



1. Application details

1.1. Permit application details

Permit application No.: 2003/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Gary & Kevin Mason & Heitman Gary Mason & Kevin Heitman

1.3. Property details

Property: E70/3015
 P70/1514
 P70/1514
 Local Government Area: Shire Of Morawa
 Colloquial name: Access track from fenceline to prospecting area

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.25		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 352: Medium woodland; York gum (Hopkins et al. 2001, Shepherd et al. 2001).	The Vegetation is an open scrub and scattered as sparse patches on a cleared landscape. Introduced plants do not appear to be a problem at this stage (Interim Management Guidelines for Kadji Kadji, 2005-2010). Based on the vegetation condition scale of Keighery (1994), the vegetation remaining in the area under application is likely to be in a 'degraded' condition.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description and condition of the vegetation under application were inferred from the Site Visit Report (DEC Site Visit, 2007) and the Department of Environment and Conservation's Interim Management Guidelines for Kadji Kadji (2005-2010).

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 Vegetation is an open scrub and scattered as sparse patches on a cleared landscape (DEC Site Visit, 2007). It was a pastoral lease until it was purchased in 2003 and designated as an 'Unallocated Crown Land' (UCL) managed under Section 33 (2) of the Conservation and Land Management Act 1984. Introduced plants do not appear to be a problem at this stage. (Interim Management Guidelines for Kadji Kadji, 2005-2010) The remaining vegetation in the area under application is likely to be in a 'degraded' condition (Keighery, 1994).

The proposed access route is intended to take advantage of existing clearings and only minimal dead standing material should need to be removed to allow access. It is not intended to establish a long term access route in this exploration stage of the mining project. The small 4.5 tonne rig will be supported by a small 4 x 4 vehicle and a rubber tyred loader. (DEC Site Visit, 2007)

Given the historical pastoral landuse of the proposal area, the small and narrow area of proposed clearing (0.25 ha) and the open and fragmented nature of the existing vegetation, it is unlikely that the area under application is representative of an area of outstanding biodiversity. Furthermore, there will be minimal disturbance to the vegetation during the construction of the temporary vehicle access track.

Therefore, this proposal is unlikely to be at variance with this Principle.

Methodology GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
DEC Site Visit (2007)
Interim Management Guidelines for Kadji Kadji (2005-2010)
Keighery (1994)

(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**

There are approximately 30 occurrences of malleefowl, two occurrences of western spiny-tailed skink and one occurrence of the lizard *Cyclodomorphus branchialis* within a radius of 10 km. These are Declared Threatened Fauna. The closest of them appears to occur approximately 8.5 km away from the proposal area. There are no known records of Priority or other specially protected fauna within a radius of 10 km.

The Vegetation is an open scrub and scattered as sparse patches on a cleared landscape. The proposed access route is intended to take advantage of existing clearings and only minimal dead standing material should need to be removed to allow access. (DEC Site Visit, 2007) The remaining vegetation in the area under application is likely to be in a 'degraded' condition (Keighery, 1994).

The scrub vegetation may provide habitat to native fauna, however the area of proposed clearing is small (0.25 ha) and narrow, and the disturbance to habitat may not be substantial. Therefore, it is unlikely that the area under application is of significance as a potential habitat for fauna.

Therefore, this proposal is unlikely to be at variance with this Principle.

Methodology GIS Databases:
- SAC Bio Datasets (181007)
DEC Site Visit (2007)
Keighery (1994)

(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 known records of Declared Rare Flora (DRF) within a radius of 10 km. The Vegetation is an open scrub and scattered as sparse patches on a cleared landscape (DEC Site Visit, 2007). It was a pastoral lease until it was purchased in 2003 and designated as an 'Unallocated Crown Land' (UCL) managed under Section 33 (2) of the Conservation and Land Management Act 1984. Introduced plants do not appear to be a problem at this stage. (Interim Management Guidelines for Kadji Kadji, 2005-2010) The remaining vegetation in the area under application is likely to be in a 'degraded' condition (Keighery, 1994).

Considering the level of possible disturbance from past landuse and the small area (0.25 ha), it is unlikely that the proposal area is necessary for the existence of rare flora.

Methodology GIS Databases:
- Declared Rare and Priority Flora list - CALM 01/07/05
- Clearing Regulations - Environmentally Sensitive Areas - DoE 30/05/05
- SAC Bio Datasets (181007)
DEC Site Visit (2007)
Interim Management Guidelines for Kadji Kadji (2005-2010)
Keighery (1994)

(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 four known records of Threatened Ecological Communities (TEC's) within a radius of 10 km: KOOL1, GL38, GL39 and SHB18. They contain plant assemblages of the Koolanooka System. The closest of them occur at a distance of approximately 9 km from the proposal area.

