



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7305/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Australian Nickel Investments Pty Ltd

### 1.3. Property details

Property: Mining Lease 36/349  
Mining Lease 36/371  
Local Government Area: Shire of Leonora.  
Colloquial name: Cosmos Nickel Project

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 10 November 2016

## 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. One Beard vegetation association is located within the application area (GIS Database):

**Beard vegetation association 39:** Shrublands; mulga scrub

A Level 1 flora and vegetation survey was conducted over the application area and surrounding areas in 2011 by Mattiske Consulting. The survey was conducted in support of a previously granted clearing permit (CPS 4520/1). Three vegetation communities were identified within the application area (Mattiske, 2011):

- 1) Low woodland of *Acacia aneura* var. *aneura* with *Acacia craspedocarpa* and *Acacia aneura* var. *macrocarpa*, *Acacia aneura* var. *gilgiana* and *Santalum spicatum* over *Eremophila galeata*, *Eremophila spectabilis*, *Monachather paradoxus* and *Eragrostis eriopoda* on red loams and sand loams along drainage lines;
- 2) Low open woodland of *Acacia aneura* var. *macrocarpa* and *Acacia aneura* var. *aneura* over *Eremophila galeata*, *Eremophila spectabilis*, *Eremophila latrobei* subsp. *latrobei*, *Senna artemisioides* subsp. *helmsii* x *oligophylla* and *eragrostis eriopoda* on sandy loam gravels, often covered by a stony mangle of quartz and dolerite; and
- 3) Open shrubland of *Eremophila galeata* and *Acacia tetragonophylla* with occasional emergent *Acacia aneura* var. *aneura* over *Senna artemisioides* subsp. *helmsii* x *oligophylla* and *Solanum lasiophyllum* on shallow red loams with an extensive stony mantel of dolerite or quartz.

**Clearing Description** Cosmos Nickel Project  
Australian Nickel Investments Pty Ltd proposes to clear up to 24.55 hectares of native vegetation within a total boundary of approximately 24.56 hectares, for the purpose of mineral production. The project is located approximately 35 kilometres north of Leinster in the Shire of Leonora

**Vegetation Condition** Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);  
To:

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

**Comment** Clearing permit CPS 4520/1 was granted by the Department of Mines and Petroleum on 6 October 2011, and approved the clearing of up to 24.55 hectares of native vegetation within a clearing permit boundary of approximately 24.56 hectares. This permit was held by a different permit holder and expired on 29 October 2016. On 6 October 2016, Australian Nickel Investments Pty Ltd applied for a clearing permit over exactly the same area that was previously approved. No annual clearing report information was received from the expired permit holder. Aerial imagery suggests that track clearing along the edge of water management ponds and a large access track have been present since at least 2005. The majority of the application area remains uncleared.

The condition of the vegetation under application was determined via a flora and vegetation survey conducted in 2011 by Mattiske Consulting.

### 3. Assessment of application against Clearing Principles

#### Comments

The proposed clearing of 24.55 hectares of native vegetation is to occur within a clearing permit boundary of approximately 24.56 hectares and will allow for the construction of a water management pond, which will support mineral production activities. The area applied to be cleared was assessed in 2011 during the approval process for the granted clearing permit CPS 4520/1. The assessment of CPS 4520/1 found the proposed clearing to be not at variance to Principle (e) and not likely to be at variance with the remaining clearing principles.

The application area occurs within the Eastern Murchison (MUR1) subregion of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. Salt lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sandplains. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Halosarcia* shrublands (CALM, 2002).

A search of current available flora and fauna databases identified a number of conservation significant species within the local area (20 kilometre radius) (DPaW, 2016):

#### Fauna

- Rainbow Bee-eater (*Merops ornatus* – IA)
- Trapdoor spider (*Kwonkan moriartii* – P2)
- Peregrine Falcon (*Falco peregrinus* – OS)
- Brush-tailed Mulgara (*Dasyercus blythi* – P4)

#### Flora

- *Anacampteros* sp. Eremaean (F.Hort, J. Hort & J. Shanks) (P1)
- *Austroparmelina macrospora* (P3)
- *Gunniopsis propinqua* (P3)
- *Hybanthus floribundus* subsp. *chloroxanthus* (P3)
- *Eremophila pungens* (P4)
- *Grevillea inconspicua* (P4)
- *Hemigenia exilis* (P4)

The vegetation communities and habitat types mapped within the application area are common and widespread in the local area and region (Ninox, 2005). The soils mapped as occurring within the application area (Fa7) are described as greenstone hills and low ranges with some slate and basalt: dominant soils are shallow stony earthy loams on the steep slopes while overlying red-brown hardpan occur on the stony pediments (Northcote et al. 1960-68).

