Chief and Monaco Areas Minjar Gold Project. Unpublished report prepared by Woodman Environmental Consulting Pty Ltd for Gindalbie Gold N.L. dated October 2003.

Woodman (2004) Flora and Vegetation Survey of the Keronima, Western Corridor, Austin, Mug's Luck, Bobby McGee, Apollo and Promises Project Areas Minjar Gold Project. Unpublished report prepared by Woodman Environmental Consulting Pty Ltd for Gindalbie Gold N.L. dated March 2004.

5. Glossary

Acronyms:

BoM DAA DAFWA	Bureau of Meteorology, Australian Government Department of Aboriginal Affairs, Western Australia 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	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			
PEC	Priority Ecological Community, Western Australia			
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:

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

т

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 the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus 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.

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.

Principles for clearing native vegetation:

P4

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare 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.
- (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.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (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.
- (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.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.