



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7471/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Opis Resources Pty Ltd**

### 1.3. Property details

Property: Exploration Licence 69/3424  
Exploration Licence 69/3425  
Mt Squires Project

Local Government Area: Shire of Ngaanyatjarraku  
Colloquial name: Mt Squires Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
50		Mechanical Removal	Mineral Exploration

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 12 April 2017

## 2. Site Information

### 2.1. Existing environment and information

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

**Vegetation Description** Beard vegetation associations have been mapped for the whole of Western Australia. Three Beard vegetation associations have been mapped within the application area (GIS Database).

**18:** Low woodland; mulga (*Acacia aneura*);

**39:** Shrublands; mulga scrub;

**236:** Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex.

**Clearing Description** Mt Squires Project  
Opis Resources Pty Ltd proposes to clear up to 50 hectares of native vegetation within a total boundary of approximately 30,530 hectares for the purposes of mineral exploration. The project is located approximately 87 kilometres east of Warburton in the Shire of Ngaanyatjarraku (Western Botanical, 2016).

**Vegetation Condition** Pristine: No obvious signs of disturbance (Keighery, 1994).  
To  
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

**Comment** The vegetation condition was assessed by botanists from Western Botanical (2016).

## 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 may be at variance to this Principle**

The proposed clearing is located within the Central Ranges Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, and the Central Ranges - Mann-Musgrave Block IBRA subregion (GIS Database).

CALM (2002b) assessed the biodiversity of the Mann-Musgrave Block IBRA subregion, finding that the subregion is rich and diverse in both its flora and fauna. However, most species are wide ranging and usually occur in at least one, and often several adjoining subregions (CALM, 2002b).

Western Botanical and other consultants have conducted several flora and vegetation surveys in the application area and surrounding areas since 2001. Western Botanical has reviewed these surveys in relation to the current application area (Western Botanical, 2016). Western Botanical (2016) report that the majority of

the identified flora species are widespread in Western Australia and more generally in Central Australia. The vegetation and habitat types occurring within the application area are well represented in the region (GIS Database), and the application area is unlikely to be of higher biodiversity value than the surrounding areas.

No Threatened or Priority Ecological Communities, or Threatened flora are known to occur within the application area and none were recorded during various flora and vegetation survey's (Western Botanical, 2016; GIS Database). Five Priority flora species have been recorded or have the potential to occur within the application area:

- *Goodenia gibbosa* (Priority 1 as listed by DPaW)
- *Indigofera warburtonensis* (Priority 1 as listed by DPaW)
- *Thryptome* sp. *Warburton* (Priority 1 as listed by DPaW)
- *Amaranthus centralis* (Priority 3 as listed by DPaW)
- *Calotis latiuscula* (Priority 3 as listed by DPaW)

Potential impacts to the Priority flora species above may be minimised by the implementation of a flora management condition.

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

**Methodology** CALM (2002b)  
Western Botanical (2016)

GIS Database:  
- IBRA Australia  
- 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 search of available databases within a 40km radius of the application area recorded four fauna species of conservation significance. Of these four species only one, the Brush-tailed Mulgara (*Dasyercus blythi*) is considered to have the potential to be impacted by the proposed exploration programme.

Whilst no records were revealed during the database search, the application area also consists of habitat suitable for Malleefowl (*Leipoa ocellata*) and the Greater Bilby (*Macrotis lagotis*), and individuals have been recorded in nearby areas. Therefore, both the Malleefowl and the Greater Bilby are considered to have the potential to exist within the application area.

The proposed clearing may impact Brush-tailed Mulgara burrows, Malleefowl mounds, and Greater Bilby burrows. Potential impacts to Brush-tailed Mulgara burrows, Malleefowl mounds and Greater Bilby burrows may be minimised by the implementation of a fauna management condition.

The vegetation types, landforms and habitat types within the application area are common and widespread in the region (Western Botanical, 2016). Apart from the potential existence of mounds and burrows of the species listed above, the vegetation proposed to be cleared is unlikely to represent significant habitat for fauna indigenous to Western Australia.

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

**Methodology** Western Botanical (2016)

GIS Database:  
- Threatened Fauna

**(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**

Flora surveys conducted over parts of the application area and surrounding areas did not record any species of rare flora (Western Botanical, 2016).

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 rare flora (Western Botanical, 2016).

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

**Methodology** Western Botanical (2016)

GIS Database:  
- 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 the application area (GIS Database). Surveys over parts of the application area and nearby areas did not identify any Threatened Ecological Communities (Western Botanical, 2016).

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

**Methodology** Western Botanical (2016)

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 application area falls within the Central Ranges IBRA bioregion (GIS Database). The vegetation within the application area is broadly mapped as the following Beard vegetation associations:

- 18:** Low woodland; mulga (*Acacia aneura*);
- 39:** Shrublands; mulga scrub;
- 236:** Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex.

These vegetation associations (18, 39 and 236) have not been extensively cleared as over 99% remains at both a state and bioregional level (see table) (Government of Western Australia, 2015).