Preferred habitat for *Anacampteros* sp. Eremaean is not present, as this species prefers sand patches inside rocks, brown sandy clay, granite, depressions in rock outcrops, breakaways and flats (Western Australian Herbarium, 1998-). The remaining flora species listed above are either known from a number of IBRA regions, or prefer habitat types that are not prevalent within the application area (Western Australian Herbarium, 1998-). The conservation status of these species is unlikely to be impacted should they be present.

Of the flora and fauna species listed above, only *Grevillea inconspicua* has been recorded within 5 kilometres of the application area. The Trapdoor spider (*Kwonkan moriartii*) is the only fauna species recorded in the local area with a likely restricted range where impacts from clearing could be significant. However, this recorded occurrence is a relic collection from 1962. There have only been two individuals of this species recorded from the entire Eastern Murchison subregion, and collection data suggests that herbaceous graminoids and/or sparse hummock grassland is the preferred habitat (DPaW, 2016). During flora and fauna surveys of the application area, no flora or fauna species of conservation significance were recorded (Mattiske, 2011; Ninox, 2005).

There are no Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) mapped within the application area and no TECs or PECs were identified during the flora and vegetation survey (Mattiske, 2011; GIS Database). The application area is situated within the buffer zone of a Priority 1 PEC; the 'Violet Range (Perseverance Greenstone) vegetation complexes (banded ironstone formation).' This buffer has a mapped extent of over 19,000 hectares. The PEC itself has a known extent over 14,000 hectares. The proposed clearing of 24.55 hectares of native vegetation within the buffer of such an extensive PEC (where existing mining infrastructure and disturbance are already present) is unlikely to result in any measureable adverse impacts.

A minor non-perennial watercourse dissects the application area, running along the western boundary adjacent to the exiting water management pond (GIS Database). There are many similar drainage lines scattered throughout the local area, which will likely only flow following a significant rain event. Vegetation that could be considered as growing in association with a watercourse (riparian vegetation), has been identified within the application area (Mattiske, 2011), however this type of vegetation represents a small fraction of the vegetation present within the application area. Impacts to vegetation growing in association with a watercourse are not expected to be significant.

The mapped Beard vegetation association (Beard vegetation association 39) is well represented, with more than 99% of pre-European levels of native vegetation remaining within the State and Bioregion (Department of Natural Resources and Environment, 2002; Government of Western Australia 2015; GIS Database).

Given the relatively small size of the proposed clearing, the amount of existing disturbance in the vicinity and the large amount of remaining vegetation in the surrounding area, significant environmental impacts are unlikely to result from the proposed clearing

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing was found to be not at variance to Principle (e) and not likely to be at variance with the remaining clearing principles.

**Methodology** CALM (2002)  
Department of Natural Resources and Environment (2002)  
DPaW (2016)  
Government of Western Australia (2015)  
Mattiske (2011)  
Ninox (2005)  
Northcote et al. (1960-68)  
Western Australian Herbarium (1998-)

GIS Database:  
- DPaW Tenure  
- Hydrography, linear  
- IBRA Australia  
- Imagery  
- Pre-European Vegetation  
- Public Drinking Water Source Areas (PDWSAs)  
- Threatened and Priority Flora List  
- Threatened and Priority Ecological Communities Buffers  
- Threatened and Priority Ecological Communities Boundaries

#### **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 application area (WC2011/007) (DAA, 2016). 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*.

According to available datasets, there is no Sites of Aboriginal Significance located in the area applied to clear (DAA, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the 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 17 October 2016 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application. Native title matters were raised.

**Methodology** DAA (2016)

#### **4. References**

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia  
< <http://maps.dia.wa.gov.au> > Accessed October 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.
- DPaW (2016) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>> (Accessed October 2016).
- Government of Western Australia (2015) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. 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.
- Mattiske (2011) Flora and Vegetation Survey of Proposed Evaporation Pond Extensions: Cosmic Nickel Project. Prepared for Xstrata Nickel Australasia Operations Pty Ltd, by Mattiske Consulting, April 2011.
- Ninox (2005) Vertebrate Fauna Habitat Assessment of the Proposed Expansion to the Cosmos Nickel Mine. Prepared for URS

Australia Pty Ltd by Ninnox Wildlife Consulting, May 2005.

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 (1998-) FloraBase – the Western Australian Flora. Department of Parks and Wildlife <<https://florabase.dpaw.wa.gov.au>> Accessed October 2016.

## 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.

**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.