



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6665/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Norton Gold Fields Limited

### 1.3. Property details

Property: Mining Lease 24/944  
Local Government Area: City of Kalgoorlie-Boulder  
Colloquial name: Mt Jewell Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
200		Mechanical Removal	Mineral production and associated activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 10 September 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** The clearing permit application area has been broadly mapped as the following Beard vegetation associations: 529: Succulent steppe with open low woodland; mulga & sheoak over bluebush; and 555: Hummock grasslands, mallee steppe; red mallee over spinifex, *Triodia scariosa* (GIS Database).

A flora and vegetation survey was conducted by Botanica Consulting (Botanica) during December 2010 over an area of approximately 1,145 hectares, which includes the current clearing permit application area (Botanica, 2011).

The following twelve vegetation associations were recorded within the survey area (Botanica, 2011):

1. *Casuarina pauper* woodland over *Maireana sedifolia*;
2. *Eucalyptus salmonophloia* woodland over *Maireana sedifolia*;
3. *Acacia burkittii* shrubland on stony rise;
4. *Eucalyptus clelandii* woodland over *Eremophila interstans*;
5. *Eucalyptus trichopoda* Mallee woodland over *Acacia kalgoorliensis*;
6. *Acacia quadrimarginea* shrubland;
7. *Eucalyptus trichopoda* Mallee woodland over *Triodia scariosa*;
8. *Eucalyptus* and *Casuarina* mixed woodland;
9. *Eucalyptus ravidia* woodland over *Atriplex vesicaria* (sub-group *E. ravidia* thicket);
10. *Eucalyptus concinna* Mallee woodland over *Triodia scariosa*;
11. *Acacia* sp. narrow phyllode shrubland; and
12. *Eucalyptus concinna* Mallee woodland over *Senna artemisioides* subsp. *filifolia*.

**Clearing Description** Mt Jewell Project.  
Norton Gold Fields Limited (Norton) proposes to clear up to 200 hectares of native vegetation within a boundary of approximately 280 hectares, for the purposes of mineral production and mining-related infrastructure. The project is located approximately 54 kilometres north of Kalgoorlie, within the City of Kalgoorlie-Boulder.

**Vegetation Condition** Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

**Comment** The vegetation condition was derived from a vegetation survey conducted by Botanica Consulting (Botanica, 2011).

The proposed clearing is for the development of the Mt Jewell gold mining project. Clearing of native vegetation will be required for three mine pits and associated mining related infrastructure. Two haul roads connecting to the minesite are the subject of a separate clearing permit application (CPS 6666/1).

### 3. Assessment of application against clearing principles

#### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

##### Comments

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

The application area is located within the Eastern Murchison subregion of the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). The Eastern Murchison subregion is characterised by broad plains of red-brown soils and breakaway complexes as well as red sandplains. The vegetation of this subregion is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002).

A Level 1 flora and vegetation survey was conducted by Botanica Consulting (Botanica) over the application area and surrounding areas during 2010 (Botanica, 2011). A total of 109 flora species, from 22 families and 50 genera were recorded within the survey area (Botanica, 2011).

No Threatened Flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within or in close proximity to the application area, and none were found during the survey (GIS Database; Botanica, 2011).

Desktop surveys of available databases identified 42 Priority flora species with the potential to occur within the survey area, based on known distributions (Botanica, 2011). Of these, two species: *Acacia epedunculata* (P1) and *Ptilotus rigidus* (P1) were considered to be the most likely to occur within the application area, based on habitat preferences (Botanica, 2011). However, no Priority flora species were recorded during the survey (Botanica, 2011). One previously unknown *Ricinocarpus* species was recorded from two locations during the survey, and this species has subsequently been classified as a Priority 1 species, *Ricinocarpus* sp. Eastern goldfields (Botanica, 2011; Western Australian Herbarium, 2015).

The vegetation condition within the survey area was described as Good on the Keighery scale with parts of the application area previously disturbed by historical mining activities and more recent mineral exploration activities (Botanica, 2011).

