



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6899/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Beatons Creek Gold Pty Ltd**

### 1.3. Property details

Property: Mining Lease 46/11  
Local Government Area: Shire of East Pilbara  
Colloquial name: Bulk Sampling Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.59		Mechanical Removal	Bulk Sampling and associated activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 3 March 2016

## 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 association:  
173: hummock grasslands, shrub steppe; Kanji over soft Spinifex and *Triodia wiseana* on basalt.

A flora and vegetation survey was conducted over the larger Beatons Creek project area, which included the current clearing permit application areas (360 Environmental, 2015).

Of the four proposed clearing areas, two of the sites were mapped as the following vegetation association:

Scattered low trees of *Eucalyptus leucophloia* subsp. *leucophloia*, over low open shrubland of *Acacia orthocarpa*, *A. spondylophylla* and *A. hilliana*, over open hummock grassland of *Triodia brizoides* and *T. epactia*.

The vegetation of the other two sites was described as "Disturbed" (360 Environmental, 2015).

**Clearing Description** Bulk Sample Project.  
Beatons Creek Gold Pty Ltd (Beatons Creek) proposes to clear up to 1.59 hectares of native vegetation within a boundary of approximately 11 hectares, for the purpose of bulk sampling and associated activities. The project is located approximately 2 kilometres northwest of Nullagine, within the Shire of East Pilbara.

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

To

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

**Comment** The vegetation condition was derived from a report produced by 360 Environmental (2015).

The proposed clearing application area consists of four separate areas. Each area is the proposed site for an excavation, to a depth of approximately 5 metres, to extract a "bulk sample" to be assessed for gold ore characterisation.

### 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 Chichester subregion of the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Chichester subregion is characterised by undulating granite and basalt plains typically supporting a shrub steppe and hummock grasslands of *Acacia inaequilatera* over *Triodia wiseana*; and significant areas of basaltic ranges typically supporting tree steppes of *Eucalyptus leucophloia*. The hummock grasslands which host reptile and small mammal communities, and the cracking clay communities of the Chichester Range and Mungaroona Range are identified as areas of high species and ecosystem biodiversity within the subregion (CALM, 2002).

A flora and vegetation survey was conducted over the larger Beatons Creek project area, which included the current clearing permit application areas (360 Environmental, 2015). A total of 173 flora species from 91 genera and 43 families were recorded within the survey area, which was representative of the level of flora diversity expected for the region (360 Environmental, 2015). The vegetation condition within the larger survey area ranged from Excellent to Degraded. The majority of the survey area was in Excellent condition, while some areas had been previously disturbed by historical mineral exploration activities (360 Environmental, 2015). The vegetation associations recorded within the survey area are all widespread and typical of the Pilbara region (360 Environmental, 2015; GIS Database).

No species of Threatened flora were recorded within the survey area. Three species of Priority flora were recorded within the survey area, however none were located within the clearing application areas (360 Environmental, 2015).

Three weed species were recorded within the survey area (360 Environmental, 2015). 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.

No Threatened Ecological Communities occur within or in close proximity to the application areas (GIS Database). The southern-most of the four application areas occurs partly within the buffer zone of a Priority Ecological Community (PEC) (GIS Database), however, the PEC itself is not within the application area. The small area of proposed clearing within the PEC buffer zone is unlikely to have any impact on the PEC.

A Level 2 fauna survey was conducted over the larger Beatons Creek project area, which included the current clearing permit application areas, in September and October 2014 (360 Environmental, 2015). A total of 65 fauna species were recorded within the survey area (a total area of approximately 1,172 hectares), including 22 reptiles, 29 bird species and 14 mammal species (360 Environmental, 2015). The fauna species and diversity recorded during the survey were considered to be representative of the wider area (360 Environmental, 2015). Only two fauna habitat types were recorded within the four small areas applied to clear, and hence the faunal diversity within the application areas is expected to be lower than the overall survey area.

The vegetation associations, landforms and fauna habitat types found within the application area are well represented in the region (GIS Database). The four small areas applied to clear have suffered varying degrees of previous disturbance, and are unlikely to represent a higher level of biodiversity than surrounding undisturbed areas.

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

##### Methodology

360 Environmental (2015)  
CALM (2002)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities (TECPEC) - Boundaries
- Threatened and Priority Ecological Communities (TECPEC) - Buffered

#### (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

##### Comments

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

A fauna survey was conducted over the larger Beatons Creek project area, which included the current clearing permit application areas (360 Environmental, 2015). The following four fauna habitat types were recorded within the survey area:

1. Drainage lines;
2. Hill slopes;
3. Dam; and
4. Degraded mining areas.

Two of the clearing application areas fall within the hill slopes habitat type and two are within degraded mining areas (360 Environmental, 2015). These two habitat types are considered to provide the lowest fauna habitat value. The drainage line and dam habitats provide the highest value fauna habitats, however, these two habitat types are not in close proximity to the proposed clearing areas. All of the habitat types mapped in the survey area are well represented in the region (360 Environmental, 2015).

The following fauna species of conservation significance were recorded during the fauna survey conducted over the application area and surrounding areas (360 Environmental, 2015):

- Northern Quoll (*Dasyurus hallucatus*) - Endangered
- Pilbara leaf-nosed Bat - *Rhinionictes aurantia* - Vulnerable;
- Rainbow Bee-eater (*Merops ornatus*) - Migratory; and
- Western Pebble-mound Mouse (*Pseudomys chapmani*) - Priority 4.

