

Clearing Permit Decision Report

1. Application details

1.1. Permit application details
Permit application No.: 8291/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Golden Iron Resources Ltd

1.3. Property details

Property: Mining Lease 77/427

Mining Lease 77/428

Local Government Area: Shire of Yilgarn

Colloquial name: Mt Dimer Gold Project

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of:

20.764 Mechanical Removal Airstrip and Associated Upgrades

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 7 February 2019

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The vegetation of the application area is broadly mapped as the following Beard vegetation association: 538: Shrublands; *Acacia brachystachya* scrub (GIS Database).

A flora and vegetation survey was conducted over the application area by Western Botanical during May and October, 2016. The following vegetation associations were recorded within the application area (Western Botanical, 2017):

W2: Eucalyptus formanii, E.corrugata and E.kochii Woodland over Acacia acuminata and Beyeria calycina subsp.calycina over Triodia scariosa on orange to red sandplains.

S1: Emergent *Eucalyptus ebbanoensis, E.formanii* over *Acacia sibina, A.resinimarginea, A.acuminata, Allocasuarina acutivalvis* subsp. *acutivalvis, Allocasuarina corniculata* over *Phebalium* spp. dominated or *Myrtaceae* spp. dominated understorey.

Clearing Description Mt Dimer Gold Project.

Golden Iron Resources proposes to clear up to 20.764 hectares of native vegetation within a boundary of approximately 25 hectares, for the purpose of an airstrip and associated upgrades. The project is located

approximately 120 kilometres north-east of Southern Cross, within the Shire of Yilgarn.

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 Western Botanical (2017).

The proposed clearing is for an airstrip and associated airstrip upgrades.

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 clearing permit application area is located within the Southern Cross subregion of the Interim

Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database). This subregion is characterised by gently undulating uplands dissected by broad valleys with bands of low greenstone hills (CALM, 2002).

A Level 2 flora and vegetation survey was undertaken by Western Botanical (2017) over M77/427 (which included half of the airstrip) during October 2016. Additionally, a Level 1 flora and vegetation survey was completed over M 77/428 (which included the other half of the airstrip) by Western Botanical in May 2016 (Western Botanical, 2017). The vegetation in the application area was considered to range from 'Excellent' to 'Completely Degraded', with the majority of vegetation within the survey recorded as 'Excellent'. Areas of disturbance were mostly attributed to historic mining activities (Western Botanical, 2017).

No Threatened Ecological Communities or Priority Ecological Communities have been recorded within the application area (GIS Database), and none were found during the flora survey (Western Botanical, 2017). The closest Priority Ecological Community, the 'Finnerty Range vegetation complex (Banded Iron Formation)' is 4 kilometres to the northeast of the application area (Western Botanical, 2017; GIS Database). The area proposed to be cleared contains no banded iron formation outcrops and does not contain any of the known declare rare flora species known from these areas (Western Botanical, 2017).

Desktop surveys of available databases identified 9 Threatened and 59 Priority flora species with the potential to occur within a 20 kilometre radius of the application area, based on known distributions. The majority of these species are associated with Banded Iron Formation hills in the region, and (with the exception of the priority 4 species *Eucalyptus formanii*) do not occur within the area to be cleared (Western Botanical, 2017).

Flora surveys have identified approximately four *Eucalyptus formanii* individuals within the application area (Western Botanical, 2017). *Eucalyptus formanii* is a tree measuring 3-11 metres in height which typically grows on ironstone slopes (Western Botanical, 2017). *Eucalyptus formanii* trees are typically found on sandplains north of Southern Cross (Western Botanical, 2017) and available records indicate that it is well represented throughout the Coolgardie bioregion, occurring in more than one subregion (Western Australian Herbarium, 2019). Though individuals of *Eucalyptus formanii* recorded within the application area may be impacted on a local scale, given the wide distribution of the species, the proposed clearing is unlikely to affect the conservation status of this species.

