



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6466/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Sinosteel Midwest Corp Ltd

### 1.3. Property details

Property: Mining Lease 70/1012  
Mining Lease 70/1013  
Local Government Area: Shire of Morawa  
Colloquial name: Koolanooka Project

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 9 April 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 Beard vegetation associations:

**358:** Shrublands: bowgada & *Acacia quadrimarginea* on stony ridges;

**693:** Mosaic: Low woodland: *Allocasuarina huegeliana* over mallee and *Acacia scrub/Allocasuarina campestris* thicket; and

**1155:** Mosaic: Medium woodland; York gum/ Shrublands: *Allocasuarina campestris* thickets.

A flora and vegetation survey conducted by Maia Environmental Consultancy Pty Ltd (Maia, 2014) over the application area identified the following six vegetation types:

1: Low Open Woodland and High Open Shrubland of *Allocasuarina acutivalvis* subsp. *prinsepiana* with a mixed Shrubland (*Melaleuca nematophylla*, *Dodonaea inaequifolia* and mixed *Acacia* spp.) and a mixed Low Open Shrubland (*Grevillea paradoxa*, *Philotheca brucei* subsp. *brucei* and +/- *Eremophila clarkei*) on BIF upperslopes and crests.

2: Open Mid Shrubland of *Allocasuarina acutivalvis* subsp. *prinsepiana* with an Open Mallee Woodland of *Eucalyptus ebbanoensis* subsp. *ebanoensis* and Sparse Low Open Shrubland of *Daviesia hakeoides* subsp. *hakeoides*.

3: Open Tall Shrubland of *Allocasuarina acutivalvis* subsp. *prinsepiana* with a Sparse Mid Shrubland of *Grevillea paradoxa* and Sparse Low Shrubland of *Xanthosia bungei*.

4: Sparse Tall Shrubland of *Acacia quadrimarginea* and *A. tetragonophylla* with a Low Shrubland of *Ptilotus obovatus* on upper and mid slopes.

5: Open Tall Shrubland of *Acacia acuminata* with an Open Mid Shrubland of *Dodonaea inaequifolia* and Sparse Low Shrubland of *Mirbelia microphylla* on upper steep slopes.

6: Open Tall Shrubland of *Acacia stereophylla* var. *stereophylla*, *Acacia assimilis* subsp. *assimilis*, *Acacia ramulosa* var. *ramulosa* with a Sparse Mid to Low Shrubland of *Grevillea paradoxa* on footslopes and flats.

##### Clearing Description

Koolanooka Project

Sinosteel Midwest Corp Ltd proposes to clear up to 1.06 hectares of native vegetation within a total boundary of approximately 1.06 hectares, for the purpose of mineral exploration. The project is located approximately 15 kilometres north-east of Morawa, in the Shire of Morawa.

##### Vegetation Condition

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

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

##### Comment

Vegetation condition was determined by Maia (2014) using the Keighery scale.

### 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 application area is located within the Merredin sub-region of the Avon Wheatbelt Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Merredin subregion is dominated by Mallees, Acacia thickets and shrubheaths on sandplains. Diverse Eucalyptus woodlands occur around salt lakes, on ranges, and in valleys, and dwarf shrublands of samphire are common in salt areas (GIS Database).

A flora and vegetation survey was conducted by Maia Environmental Consultancy Pty Ltd (Maia) over the application area in 2010 and 2011 (Maia, 2014). A total of 117 flora taxa (including subspecies and varieties) representing 41 families and 82 genera were recorded from the application area during the flora and vegetation survey (Maia, 2014).

The application area is located within the Koolanooka System Threatened Ecological Community (TEC) (GIS Database; Maia, 2014). The Koolanooka System TEC covers approximately 4,347 hectares (excluding the Perenjori Hills section) therefore the proposed clearing for mineral exploration will potentially have a 0.02% impact on the TEC (GIS Database; Maia, 2014). It is therefore considered unlikely that the proposed clearing will have a significant impact on the TEC. It should be noted however that the Department of Parks and Wildlife (DPAW) have indicated that previously disturbed areas within this TEC show poor rehabilitation success and as a result potential impacts from the proposed clearing may be minimised by the implementation of a rehabilitation condition.

