



1. Application details

1.1. Permit application details

Permit application No.: 410/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Kimberley Diamond Company N. L.

1.3. Property details

Property: M4/372
Local Government Area: Shire Of Derby-West Kimberley
Colloquial name: Kimberley Diamond Company - Ellendale 9 Area

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
330		Mechanical Removal	Mining

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
The vegetation of the area is Beard Vegetation Association 760 (Shrublands, pindan; Acacia tumida shrubland with scattered low bloodwood & Eucalypt setosa over ribbon and curly spinifex) (Shepherd et al, 2001).	Six community types were described within the survey area: Pindan woodland; Hill communities; Baobab-Terminalia low Tree Steppe; Ribbon grass-Blue grass Savanna; Eucalypt Woodland (Twin-leafed Bloodwood and Poplar Gum Savanna woodland); Eucalypt Woodland (Twin-leafed Bloodwood, Poplar Gum and Grey Box Savanna Woodland); Mixed Woodland (Poplar Gum, Twin-leafed Bloodwood and Pindan Woodland); and Disturbed community (Mattiske Consulting, 2002).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Condition and vegetation description based on consultants report provided with the permit application.

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**
A total of 64 families, 155 genera and 265 species were identified within the survey area comprising a floral composition considered typical for the Kimberley region (Mattiske, 2001). There are a few areas that could be considered locally significant (such as the outcrops and seasonally inundated areas) due to their higher species diversity and the presence of many annual and short-lived species that are site-specific. These areas should be avoided to allow maintenance of biodiversity values in the range of communities on the survey area (Mattiske, 2001).

Methodology Mattiske, 2001

(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**
The vegetation proposed for clearing is likely to be a habitat for the following Specially Protected species;
- Orange Leaf-nosed Bat (*Rhinonicteris aurantius*) Schedule 1- Fauna that is rare or is likely to become extinct under the Wildlife Conservation Act. The Action Plan for Australian Bats (Biodiversity Group Environment

Australia, 1999) lists this bat as IUCN Red List category LR (lc); lower risk least concern.
- Bilby (*Macrotis lagotis*) Schedule 1- Fauna that is rare or is likely to become extinct.

The vegetation is likely to be a habitat for the following Priority Listed fauna species:
- Lakeland Downs Mouse (*Leggadina lakedownensis*) P4; and
- Pictorella Mannikin (*Heteromunia pectoralis*) P4

The vegetation that is proposed to be cleared is common in the region and extensive habitat exists in the surrounding area capable of supporting local fauna impacted or displaced by this clearing proposal being approved. There appears to be a low probability of the proposed clearing to be at variance with Principle (b) (CALM, 2005).

Methodology CALM, 2005

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, significant flora.

Comments Proposal is not likely to be at variance to this Principle

No plant taxa gazetted as Declared Rare Flora were located within the survey area.

In addressing biodiversity concerns in their application the proponent stated 'In 2002, the plant communities on several outcrops and in seasonally inundated areas were highlighted as possibly locally significant areas as these areas supported a high range of species as well as possibly supporting annual and short lived species that are area site specific. Areas of proposed infrastructure and land clearing will avoid areas of outcropping and seasonal inundation for ecological and practical reasons.'

Based on the limited CALM records of significant flora in the area and the findings of the flora surveys conducted in the Ellendale Mining Lease there appears to be a low probability of this proposal being at variance with Principle (c). The vegetation proposed for clearing is well represented in the area and this clearing proposal would not pose a significant threat to the overall survival of this community type. Of note is a botanical survey of the area conducted by Matiske Consulting Pty Ltd (for the Blina Diamonds proposal situated 5km to the west) that found no priority or Declared Rare flora taxa at that proposed clearing site. The Matiske Consulting report made the observation that eight introduced weed species were found at the Blina Diamonds site and due to the aggressive nature of some of these species it is strongly advised that the proponent implement a vehicle hygiene and cleaning protocol to limit the spread of the weeds within the survey area. Given the close proximity of these two proposals, CALM recommends that the same vehicle hygiene and cleaning protocols be also adopted by Kimberley Diamond Company NL. Provided that the aforesaid recommendation is adopted and the proponent adheres to their commitment (underlined at (c2)) there appears to be a low probability of the proposed clearing to be at variance with Principle (c) (CALM, 2005).

Methodology CALM, 2005
Matiske, 2001

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

Comments Proposal is not likely to be at variance to this Principle

No Threatened Ecological Communities have been recorded in the area proposed for clearing or in adjacent areas. There appears to be a low probability of the proposed clearing to be at variance with Principle (d) (CALM, 2005).

