

# **Clearing Permit Decision Report**

. Application detai				
.1. Permit applicat				
ermit application No.:	8938/2	-		
ermit type:	Purpos	se Permit		
.2. Proponent deta	ails			
roponent's name:	Green	Greenstone Resources (WA) Pty Ltd		
.3. Property detail	le			
roperty:	Mining 37/410 37/572		37/179, 37/201, 37/222, 37/248, 37/330, 37/394, 37/407, 57, 37/496, 37/547, 37/548, 37/551, 37/570, 37/571, 1105	
ocal Government Area:	Shire of	of Leonora		
olloquial name:	King o	f the Hills Project		
.4. Application				
learing Area (ha)	No. Trees	Method of Clearing	For the purpose of:	
92		Mechanical Removal	Mineral Production and Associated Activities	
.5. Decision on ap				
ecision on Permit Applic				
ecision Date:	12 Aug	gust 2021		
. Site Information				
.1. Existing enviro	onment and ir	nformation		
-		tation under application		
	no nativo vogo	allon and application		
edetation Description	The vegetation	of the application area is broadly r	napped as the following Beard vegetation associations:	
egetation Description	18: Low woodla 28: Open low w 39: Shrublands	and; mulga ( <i>Acacia aneura</i> ); roodland; mulga; and ; mulga scrub (GIS Database).	napped as the following Beard vegetation associations: onducted over the application area by Law (2004) and Mattisk	
egetation Description	18: Low woodla 28: Open low w 39: Shrublands Several flora an (1997; 1999; 20 recorded within	and; mulga ( <i>Acacia aneura</i> ); roodland; mulga; and ; mulga scrub (GIS Database). nd vegetation surveys have been c 000; 2003; 2004; 2006; 2019a; 201 the application area (Mattiske, 20)	onducted over the application area by Law (2004) and Mattisko 9b; and 2020). The following vegetation associations were 20; MBS, 2021):	
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	A10: Low Open Woodland of Acacia aneura and Acacia ramulosa var. ramulosa over Eremophila youngii subsp. youngii over Cheilanthes austrotenuifolia, annual herb and grasses on quartz ridge.
	A11: Low Open Woodland of Acacia aneura – Acacia tetragonophylla over Dodonaea rigida, Scaevola spinescens over annual herbs and grasses on ironstone outcropping ridge.
	A13: Low woodland of Acacia ?incurvaneura over Acacia species tall open shrubland over Eremophila ?platycalyx, Scaevola spinescens, Senna artemisioides subsp. x artemisioides, Eremophila latrobei subsp. glabra and Psydrax spp. mid sparse shrubland on hard red clay flats.
	<b>C1</b> : Open Chenopod Shrubland with <i>Atriplex nummularia</i> , <i>Maireana pyramidata</i> and mixed <i>Sclerolaena</i> species with occasional emergent <i>Hakea preissii</i> and patches of <i>Acacia aneura</i> on calcrete soils.
	E1: Open Woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> with pockets of <i>Casuarina</i> and <i>Acacia citrinoviridis</i> over <i>Bossiaea walkeri</i> over mixed grasses and annual herbs on sandy soils in creeklines.
Clearing Description	King of the Hills Project. Greenstone Resources (WA) Pty Ltd proposes to clear up to 992 hectares of native vegetation within a boundary of approximately 3898.27 hectares, for the purpose of mineral production and associated activities. The project is located approximately 23 kilometres northwest of Leonora, within the Shire of Leonora.
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 vegetation condition was derived from a vegetation survey conducted by Mattiske (2020).
	Clearing permit CPS 8938/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 30 July 2020 and was valid from 22 August 2020 to 31 October 2021. The permit authorised the clearing of up to 918.5 hectares of native vegetation within a boundary of approximately 2,472.5 hectares, for the purpose of mineral production and associated activities.
	On 3 June 2021, the Permit Holder applied to amend CPS 8938/2 to extend the permit duration, increase the amount of clearing authorised and increase the permit boundary.

## 3. Assessment of application against Clearing Principles

#### Comments

The permit holder has applied to extend the permit duration by 5 years, to 31 October 2026, increase the amount of clearing authorised by 73.5 hectares, and increase the permit boundary by approximately 1,425.77 hectares. As the project is ongoing, these changes will allow for power and borefield corridors to be constructed.