Five weed species were recorded during the flora survey: *Brassica* aff. *juncea, Carrichtera annua* (Ward's weed), *Erodium cicutarium* (Common storksbill), *Sonchus oleraceus* (Common sowthistle) *and Rumex vesicarius* (Ruby dock). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The landforms, vegetation associations and fauna habitat types found within the application area are well represented within the region (GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

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

Methodology

CALM (2002)

Western Botanical (2017)

Western Australian Herbarium (2019)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- Threatened Fauna

(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 may be at variance to this Principle

The fauna habitats within the application area are common and widespread within the region (GIS Database), and the proposed clearing is likely to have minimal impacts on available fauna habitats in a regional context.

A fauna survey has not been conducted over the application area. Searches of available databases identified several fauna species of conservation significance with the potential to occur within the application area (DBCA, 2019b). The majority are wide ranging and unlikely to be dependent on specific habitats within the application area, with the notable exception of Malleefowl.

Malleefowl (Leipoa ocellata), listed as Vulnerable under the Wildlife Conservation Act 1950 and the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), have been recorded in the local

area within the last two years (DBCA, 2019b; GIS Database). The vegetation within the permit area has the potential to support this species and care should be taken to ensure clearing does not impact on any active mounds. Potential impacts to Malleefowl as a result of the proposed clearing, may be minimised by the implementation of a fauna management condition prohibiting disturbance of active mounds during the breeding season (September to January).

Methodology DBCA (2019b)

GIS Database:

- Imagery
- Pre-European Vegetation
- Threatened Fauna

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of,

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

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

The vegetation associations within the application area are common and widespread within the region (GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

Methodology

GIS Database:

- Imagery
- Pre-European Vegetation
- 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) located within or in close proximity to the application area (GIS Database). Furthermore, there are no listed TEC's within the Coolgardie Bioregion (GIS Database).

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

Methodology GIS Database:

- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(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 Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 98% of the pre-European vegetation still exists in the IBRA Coolgardie Bioregion (Government of Western Australia, 2018). The application area is broadly mapped as Beard vegetation association 538: Shrublands; *Acacia brachystachya* scrub (GIS Database). Approximately 97.6% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2018).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Coolgardie	12,912,204	12,648,491	~98	Least Concern	16.4
Beard vegetation associations – WA					
538	147,821	144,203	~97.6	Least Concern	34
Beard vegetation associations - Coolgardie Bioregion					
538	127,882	124,867	~97.6	Least Concern	27.2

^{*} Government of Western Australia (2018)

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

Methodology

Department of Natural Resources (2002) Government of Western Australia (2018)

GIS Database:

- IBRA Australia
- 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

There are no watercourses or wetlands within the area proposed to clear (Western Botanical; 2017, GIS Database). The nearest watercourse is a minor non-perennial watercourse to the east of the application area (GIS Database). No riparian vegetation was identified during the flora and vegetation survey over the application area (Western Botanical, 2017).

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

Methodology

Western Botanical (2017)

GIS Database:

- Hydrography, Lakes
- Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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

The application area is mapped as being composed of undulating terrain with small gently sloping plains and some ranges on basic schists, gneisses, and allied rocks: chief soils seem to be neutral red earths with a variable content of ironstone gravel (Northcote et al. 1960-68; GIS Database).

The application area experiences an arid to semi-arid Mediterranean climate and receives approximately 305 millimetres of rainfall per year (Western Botanical, 2017). The application area is flat with no significant changes in topography (GIS Database). Given this, there is unlikely to be any significant surface water movement and associated water erosion.

The proposed clearing of up to 20.7 hectares of native vegetation within a boundary of approximately 25 hectares, for the purpose of an airstrip and associated upgrades is unlikely to cause appreciable land degradation.

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

Methodology

Northcote et al. (1960-68) Western Botanical (2017)

GIS Database:

- Soils, Statewide
- Topographic Contours, Statewide

^{**} Department of Natural Resources and Environment (2002)

(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 may be at variance to this Principle

The application area is located within a proposed Conservation Reserve (former Jaurdi Pastoral Lease), managed by the Department of Biodiversity, Conservation and Attractions (DBCA). DBCA has recommended that disturbance to conservation significant flora species should be avoided or minimised where possible (DBCA, 2019a).