The application area falls within the Mt Veters pastoral lease (GIS Database), and previous vegetation disturbance has occurred from pastoral activities, including weed invasion in some areas (Botanica, 2011). Three weed species were recorded during the flora survey: *Salvia verbenaca*, *Carthamus lanatus* and *Centaurea melitensis*. *Carthamus lanatus* (Saffron thistle) is listed as a declared plant under the *Biosecurity and Agriculture Management Act 2007*. 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 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)  
Botanica (2011)  
Government of Western Australia (2014)  
Western Australian Herbarium (2015)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Pre-European Vegetation  
- 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 may be at variance to this Principle**

A fauna survey has not been conducted over the application area. Several fauna species (mostly birds) of conservation significance have the potential to occur within the application area, however most fauna species occurring in the region tend to be wide ranging (CALM, 2002).

Malleefowl (*Leipoa ocellata*) (listed as Vulnerable under the EPBC Act and the WC Act) previously inhabited much of the Goldfields region, however their range and abundance is now greatly reduced. The flora survey opportunistically recorded one malleefowl mound within the north-western corner of the application area (Botanica, 2011). A targeted malleefowl survey is recommended prior to clearing, and any malleefowl mounds should be avoided. A fauna management condition may minimise potential impacts to malleefowl from the proposed clearing.

The Murchison Bioregion remains largely uncleared (Government of Western Australia, 2014), and the landforms, vegetation associations and fauna habitat types found within the application area are well represented within the region (Botanica, 2011; CALM, 2002; GIS Database).

The landforms and habitat types found within the application area are relatively common and widespread in the region (CALM, 2002; GIS Database). The vegetation proposed to be cleared is unlikely to represent significant habitat for fauna in a regional context.

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

**Methodology** Botanica (2011)  
CALM (2002)  
Government of Western Australia (2014)  
GIS Database:  
- Bardoc 50cm Orthomosaic - Landgate 2012  
- Pre-European Vegetation

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

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

A flora survey of the application area did not record any species of Threatened flora (Botanica, 2011). The vegetation associations recorded within the application areas are well represented in surrounding areas (GIS Database; Botanica, 2011), 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** Botanica (2011)  
GIS Database:  
- Declared Rare and Priority Flora List  
- Pre-European Vegetation

**(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 a 100 kilometre radius of the application area (GIS Database).

Surveys of the application area did not identify any TECs (Botanica, 2011).

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

**Methodology** Botanica (2011)  
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 area applied to be cleared is located within the Murchison IBRA bioregion (GIS Database). There is approximately 99% of pre-European vegetation remaining within the bioregion (Government of Western Australia, 2014).

The application area is broadly mapped as Beard vegetation associations: 529: Succulent steppe with open low woodland; mulga & sheoak over bluebush; and 555: Hummock grasslands, mallee steppe; red mallee over spinifex, *Triodia scariosa* (GIS Database). Approximately 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2014). Hence, the vegetation proposed to be cleared does not represent a significant remnant of vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW managed lands
IBRA Bioregion - Murchison	28,120,586	28,044,823	~ 99	Least Concern	7.7
<b>Beard vegetation association - State</b>					
529	102,579	102,479	~ 99	Least Concern	4.3
555	57,420	57,252	~ 99	Least Concern	44.2
<b>Beard vegetation association - Bioregion</b>					
529	62,202	62,102	~ 99	Least Concern	4.4
555	22,475	22,468	~ 99	Least Concern	18.1

\* Government of Western Australia (2014)

\*\* Department of Natural Resources and Environment (2002)

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

**Methodology** Department of Natural Resources and Environment (2002)  
Government of Western Australia (2014)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Pre-European Vegetation

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is at variance to this Principle**

There are no permanent watercourses or wetlands within or in close proximity to the application area (GIS database).

One minor seasonal watercourse passes through the south-western corner of the application area (GIS Database). Seasonal watercourses in the region are dry for most of the year, only flowing briefly following significant rainfall events (Botanica, 2011).