The TEC boundaries are situated at a distance of approximately 5.5 km from the area under application while the buffer extends into the proposal area.

The soil type within the area under application differs from the soil types where the TEC's are found.

Due to the large separation distance (9 km) and the differences in soil types it is unlikely that the proposal area consists of any of these TEC's. Similarly, the small area of proposed clearing (0.25 ha) is not likely to impact upon any of these TEC's.

Methodology GIS Databases:
 - Threatened Ecological Communities - CALM 12/04/05
 - SAC Bio Datasets (100308)

(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

Pre-European	Current area (ha)	Remaining extent (ha)	Reserves/CALM- %*	managed land, %	
IBRA Bioregion - Avon Wheatbelt**		9,517,106	1,470,160	15.4	10.8
Shire - Morawa	341,836	56,051	19.4	Not available	
Beard veg type - 352	724,272	120,609	16.7	10.2	

* (Shepherd et al. 2001; Shepherd 2006)
 ** Area within Intensive Landuse Zone

Beard vegetation association 352 has 16.7 % of pre-European vegetation remaining. Shire of Morawa has 19.4 % of pre-European vegetation remaining. Avon Wheatbelt Bioregion has 15.4 % of pre-European vegetation remaining.

The State Government is committed to the National Objectives Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) which includes a target that prevents clearance of ecological communities with an extent below 30 % of that present pre-1750 (EPA 2000).

The proposed access route is intended to take advantage of existing clearings among the open scrub and only minimal dead standing material should need to be removed to allow access (DEC Site Visit, 2007).

If approved, the access route will be constructed within a State Timber Reserve that has been vested in the Conservation Commission (WA). The Reserve was a pastoral lease until it was purchased in 2003 and designated as an 'Unallocated Crown Land' (UCL) managed under Section 33 (2) of the Conservation and Land Management Act 1984 (Interim Management Guidelines for Kadji Kadji, 2005-2010).

The historical landuse appear to have altered the original Beard vegetation association and resulted in the currently existing open scrub vegetation. Furthermore, the proposal area is small (0.25 ha) and the disturbance to native vegetation is proposed to be minimal. Therefore, the proposal is not likely to contribute significantly to the vegetation decline in the Shire, the Bioregion or of the Beard vegetation association.

Methodology GIS Databases:
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
 - Pre-European Vegetation - DA 01/01
 - Local Government Authorities - DLI 08/07/04
 - EPA Position Paper No 2 Agriculture Region - DEP 12/00
 AGPS (2001)
 DEC Site Visit (2007)
 EPA (2000)
 Interim Management Guidelines for Kadji Kadji (2005-2010)
 Shepherd (2006)
 Shepherd et al (2001)

(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 watercourses or wetlands within 10 km of the area under application.

Therefore this proposal is not at variance with this Principle.

Methodology GIS Databases:
 - Hydrography, linear - DoE 01/02/04
 - Hydrographic Catchments - Catchments - DoE 23/03/05

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal may be at variance to this Principle

The area under application has a flat topography and known to contain gypseous and saline loamy soils underlain by clayey or sandy strata. The mean annual rainfall in the region is 300 mm. There appears to have a

low risk of salinity on average.

Wind erosion will not be an issue because the proposed clearing will be narrow and small in size (0.25 ha). Considering the low rainfall in the region and the small area, the proposed clearing is not likely to cause significant runoff, flooding or land salinisation.

There is evidence of water erosion on several tracks (Interim Management Guidelines for Kadji Kadji, 2005-2010). There is the likelihood of water erosion after the abandonment of the access track, which would likely to have a compact and less permeable surface.

Therefore this proposal may be at variance with this Principle.

In order to reduce the impact of water erosion on the surface of the abandoned access track, rehabilitation conditions will be imposed on the Permit if clearing is approved.

Methodology GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide - DA 11/99
Interim Management Guidelines for Kadji Kadji (2005-2010)

(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 may be at variance to this Principle

The proposal area falls within a State Timber Reserve that has been vested in the Conservation Commission of WA. The Reserve was a pastoral lease until it was purchased in 2003 and designated as an 'Unallocated Crown Land' (UCL) managed under Section 33 (2) of the Conservation and Land Management Act 1984 (Interim Management Guidelines for Kadji Kadji, 2005-2010). The proposed access route is intended to take advantage of existing clearings among the open scrub and only minimal dead standing material should need to be removed to allow access (DEC Site Visit, 2007). The Bowgarder Nature Reserve is situated approximately 8 km from the proposed access route.

