



1. Application details

1.1. Permit application details

Permit application No.: 1148/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: South Kal Mines Pty Ltd

1.3. Property details

Property: PART LOT 59 ON PLAN 226332
Local Government Area: Shire Of Coolgardie
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.6		Mechanical Removal	Road construction or maintenance

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 936: Medium woodland; salmon gum (Hopkins et al. 2001; Shepherd et al. 2001).	The area under application is to facilitate a proposed haul road to link mining activities, to the north on Lot 59, to the existing Noble haul road and is approximately 9km southeast of Coolgardie (South Kal Mines Pty Ltd 2006).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The proposed haul road will be constructed utilising an existing 10m wide track to minimise clearing. The area under application has a history of mining and grazing activities (Galton-Fenzi 2006, pers comm.).
	The vegetation proposed to be cleared is described as Eucalypt woodland with Sclerophyll understorey with dominating species of Eucalyptus salmonophioia, Eremophila and Acacia species (Western Botanical 2003).		

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 area under application has a history of mining and grazing activities with the vegetation predominantly regrowth. The area under application has also been previously disturbed as it contains an existing track of approximately 10m width, which is to be expanded to approximately 20m (Galton-Fenzi 2006, pers comm., Site Photos 2006). Given the existing disturbance, it is considered unlikely the area under application comprises a higher level of biological diversity than that of other less disturbed areas in the local area.
Methodology	Galton-Fenzi (2006) pers comm. Information provided by the proponent (DoE TRIM Ref IN25777) Site Photos (2006) (DoE TRIM Ref ND835)

(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 recent clearing proposal (CPS 909/1) to the north of the area under application was assessed and granted. The assessment included CALM advice regarding fauna species occurring in the area. CALM (2005) advised records of malleefowl (<i>Leipoa ocellata</i>) in the area were relatively recent and it is likely that the vegetation within the notified area, particularly areas of Salmon Gum woodland, is utilised as suitable habitat and nesting hollows for a wide variety of fauna. Therefore CALM (2005) recommended the proponent should actively survey for the

presence of malleefowl mounds before commencing any clearing and that trees (especially those with hollows) were to be retained where possible.

Therefore, the area applied to be cleared shall be walked, prior to clearing, to determine the presence of malleefowl (*Leipoa ocellata*) mounds. Further, clearing shall not occur within 50 m of any malleefowl mounds identified in the survey.

Methodology CALM (2005) (DoE TRIM Ref IN25055)

(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 Declared Rare Flora (DRF) within close proximity of the area under application with the nearest recorded DRF located approximately 40km west. It is therefore unlikely that the proposed clearing will have an impact on DRF or any other species of conservation significance.

Methodology GIS databases:
- Declared Rare and Priority Flora List - CALM 01/07/05

(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 records of Threatened Ecological Communities (TECs) within close proximity of the area under application with the nearest recorded TEC located approximately 130km southwest. It is therefore unlikely that the vegetation proposed to be cleared comprises the whole or part of or is necessary for the maintenance of a TEC.

Methodology GIS Databases:
- Threatened Ecological Community Database - CALM 12/04/05
- Environmentally Sensitive Areas - DOE 08/03/05

(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 vegetation under application is mapped as a component of Beard vegetation association 936, of which 89.2% (906,826 ha) of the original extent remains with 4.0% in secure tenure (Shepherd et al 2001, Hopkins et al 2001). This vegetation type is therefore regarded as 'least concern' (>50%) in terms of biodiversity conservation (Department of Natural Resources and the Environment 2002).

The area under application is mapped within the Coolgardie IBRA Region of which 98.5% of native vegetation remains (Hopkins et al 2001). Given the proposed clearing of 2.6ha is relatively small compared to the area of remnant vegetation remaining within the Region (12,719,084ha) (Shepherd et al 2001), the proposed clearing will not be significant as a remnant of native vegetation in the surrounding area.

Methodology Department of Natural Resources and Environment (2002)
Hopkins et al. (2001)
Shepherd et al. (2001)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

(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 is a non-perennial watercourse (Italian Gully) approximately 70m to the east of the area under application. However, the vegetation within the area under application is not considered to be wetland dependant. Therefore, this clearing as proposed is not likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DOE 01/02/04

(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 landform of the area under application and surrounds can be described as gently undulating valley plains and pediments; some outcrop of basic rock: chief soils are alkaline red earths with limestone or limestone nodules at shallow depth, on gently sloping slightly concave plains.