The amendment application is located within the East Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Murchison Bioregion (GIS Database). The East Murchison subregion is characterised by internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development (CALM, 2002). The salt-lake systems are associated with the occluded Paleodrainage system (CALM, 2002). The vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Tecticornia* shrublands (CALM, 2002).

The vegetation within the amendment area is dominated by low open forests or woodlands of *Acicia* species, *Eremophila* and *Hakea* shrubland, and *Eucalyptus* open woodland with pockets of *Casuarina* (Mattiske, 2020; MBS, 2021). No Threatened or Priority Ecological Communities were identified as potentially occurring within the amendment area and none of the vegetation types mapped and described are listed as Threatened or Priority Ecological Communities, 2021). No Threatened or Priority Ecological Communities (Mattiske, 2020; MBS, 2021). No Threatened or Priority Ecological Communities (Mattiske, 2020; MBS, 2021). No Threatened or Priority flora were identified within the amendment area (Mattiske, 2020; MBS, 2021).

There is one fauna habitat within the amendment area: open mulga woodland over mixed shrubs and scattered grasses or bare ground (MBS, 2021; Terrestrial Ecosystems, 2020). The condition of this fauna habitat varies from highly degraded to good (Terrestrial Ecosystems, 2020). Mulga woodland fauna habitat is considered common and widespread throughout the Murchison region (MBS, 2021; Terrestrial Ecosystems, 2020). No conservation significant fauna were identified during the fauna survey of the amendment area and none are expected to be reliant upon the amendment area for habitat (MBS, 2021; Terrestrial Ecosystems, 2020).

There are no permanent watercourses or wetlands within the amendment area, however several drainage lines intersect these areas (GIS Database). Drainage lines flow infrequently after periods of heavy rainfall (MBS, 2021). The continued implementation of a watercourse management condition may minimise potential impacts to the vegetation growing in association with these watercourses.

The amendment area lies within the Jundee, Monk, Nubev, Rainbow, Violet and Wilson land systems (GIS Database). The Jundee, Monk and Violet land systems have the potential to be susceptible to erosion from disturbance activities (Payne et al., 1998; Pringle et al., 1994). Potential impacts from erosion may be reduced by the continued implementation of a staged clearing condition.

The proposed amendment is unlikely to cause deterioration in the quality of surface or underground water, or exacerbate the incidence of flooding (MBS, 2021). There are no conservation areas located within the vicinity of the amendment area (GIS Database). The nearest DBCA managed land is the ex-Bulga Downs former leasehold proposed for conservation, which is located approximately 79 kilometres west of the application area (GIS Database)

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.510 of the *Environmental Protection Act 1986*. Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 8938/1.

# Methodology Mattiske (2020)

MBS (2021) Payne et al. (1998) Pringle et al. (1994) Terrestrial Ecosystems (2020)

#### GIS Database:

- DPaW Tenure
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

## Planning Instrument, Native Title, previous EPA decision or other matter.

#### Comments

There are no native title claims over the area under application (DPLH, 2021). 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 are multiple registered Aboriginal Sites of Significance within the application area (DPLH, 2021). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, 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 amendment application was advertised on 5 July 2021 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

Methodology DPLH (2021)

# 4. References

DPLH (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage.

https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 2 August 2021).

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

Law (2004) Tarmoola Minesite TSF 5 – Flora Survey. Report prepared for Sons of Gwalia Ltd by Law, January 2004. Mattiske (1997) Mine Site Rehabilitation Services (1997) Tarmoola Gold Mine Flora and Fauna Survey. Unpublished report

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Mattiske (1999) Flora and Vegetation of Sullivan Creek. Unpublished report prepared for Tarmoola Operations Pty Ltd by Mattiske Consulting Pty Ltd, July 1999.