DAFWA (2015) advise that the drainage tracts within the application area are likely to be susceptible to potential erosion. Removal of vegetation and stony surface mantles may result in an increase in runoff and may increase sediment loads in surface water flows, however the impacts on any watercourses are likely to be minimal.

Based on the above, the proposed clearing is at variance to this Principle. Potential impacts to vegetation associated with these watercourses, and vegetation downstream from the application area, may be minimised by the implementation of a watercourse management condition.

**Methodology** Botanica (2011)  
DAFWA (2015)  
GIS Database:  
- Hydrography, linear

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

**Comments Proposal may be at variance to this Principle**

The landforms and soil types of the subregion include broad plains of red-brown soils, breakaway complexes and red sandplains (CALM, 2002). The vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002). Soils of the region are generally protected by stony mantles, however accelerated soil erosion may occur where vegetation is cleared or protective stony mantles are disturbed (DAFWA, 2015).

Based on the above, the proposed clearing may be at variance to this Principle. Potential land degradation as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

**Methodology** CALM (2002)  
DAFWA (2015)  
GIS Database:  
- Soils, Statewide

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

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

The nearest conservation area is the former Goongarrie pastoral lease, which is located approximately 15 kilometres north of the application area, at its nearest point, and is managed by the Department of Parks and Wildlife (GIS Database). The proposed clearing is unlikely to have any impacts on the environmental values of this or any other conservation area.

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

**Methodology** GIS Database:  
- DPaW 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**

There are no Public Drinking Water Source Areas within or in close proximity to the clearing permit application area (GIS Database). There are no permanent watercourses or wetlands within the application area (GIS Database). One minor seasonal watercourse passes through the application area (GIS Database). Drainage lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall (Botanica, 2011). Management practices will be implemented to minimise the risk of erosion and potential impacts to surface water quality (Botanica, 2011).

The proposed clearing is unlikely to result in increased sedimentation of any watercourse, or cause deterioration in the quality of surface or underground water.

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

**Methodology** Botanica (2011)  
GIS Database:  
- Hydrography, Linear  
- 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 200 millimetres per year (Botanica, 2011; CALM, 2002). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (Botanica, 2011).

There are no permanent water courses or waterbodies within the application area (GIS Database). One minor seasonal water course passes through the application area (GIS Database). Temporary localised flooding may occur during heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

**Methodology** Botanica (2011)  
CALM (2002)  
GIS Database:

- Hydrography, linear

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

### Comments

The clearing permit application was advertised on 3 August 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There are no registered native title claims over the area under application (DAA, 2015). However, the mining tenement 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 located within or in close proximity to the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of Water, and the Department of Parks and Wildlife, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

**Methodology** Department of Aboriginal Affairs (2015)  
GIS Database:  
- Aboriginal Sites of Significance

## 4. References

- Botanica (2011) Level 1 Flora and Vegetation Survey of Lignum Dam Tenements E24/146. Report prepared for Pioneer Resources Ltd, by Botanica Consulting, January 2011.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DAA (2015) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/>
- DAFWA (2015) Advice from the Commissioner of Soil and Land Conservation for Clearing Permit 6666/1. Department of Agriculture and Food, Western Australia, July 2015.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, 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.
- Western Australian Herbarium (2015). FloraBase - the Western Australian Flora. Department of Parks and Wildlife. <https://florabase.dpaw.wa.gov.au/>

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia

**Definitions:**

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

- T Threatened species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).  
Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.  
Rankings:  
CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.  
EN: Endangered - considered to be facing a very high risk of extinction in the wild.  
VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
- X Presumed Extinct species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).
- IA Migratory birds protected under an international agreement:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.  
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.
- S Other specially protected fauna:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1 Priority One - Poorly-known species:**  
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2 Priority Two - Poorly-known species:**  
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3 Priority Three - Poorly-known species:**  
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**  
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.  
(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.  
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5 Priority Five - Conservation Dependent species:**  
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

**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 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.