Management actions to be undertaken include road storm culverts to maintain natural flow water regimes and the rehabilitation of disturbed areas once mining activities cease, which will assist in the avoidance of long-term land degradation (South Kal Mines Pty Ltd 2006). In addition, due to the small scale of the proposed clearing and its linearity, it is not likely to cause appreciable land degradation.

Methodology South Kal Mines Pty Ltd (2006) (DoE TRIM Ref TR6015)
GIS Databases:
- Soils, Statewide - DA 11/99

(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

There are no conservation reserves within close proximity of the area under application with the nearest reserves being CALM managed lands, located approximately 10.6km southeast (Yallari Timber Reserve) and 11km east (Karamindie Forest) of the proposed clearing. Given the distance between the area under application and the CALM managed lands the proposed clearing is not likely to have an impact on the environmental values of the surrounding conservation area.

The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria 1997) has not been met for Beard Vegetation Associations 936 with only 4.0% of the current extent in secure tenure (Shepherd et al. 2001, Hopkins et al. 2001). However with over 900,000ha remaining (Shepherd et al 2001, Hopkins et al 2001), the clearance of the small area under application (2.6ha) is unlikely to affect the conservation status of this vegetation complex.

Methodology Hopkins et al. (2001)
JANIS Forests Criteria (1997)
Shepherd et al. (2001)
GIS databases:
- CALM Managed Lands and Water - CALM 01/07/05

(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

With an average annual rainfall of 260mm and an annual evaporation rate of 2,600mm there is likely to be little surface flow during normal seasonal rains. During these normal seasonal rains, the spoon drains and sumps for the proposed haul road will avert stormwater runoff from the nearby Italian Gully (South Kal Mines Pty Ltd 2006). During major rainfall events there would be significant surface flow for which the Bandy Creek Catchment of the Salt Lake Basin becomes a medium for the collection and transportation of the major flows.

With high annual evaporation rates and low annual rainfall there is little recharge into regional groundwater table, which at this site is between 14,000 mg/l and 35,000 mg/l and is considered to be high saline to hypersaline. The proposed clearing of 2.6 ha native vegetation for this proposal is unlikely to have an impact on regional groundwater considering the relatively small size of the proposal and the magnitude of the Yilgarn-Goldfields Groundwater Province.

Methodology South Kal Mines Pty Ltd (2006) (DoE TRIM Ref TR6015)
GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Isohyets - BOM 09/98
- Groundwater Salinity, Statewide - 22/02/00
- Hydrography, linear - DOE 01/02/04
- Groundwater Provinces - WRC 98
- Hydrographic Catchments, Catchments - DOE 23/03/05
- Topographic Contours, Statewide - DOLA 12/09/02

(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

With an average annual rainfall of 260mm and an annual evaporation rate of 2,600mm there is little surface flow

during normal seasonal rains. Given the area under application is only 2.6ha and occurs on a relatively flat landscape, the proposed clearing is not likely to cause or increase the incidence or intensity of flooding.

- Methodology** GIS Databases:
- Evaporation Isoleths - BOM 09/98
 - Isohyets - BOM 09/98
 - Hydrography, linear - DOE 01/02/04
 - Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The area under application is within the Proclaimed Groundwater Area of Goldfields. Therefore any abstraction of groundwater would require a licence. However, considering this application is only for road construction or maintenance, no licence will be necessary.

There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

There are no native title issues as the land is Freehold Land.

No official submission was received from the Shire of Coolgardie. However, the assessing officer has contacted the Shire of Coolgardie and confirmed that no local government approvals are required in relation to the intended land-use (haul road).

- Methodology** GIS databases:
- RIWI Act, Groundwater Areas - WRC 13/06/00
 - RIWI Act, Surface Water Areas - WRC 18/10/02

4. Assessor's recommendations

Purpose	Method Applied	area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	2.6	Grant	<p>The application has been assessed and the clearing as proposed may be at variance to Principle b) and is not and not likely to be at variance to the remaining Principles. Therefore, the assessing officer recommends that the permit should be granted with the following conditions:</p> <p>Prior to clearing, the site shall be walked, inspected and surveyed by a suitably qualified person to identify the presence of malleefowl (<i>Leipoa ocellata</i>) mounds.</p> <p>The Permit Holder shall not clear within 50m of malleefowl mounds identified in the above condition.</p>

5. References

CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM Ref IN25055.

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.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Western Botanical (October 2003) (Draft) Flora, vegetation and habitats of the South Kal Mines, Pty Ltd Holdings and Surrounding Area WA. DoE TRIM Ref IN25777-02

6. Glossary

Term	Meaning
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CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)