- Mattiske (2000) Flora Survey of the Area North of the Present Tarmoola Mining Operation. Unpublished report prepared for Tarmoola Operations Pty Ltd by Mattiske Consulting Pty Ltd, December 2000.
- Mattiske (2003) Flora and Vegetation Survey Prospects South of Tarmoola. Unpublished report prepared for Sons of Gwalia Pty Ltd by Mattiske Consulting Pty Ltd, July 2003.
- Mattiske (2004) Tarmoola Minesite TSF 5 Flora Survey. Unpublished report prepared for Sons of Gwalia Ltd by Mattiske Consulting Pty Ltd, January 2004.
- Mattiske (2006) Flora and Vegetation Survey of St Barbara, Tarmoola Mine Site. Unpublished report prepared for St Barbara Limited by Mattiske Consulting Pty Ltd, June 2006.
- Mattiske (2019a) Assessment of Potential Flora and Vegetation Values King of the Hills Mine Expansion. Desktop Flora and Vegetation Unpublished report prepared for Red 5 Limited by Mattiske Consulting Pty Ltd, November 2019.
- Mattiske (2019b) Assessment of Flora and Vegetation Values King of the Hills Mine Expansion. Level 2 Flora and Vegetation Survey. Unpublished report prepared for Red 5 Limited by Mattiske Consulting Pty Ltd, November 2019.
- Mattiske (2020) Flora and Vegetation Values on Proposed Expansion Areas at Tarmoola. Level 1 Flora and Vegetation Survey. Memorandum prepared for Red 5 Limited by Mattiske Consulting Pty Ltd, April 2020.
- MBS (2021) Native Vegetation Clearing Permit Amendment (CPS 8938/1) King of the Hills Project. Report prepared for Red 5 Limited by MBS Environmental, June 2021.
- Payne, A.L., Van Vreeswyk, A.M.E., Pringle, H.J.R., Leighton, K.A and Hennig, P (1998) Technical Bulletin No. 90: An inventory and condition survey of the Sandstone-Yalgoo-Paynes Find area, Western Australia. Department of Agriculture, Western Australia, South Perth.
- Pringle, H.J.R, Van Vreeswyk, A.M.E. and Gilligan, S.A. (1994) An inventory and condition survey of rangelands in the northeastern Goldfields, Western Australia, Technical Bulletin No. 87., Department of Agriculture, South Perth, Western Australia.
- Terrestrial Ecosystems (2020) Level 2 Vertebrate Fauna Assessment, King of the Hills Project. Unpublished report prepared for Red 5 Limited by Terrestrial Ecosystems, May 2020.

## 5. Glossary

#### Acronyms:

BC Act BoM DAA DAFWA DAWE DBCA DER DMIRS DMP DoEE DoW DPaW DPIRD DPLH DRF DWER EP Act EPA EPBC Act GIS ha IBRA IUCN	Biodiversity Conservation Act 2016, Western Australia Bureau of Meteorology, Australian Government Department of Aboriginal Affairs, Western Australia (now DPLH) Department of Agriculture and Food, Western Australia (now DPIRD) Department of Agriculture, Water and the Environment, Australian Government Department of Agriculture, Water and the Environment, Australian Government Department of Biodiversity, Conservation and Attractions, Western Australia Department of Environment Regulation, Western Australia (now DWER) Department of Mines, Industry Regulation and Safety, Western Australia Department of Mines, Industry Regulation and Safety, Western Australia Department of Mines and Petroleum, Western Australia (now DMIRS) Department of the Environment and Energy (now DAWE) Department of the Environment and Energy (now DAWE) Department of Parks and Wildlife, Western Australia (now DBCA) Department of Parks and Wildlife, Western Australia (now DBCA) Department of Planning, Lands and Heritage, Western Australia Declared Rare Flora (now known as Threatened Flora) Department of Water and Environmental Regulation, Western Australia Environmental Protection Act 1986, Western Australia Environmental Protection Act 1986, Western Australia Environmental Protection Authority, Western Australia Environmental Protection and Biodiversity Conservation Act 1999 (Federal Act) Geographical Information System Hectare (10,000 square metres) Interim Biogeographic Regionalisation for Australia International Union for the Conservation of Nature and Natural Re
PEC RIWI Act TEC	

## **Definitions:**

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

# T <u>Threatened species:</u>

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the

Wildlife Conservation (Specially Protected Fauna) Notice 2018 for Threatened Fauna.

*Threatened flora* is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

## CR Critically endangered species

Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

#### EN Endangered species

Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for endangered fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for endangered flora.

# VU Vulnerable species

Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for vulnerable flora.

## **Extinct Species:**

#### EX Extinct species

Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

#### EW Extinct in the wild species

Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

## **Specially protected species:**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

## MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory

species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018.* 

# CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018.

#### OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018.

# P <u>Priority species:</u>

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

## P1 Priority One - Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

#### P2 Priority Two - Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

## P3 Priority Three - Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations 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 locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

## 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 are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

# Principles for clearing native vegetation:

- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened 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 the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.