No Threatened flora species or vegetation associations of restricted distribution were recorded within the application area during the flora and vegetation survey (Maia, 2014). One Priority Flora species *Stenanthemum poecilum* (P3) was recorded within the application area (Maia, 2014). It is expected that the proposed clearing will impact only two plant individuals which will have a 0.30% impact on the local population of this species (Maia, 2014). It is therefore considered unlikely that the proposed clearing will have a significant impact on priority flora.

A total of six introduced flora species were recorded within the application area during the flora and vegetation survey (Maia, 2014). These included *Arctotheca calendula* (Cape Weed), *Cuscuta planiflora* (Small-seeded Dodder), *Mesembryanthemum nodiflorum* (Slender Iceplant), *Petrorhagia dubia* (Velvet Pink), *Sisymbrium erysimoides* (Smooth Mustard) and *Spergula arvensis* (Corn Spurry). None of these introduced flora species are Declared Pest or listed as Weeds of National Significance (Maia, 2014). Potential impacts on biological diversity from weeds may be minimised by the implementation of a weed management condition.

An opportunistic fauna habitat assessment was conducted by Maia over the application area during the flora and vegetation survey. No significant fauna habitats were recorded by the botanists within the application area however there are records of the conservation significant Common Slender Blue-tongue lizard (*Cyclodomorphus branchialis*) and Malleefowl (*Leipoa ocellata*) mounds in close proximity to the application area (GIS Database). None of these species are expected to be restricted to the application area or rely exclusively on fauna habitats present within the application area.

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

**Methodology** Maia (2014)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Pre-European Vegetation  
- Threatened and Priority Flora  
- Threatened Fauna  
- 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 is not likely to be at variance to this Principle**

An opportunistic fauna habitat assessment was conducted by Maia over the application area during the flora and vegetation survey. No significant fauna habitats were recorded by the botanists within the application area (Maia, 2014).

The fauna habitats within the application area were not considered to be unique and extended beyond the proposed application area (GIS Database; Maia, 2014). Given the relatively small scale of the proposed clearing (1.06 hectares) it is considered unlikely that the area proposed to be cleared for mineral exploration activities will comprise the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

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

**Methodology** Maia (2014)  
GIS Database  
- Aerial Imagery  
- IBRA WA (Regions - Sub Regions)  
- 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**

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

The flora and vegetation survey conducted by Maia over the application area did not record any species of Threatened Flora (Maia, 2014).

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

**Methodology** Maia (2014)  
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 may be at variance to this Principle**

The application area is located within the Koolanooka System Threatened Ecological Community (GIS Database).

The Koolanooka System TEC covers approximately 4,347 hectares (excluding the Perenjori Hills section) therefore the proposed clearing will potentially have a 0.02% impact on the TEC (GIS Database; Maia, 2014). It is therefore considered unlikely that the proposed clearing will have a significant impact on the TEC.

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

**Methodology** Maia (2014)  
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 likely to be at variance to this Principle**

The application area falls within the Avon Wheatbelt Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 19% of the Pre-European vegetation remains (see table) (GIS Database; Government of Western Australia, 2013).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

**358:** Shrublands: bowgada & *Acacia quadrimarginea* on stony ridges;

**693:** Mosaic: Low woodland: *Allocasuarina huegeliana* over mallee and *Acacia scrub/Allocasuarina campestris* thicket; and