As the tenement is not bordered by any existing station track or main road, it will be necessary to access the tenement through areas of native vegetation (DEC Site Visit, 2007). In addition, the proposal area is considered to be far from the Nature Reserve (8 km) and small (0.25 ha). The physical disturbance to native vegetation by the proposed activity is intended to be minimal.

The proposed activity will take place within a State Timber Reserve and may compromise its ecological values. Therefore, the proposal may be at variance to this Principle.

Hygienic conditions will be imposed to control the introduction of dieback and weeds if clearing is approved.

Methodology GIS Databases:
- CALM Regional Parks - CALM 12/04/02
- CALM Managed Lands & Waters - CALM 01/07/05
- Proposed National Parks FMP-CALM 19/03/03
- Register of National Estate - EA 28/01/03
DEC Site Visit (2007)
Interim Management Guidelines for Kadji Kadji (2005-2010)

(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 area under application is situated within the Yarra-Monger hydrographic catchment. The mean annual rainfall in the region is 300 mm. The proposal area is known to contain gypseous and saline loamy soils underlain by clayey or sandy strata. There is no Public Drinking Water Sources (PDWSA's) in the proposal area. The proposal area does not contain water courses or surface expressions of groundwater. Groundwater has a salinity level of 14000-35000 mg/L. The depth to groundwater could not be established from available data.

Considering the existing conditions, clearing of a small strip of vegetation is not likely to deteriorate the quality of underground water any further as it appears to be already highly saline. In addition the area under application consists of a small (0.25 ha) linear strip of vegetation with a low average rainfall (300 mm) and therefore unlikely to cause a substantial watertable rise in the local area.

Therefore, this proposal is not likely to be at variance with this Principle.

- Methodology** GIS Databases:
- Current WIN data sets
 - Groundwater Salinity, Statewide - 22/02/00
 - Hydrographic Catchments - Catchments - DOE 23/03/05
 - Hydrography, linear - DoE 01/02/04
 - Public Drinking Water Sources (PDWSAs) - DOE 09/08/05
 - Rainfall, Mean Annual - BOM 30/09/01

(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 proposal area is known to contain gypseous and saline loamy soils underlain by clayey or sandy strata. The mean annual rainfall in the region is 300 mm. Data are not available to estimate the depth to groundwater.

As the average annual rainfall in the region is relatively low and the proposed clearing is small (0.25 ha) and narrow, this proposal is unlikely to cause groundwater recharge or flooding.

Therefore this proposal is not likely to be at variance with this Principle.

- Methodology** GIS Databases:
- Current WIN data sets
 - Rainfall, Mean Annual - BOM 30/09/01
 - Soils, Statewide - DA 11/99

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

Comments

The Shire of Morawa advised that the 'Council has no advice to offer with regard to the permit'.

There is no further requirement for a RIWI Act Licence, Works Approval or EP Act Licence for the area under application.

There is a Native Title claim over the area under application, however the clearing proposal falls within a State Timber Reserve that is vested in the Conservation Commission of WA. The advertisement of the application in the West Australian newspaper by the Department of Environment and Conservation constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

There is an Environmental Impact Assessment (EIA) over the area under application (CRN118975). However, this EIA is not likely to have an impact on the proposal.

There are no Aboriginal Sites of significance within the proposal area.

- Methodology** GIS databases:
- Native Title Claims - DLI 7/11/05
 - Aboriginal Sites of Significance - DIA 26/04/07
 - Environmental Impact Assessments
 - EPA Position Paper No 2 Agriculture Region - DEP 12/00
 - Shire of Morawa (2007) Submission

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction or maintenance	Mechanical Removal	0.25	The assessable criteria have been addressed and the proposal may be at variance to Principle (g) and Principle (h). In order to reduce the impacts, rehabilitation and hygienic conditions will be imposed on the Permit if clearing is approved.

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

DEC Site Visit (2007) Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref DOC46471.

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.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

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.

Interim Management Guidelines for Kadji Kadji (2005-2010). Department of Environment and Conservation (DEC), Western Australia.

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. (2006) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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.

Shire of Morawa (2007) Submission. DEC TRIM Ref DOC40564.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)