The two vegetation associations (S1 and W2) covering the area proposed to be cleared exist throughout the proposed Conservation Reserve (Western Botanical, 2017), and flora surveys identified only one priority 4 species (*Eucalyptus formanii*) within the area proposed to be cleared. Given the purpose for clearing (extension to a previously cleared airstrip), and given the size of clearing (20.7 hectares) in relation to the size of the conservation area (273,672 hectares), it is considered unlikely that the proposed clearing will significantly impact on the environmental values of the proposed Conservation Reserve.

Care should be taken to ensure that the proposed clearing does not increase the incidence and spread of weeds within the proposed conservation reserve. Potential impacts to the proposed conservation reserve as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology DBCA (2019)

Western Botanical (2017)

GIS Database:

- DBCA Interested Lands and Waters

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

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

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database).

Groundwater salinity levels are high (between 14,000-35,000 milligrams per litre Total Dissolved Solids) within the application area (GIS Database) and with high annual evaporation rates and low annual rainfall, there is likely to be little recharge into regional groundwater.

Given this, the proposed clearing is unlikely to cause deterioration in the quality of underground water.

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

Methodology GIS Database:

- Groundwater Salinity
- Hydrography, Linear
- Hydrography, Lakes
- Public Drinking Water Source Areas

(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 region is semi-arid, with a low average rainfall of approximately 305 millimetres per year (Western Botanical, 2017). Based on an average annual evaporation rate of 2,600 – 2,800 millimetres (BoM, 2019), any surface water resulting from rainfall events is likely to be relatively short lived.

There are no permanent water courses or waterbodies within the application area (GIS Database). The application area is located within the Swan Avon/Yilgarn River catchment area which covers 5,838,600 hectares (GIS Database). Given the size of the area to be cleared (20.7 hectares) in relation to the size of the catchment area, the proposed clearing is not likely to increase the incidence or intensity of flooding.

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

Methodology BOM (2019)

Western Botanical (2017)

GIS Database:

- Hydrographic Catchments Catchments
- Hydrography, linear
- Hydrography, lakes

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

Comments

The clearing permit application was advertised on 24 December 2018 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2019). This claim has been registered with the National 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*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2018). 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.

Methodology DPLH (2019)

4. References

BoM (2018) Bureau of Meteorology Website – Climate Data Online, Coolgardie. Bureau of Meteorology. http://www.bom.gov.au/climate/data/ (Accessed 31 January 2019).

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

DBCA (2019a) Advice received in relation to Clearing Permit Application CPS 8291/1. Environmental Management Branch.

Department of Biodiversity, Conservation and Attractions, Western Australia, January 2019.

DBCA (2019b) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. https://naturemap.dpaw.wa.gov.au/ (Accessed 31 January 2019).

DPLH (2019) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 31 January 2019).

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 (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Western Australian Herbarium (2019). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ (Accessed 31 January 2019).

Western Botanical (2017) Flora and Vegetation of the Mount Dimer Tenements. Report prepared for Golden Iron Resources Ltd, by Western Botanical.

5. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government

DAA
 Department of Aboriginal Affairs, Western Australia (now DPLH)
 DAFWA
 Department of Agriculture and Food, Western Australia (now DPIRD)
 DBCA
 Department of Biodiversity, Conservation and Attractions, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DBCA and DWER)

DEE Department of the Environment and Energy, Australian Government
DER Department of Environment Regulation, Western Australia (now DWER)
DMIRS Department of Mines, Industry Regulation and Safety, Western Australia
DMP Department of Mines and Petroleum, Western Australia (now DMIRS)

DPIRD Department of Primary Industries and Regional Development, Western Australia

DPLH Department of Planning, Lands and Heritage, Western Australia

DRF Declared Rare Flora

DoE Department of the Environment, Australian Government (now DEE)

DoW Department of Water, Western Australia (now DWER)

DPaW Department of Parks and Wildlife, Western Australia (now DBCA)

DSEWPaC Department of Sustainability, Environment, Water, Population and Communities (now DEE)

DWER Department of Water and Environmental Regulation, Western Australia

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 Hactare (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

TEC Threatened Ecological Community

Definitions:

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T Threatened species:

Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

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. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX Presumed extinct species

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA Migratory birds protected under an international agreement

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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD Conservation dependent fauna

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS Other specially protected fauna

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P Priority species

Species which are poorly known; or

Species that are adequately known, are rare but not threatened, and 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.