The vegetation within the application area is not a remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Land
IBRA Bioregion - Central Ranges	4,701,519	4,700,206	~99.97	Least Concern	No data
Beard vegetation associations - State					
18	19,892,305	19,843,727	~99.76	Least Concern	6.62
39	6,613,569	6,602,580	~99.83	Least Concern	12.02
236	1,626,899	1,617,313	~99.41	Least Concern	No data
Beard vegetation associations - Bioregion					
18	1,075,926	1,075,161	~99.93	Least Concern	No data
39	404,691	404,691	~100	Least Concern	No data
236	2,244	2,244	~100	Least Concern	No data

\* Government of Western Australia (2015)

\*\* 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 (2015)

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 permanent watercourses or waterbodies within the application area (GIS Database).

It is not anticipated that clearing access tracks and drill pads will have a significant impact on the regional hydrology of the area.

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

**Methodology** GIS Database:  
- Geodata, 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 relatively small area and temporary nature of the proposed clearing (50 hectares of proposed clearing within an area 30,530 hectares) for mineral exploration, is unlikely to result in appreciable land degradation (GIS Database).

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

**Methodology** GIS Database:  
- Imagery  
- Rangeland Land System Mapping  
- Topographic Contours, 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 application area is not located within a conservation reserve or DPaW managed land (GIS Database). The nearest conservation area is Gibson Desert Nature Reserve which is situated approximately 140 kilometres north-west of the application area (GIS Database). Given the distance separating Gibson Desert Nature Reserve and the application area, the proposed clearing is not likely to impact the environmental values of the conservation area.

The proposed clearing is within the 'Ranges of the Western Desert', an area which is listed on the Register of National Estate (GIS Database) for its unique natural values (GIS Database). The ranges of the Western Desert cover an area of approximately 8 million hectares. The small area of the proposed clearing (50 hectares) is unlikely to have any significant impact on the natural values of this area.

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

**Methodology** GIS Database:  
- DPaW Tenure  
- Register of National Estate (Status)

**(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 area is not within a Public Drinking Water Source Area (GIS Database).

Groundwater within the application area is fresh to brackish, at between 1,000 - 3,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). The proposed clearing, is unlikely to have any significant impact on groundwater levels or quality.

The proposed clearing area is relatively flat, and is not associated with any permanent watercourses or waterbodies (GIS Database). The proposed clearing of approximately 50 hectares of native vegetation for mineral exploitation, is unlikely to cause any deterioration in surface water quality.

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

**Methodology GIS Database:**

- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- Topographic Contours, Statewide

**(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 application area experiences an arid climate with varied and unpredictable rainfall in the Great Victoria Desert bioregion, and slightly higher winter rainfall in the Central Ranges bioregion (CALM, 2002a; CALM, 2002b), where the annual evaporation rate exceeds the annual rainfall (BoM, 2017). Any surface water resulting from normal rain events is expected to be short lived.

The application area is located within the Warburton Basin catchment area which covers a total area of approximately 17,203,745 hectares (GIS Database). The proposed clearing of 50 hectares is not likely to cause or exacerbate the incidence or intensity of floods in the catchment or local areas.

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

**Methodology BoM (2017)  
CALM (2002a)  
CALM (2002b)**

- GIS Database:
- Hydrographic Catchments – Catchments

**Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.**

**Comments** There is one Native Title claim over the area under application (WC04/3) (DAA, 2017). 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 is one registered Aboriginal Sites of Significance within the application area (DAA, 2017). 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, Department of Parks and Wildlife and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 6 March 2017 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

**Methodology DAA (2017)**

## 4. References

- BoM (2017) Climate statistics for Australian locations, Warburton. Bureau of Meteorology. [http://www.bom.gov.au/climate/averages/tables/cw\\_013011.shtml](http://www.bom.gov.au/climate/averages/tables/cw_013011.shtml) (Accessed 31 March 2017).
- CALM (2002a) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 - Great Victoria Desert 2 (GVD2) - Great Victoria Desert Central subregion. Department of Conservation and Land Management, Western Australia.
- CALM (2002b) Biological Summary of the 2002 Biodiversity Audit for Western Australia, A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 - Central Ranges 1 (CR1) - Mann-Musgrave Block subregion. Department of Conservation and Land Management, Western Australia.
- DAA (2017) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 31 March 2017).
- 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.
- DPaW (2017) NatureMap. Department of Parks and Wildlife. <http://naturemap.dec.wa.gov.au> (Accessed 20 February 2017).
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics Incorporating the CAR reserve analysis (Full Report). Department of Environment and Conservation, Western Australia, June 2015.
- 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 Botanical (2016) Desktop Review of Flora, Vegetation and Fauna, Mt Squires Tenements E69/3432 and E 69/3425. Report prepared for Cassini Resources, by Woodman Environmental Consulting Pty Ltd, September 2016.

### 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>DEE</b>	Department of the Environment and Energy, Australian Government
<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>DoE</b>	Department of the Environment, Australian Government (now DEE)
<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 DEE)
<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.