Targeted searches of the proposed clearing areas were undertaken, and none of these species were found within the proposed clearing areas (360 Environmental, 2015).

There are no restricted fauna habitat features (such as caves) within the four small application areas (360 Environmental, 2015), and the proposed clearing areas are unlikely to represent significant fauna habitat in a local or regional context.

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

**Methodology** 360 Environmental (2015)

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

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

According to available databases there are no records of Threatened (rare) flora within or in close proximity to the application areas (GIS Database).

Flora surveys conducted over the application area and surrounding areas did not record any species of Threatened flora (360 Environmental, 2015). The vegetation associations recorded within the application areas are well represented in surrounding areas (360 Environmental, 2015; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of rare flora.

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

**Methodology** 360 Environmental (2015)

GIS Database:

- Threatened and Priority Flora
- 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 (TEC's) located within or in close proximity to the application areas (GIS Database).

Surveys of the application areas did not identify any Threatened Ecological Communities (360 Environmental, 2015).

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

**Methodology** 360 Environmental (2015)

GIS Database:

- Threatened and Priority Ecological Communities (TECPEC) - Boundaries
- Threatened and Priority Ecological Communities (TECPEC) - 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 Pilbara IBRA bioregion (GIS Database). Although the Pilbara region is the site of numerous large mining developments, the region remains largely uncleared. There is approximately 99% of pre-European vegetation remaining within the bioregion (Government of Western Australia, 2014).

The vegetation of the application area is broadly mapped as Beard vegetation association 173: hummock grasslands, shrub steppe; kanji over soft spinifex and *Triodia wiseana* on basalt. Approximately 99% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregion 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 - Pilbara	17,808,657	17,733,584	~ 99	Least Concern	~8.3
Beard vegetation association - State					
173	1,752,520	1,747,677	~ 99	Least Concern	~13.6
Beard vegetation association - Bioregion					
173	1,752,520	1,747,678	~ 99	Least Concern	~13.6

\* 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 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 likely to be at variance to this Principle**

There are no watercourses or wetlands within or in close proximity to the application areas (360 Environmental, 2015; GIS database).

Numerous minor seasonal watercourses occur in surrounding areas (GIS Database). Seasonal watercourses in the region are dry for most of the year, only flowing briefly following significant rainfall events (360 Environmental, 2015).

Removal of vegetation 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 not likely to be at variance to this Principle.

**Methodology** 360 Environmental (2015)

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 occurring within the Capricorn land system (GIS Database). The Capricorn land system is described as hills and ridges of sandstone and dolomite, supporting hard and soft spinifex grasslands, which is generally resistant to erosion (Van Vreeswyk et al., 2004).

The small areas of proposed clearing are not likely to result in appreciable land degradation.

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

**Methodology** Van Vreeswyk et al. (2004)

GIS Database:

**(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 DPaW managed former Meentheena pastoral lease, which is located approximately 60 kilometres northeast of the application area (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**  
The application areas are located wholly within a Priority 1 Public Drinking Water Source Area, the Nullagine Water Reserve. However, the proposed bulk sampling activities will not intercept groundwater (360 Environmental, 2015). DoW (2016) has advised that the proposed clearing is unlikely to have a significant impact on groundwater quality or quantity, provided activities are carried out in accordance with DoW advice and guidelines.

There are no watercourses or waterbodies within the application areas (GIS Database). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (360 Environmental, 2015). The undulating topography and low permeability of the predominantly stony clay-loam soils of the application areas combine to produce significant runoff during high rainfall events (360 Environmental, 2015). However the small areas of clearing are likely to result in minimal additional run-off. Management practices will be implemented to minimise the risk of erosion and potential impacts to surface water quality (360 Environmental, 2015).

The proposed clearing is unlikely to 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**    360 Environmental (2015)  
DoW (2016)

GIS Database:  
- Hydrography, Lakes  
- 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 an average rainfall of approximately 300-350 millimetres per year (CALM, 2002). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (360 Environmental, 2015).

There are no permanent water courses or waterbodies within the application area (GIS Database). Temporary localised flooding may occur during heavy rainfall events (360 Environmental, 2015). 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**    360 Environmental 2015)  
CALM (2002)

GIS Database:  
- Hydrography, linear

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

**Comments**  
The clearing permit amendment application was advertised on 8 February 2016 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received raising concern over cumulative impacts of clearing in the region. This issue has been addressed under Principle (e).

There are two native title claims (WC1999/008 and WC1999/016) over the area under application (DAA, 2016). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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 the application areas (DAA, 2016; 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** DAA (2016)

GIS Database:  
- Aboriginal Sites Register System

#### 4. References

- 360 Environmental (2015) Beatons Creek Bulk Sample Project, M46/11. Application for a native Vegetation Clearing Permit – Purpose Permit. Report prepared for Beatons Creek Gold Pty Ltd, by 360 Environmental Pty Ltd, Western Australia, December 2015.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DAA (2016) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 1 March 2016).
- 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.
- DoW (2016) Advice received in relation to Clearing Permit Application CPS 6899/1. Department of Water, February 2016.
- 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.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

#### 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
<b>TEC</b>	Threatened Ecological Community

## **Definitions:**

{DPaW (2015) 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.  
**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.  
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.