**1155:** Mosaic: Medium woodland; York gum/ Shublands: *Allocasuarina campestris* thickets.

Approximately 99% of Beard vegetation association 358, 72% of vegetation association 693 and 40% of vegetation association 1155 remain at state level (Government of Western Australia, 2013). Therefore, the area proposed to be cleared is unlikely to represent a significant 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 Lands
IBRA Bioregion - Avon Wheatbelt	9,517,109	1,778,407	~18.69	Vulnerable	9.62
<b>Beard vegetation associations - State</b>					
358	59,719.25	59,576.78	~99.78	Least Concern	35.29
693	4,396.22	3,157.85	~71.83	Least Concern	0
1155	7,812.24	3,105.28	~39.75	Depleted	0
<b>Beard vegetation associations - Bioregion</b>					
358	67,832	61,680	~90.84	Least Concern	0.4
693	5,037	3,494	~69.4	Least Concern	0
1155	7,812.24	3,105.28	~39.75	Depleted	0

\* Government of Western Australia (2013)

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

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

**Methodology** Department of Natural Resources and Environment (2002)  
Government of Western Australia (2013)  
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 not at variance to this Principle**

There are no permanent or ephemeral water bodies or watercourses within or in close proximity to the application area (GIS Database).

No vegetation associated with a permanent or ephemeral watercourse or wetland was recorded within the application area during the flora and vegetation survey (Maia, 2014).

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

**Methodology** Maia (2014)  
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 is not likely to be at variance to this Principle**

The application area is located within the Koolanooka System land system which is characterised by low hills and rises and slopes, banded Iron and colluvium (GIS Database). The proposed clearing area is located on gentle sloping hilltops and undulating plains which occur in a major fault system within the Koolanooka Hills banded ironstone formation (GIS Database).

The soil type within the application area is described as red-brown hardpan shallow loam and red earths, loams, sands and duplexes (GIS Database).

Given the small scale and the relatively low impact of the proposed exploration activities it is unlikely that the associated clearing will cause appreciable land degradation.

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

**Methodology** GIS Database:  
- Rangeland Land System Mapping  
- 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 application area does not lie within any conservation areas (GIS Database).

The nearest nature conservation areas are the Koolanooka Dam Nature Reserve which lies approximately 11 kilometres south-west of the application area and Bowgada Nature Reserve which is approximately 13 kilometres south-east of the application area (GIS Database). Given the distance between the application area and the Nature Reserves, the proposed clearing is not likely to impact the environmental values of these conservation areas.

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

**Methodology** GIS Database:  
- DEC 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 area is not located within a Public Drinking Water Source Area (PDWSA) and there are no permanent or ephemeral water bodies or watercourses within the application area (GIS Database).

Groundwater salinity within the application area is between 7,000 and 14,000 milligrams/Litre Total Dissolved Solids (TDS) which is considered to be relatively saline (GIS Database). The proposed clearing is not likely to cause groundwater or surface water quality within the application area to alter significantly.

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)

**(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 Avon Wheatbelt region is mostly hot and dry, with highly variable rainfall throughout the year (BoM, 2015). The region has a semi-arid climate with hot summers, mild winters and an average rainfall of 286 mm a year (BoM, 2015).

There are no permanent or ephemeral water bodies or watercourses within or in close proximity to the application area (GIS Database). The proposed clearing within the application area is unlikely to cause or exacerbate the incidence of flooding or localised waterlogging (GIS Database).

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

**Methodology** BoM (2015)  
GIS Database:  
- Hydrography, linear

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

**Comments**

There are two Native Title Claims (WC1997/072 and WC2004/002) over the application area (GIS Database). These claims have been filed at the federal court on behalf of the claimant groups. 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 Site of Significance within 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.

The clearing permit application was advertised on 23 February 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application.

- Methodology** GIS Database:
- Aboriginal Sites of Significance
  - Native Title Claims, Determined by the Federal Court
  - Native Title Claims, Filed at the Federal Court
  - Native Title Claims, Registered with the NNTT

#### 4. References

- BoM (2015). Bureau of Meteorology (WWW Document). Retrieved from <http://www.bom.gov.au> on 24 March 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 (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, 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.
- Maia (2014) SMC Koolanooka Tenements M70/1012 and M70/1013 Targeted Flora Survey, July 2014. Report prepared by Maia Environmental Consulting Pty Ltd for SinoSteel Midwest Corp Ltd, 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
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>s.17</b>	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

##### 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:**  
**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.  
**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.  
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.