Methodology CALM, 2005
GIS Database:
- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95

(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 of the area is Beard Vegetation Association 760 (Shrublands, pindan; *Acacia tumida* shrubland with scattered low bloodwood & *Eucalyptus setosa* over ribbon and curly spinifex) (Hopkins et al., 2001). There is ~100% of the Pre-European extent of this vegetation type remaining (Shepherd et al, 2001).

The area is located within the IBRA DL Dampierland, which has not undergone significant levels of clearing in the past and generally contains a flora composition typical of the Kimberley Region. There appears to be a low probability of the proposed clearing to be at variance with Principle (e) (CALM, 2005).

Methodology GIS Database: Pre-European Vegetation - DA 01/01
Hopkins 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 likely to be at variance to this Principle

The vegetation to be cleared is not associated with major watercourses or wetlands, although there are some seasonally inundated areas that support locally significant biodiversity and should be avoided when clearing. There is a minor non-perennial watercourse and a small natural perennial pool that exist within the area proposed for clearing.

Methodology GIS Database:
- Hydrography, linear - DOE 1/2/04
- RAMSAR, Wetlands - CALM 21/10/02

(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

As part of the rehabilitation of this area, advice from the EPA should be noted, as follows: 'The final pit angle of 48 degrees is too steep to maximise the ecological potential of the final pit void. Consideration should be made by the proponent towards reducing this slope in the design of the final pit voids and including shallow areas of water near the shore of the resultant lake' (EPA, 2003).

Methodology EPA Advice, 2003

(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 Devonian Reef Conservation Park is located approximately 14km to the South-East of the proposed clearing. Windjana Gorge National Park is situated approximately 20km to the North East. The proposed clearing is sufficiently distanced from these conservation areas so as to cause negligible impact to their environmental values.

Since the clearing is unlikely to impact on The Devonian Reef Conservation Park, or Windjana Gorge National Park, there appears to be a low probability of the proposed clearing to be at variance with Principle (h) (CALM, 2005).

If the clearing activity was to encroach further towards the Devonian Reef Conservation Park there could be a possible impact and the proponent would be expected to carry out fauna surveys to enable assessment of impact (EPA, 2003).

Methodology CALM, 2005
GIS Database: - CALM Managed Lands and Waters - CALM 1/06/04
EPA, 2003

(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 proposed clearing is not expected to degrade water quality. The area for clearing is not in a Public Drinking Water Source Area or in proximity to any mangroves, tidal flats or acid sulphate soil areas.

Environs Kimberley have expressed concern about the impacts on the groundwater, nearby springs and karstic systems in relation to vegetation clearing and ground disturbance (Environs Kimberley, 2005). It should be noted that water allocation licensing will require approval through the Water and Rivers Commission process, via which the impacts on groundwater will be assessed (EPA, 2003).

Methodology EPA, 2003
Environs Kimberley, 2005
GIS database:
- Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
- WIN Surface Water Sites, Other - DEWCP (Current)

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Comments Proposal is not likely to be at variance to this Principle

The region has highly seasonal rain with large rainfall events that can periodically inundate areas of poor drainage. The area proposed for clearing is located at the top of the Lennard River sub-catchment and comprises less than 0.1% of the local catchment so there is unlikely to be exacerbated local flooding from the proposed clearing.

Methodology GIS Database
- Hydrographic Catchments - Subcatchments - 01/07/03

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

Comments

A current Native Title Claim (Bunuba; WAG6133_98) flanking the area proposed for clearing, however no advice was received from the Kimberley Land Council. There is another clearing permit application pending for a nearby parcel of land.

The Environmental Protection Authority set the assessment status as NA-PAG (Not Assessed - Public Advice Given) (EPA, 2003).

The area proposed for clearing does not include any sites listed on the Register of the National Estate or being considered for inclusion in the conservation reserve system (GIS Database).

Methodology GIS Database:
- Native Title Claims - DLI 19/12/04
- Register of National Estate - EA 28/01/03
- Proposed National Parks, FMP - CALM 19/03/03
- Clearing Instruments (DoE)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mining	Mechanical Removal	330	Grant	The proponent will make sure that areas of proposed infrastructure and land clearing will avoid areas of outcropping and seasonal inundation for ecological and practical reasons. It is recommended that Kimberley Diamond Company NL. adopts vehicle hygiene and cleaning protocols.

5. References

Department of Conservation and Land Management (2005) Land Clearing Proposal Advice Environs Kimberley (2005) Submission
EPA Advice (2003) - CRN 189898
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.
Keighery, BJ (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Mattiske Consulting Pty Ltd (2003), Flora and Vegetation Survey, Kimberley Diamond Company NL, Ellendale Diamond Project
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.