Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 896/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Blina Diamonds NL**

1.3. Property details

Property: Mining Lease 04/372
Local Government Area: Shire of Derby – West Kimberley
Colloquial name: Blina Diamonds NL Ellendale 9

1.4. Application

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

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 purpose permit area is located within Beard Vegetation unit 760 : Shrublands, pindan; *Acacia tumida* shrubland with scattered low bloodwood & *Eucalyptus setosa* over ribbon curly spinifex (Shepherd et al., 2001). Mattiske Consulting Pty Ltd was commissioned by the Kimberley Diamond Company to update previous flora and vegetation surveys of the Ellendale Diamond survey area and produced an updated map and report in 2005. This map covers the western half of the purpose permit application area and provides more precise information than the Beard Vegetation Unit mapping. Vegetation surveys for the 2005 report and map were conducted in April 2001 and December 2002 and have been supplemented by specimens collected by the Kimberley Diamond Company. A total of 15 vegetation communities were defined by Mattiske of which three were mapped within the area that is the subject of this permit. These include : **Type A:** Pindan woodland, low open woodland of *Corymbia opaca, Acacia platycarpa* and *Bauhinia cunninghamii* over *Sorghum stipoideum, Fimbristylis pachyptera* and *Sida hackettiana* in loamy sandy soils on lower slopes. **Type D-C-A:** Combination of Vegetation Types C (Twin-leafed Bloodwood Savanna Woodland) and D (Poplar Gum Low Savanna Woodland) and A (Pindan Woodland). Low open woodland of *Eucalyptus bigalerita, Acacia platycarpa* and *Bauhinia cunninghamii* over *Sorghum stipoideum, Fimbristylis pachyptera* and *Sida hackettiana* on loamy sands on lower slopes. **Type H:** Bauhinia Beefwood Savanna Woodland.	This purpose permit application is for an area of up to 11 hectares within a larger area of approximately 815 hectares. The clearing is for ongoing exploration and mining of diamondiferous alluvial channels and will include pitting, costeaning, and bulk sampling.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994) To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).	The vegetation condition assessment is based on Mattiske (2005) which described the vegetation condition surveyed in the Elendale area as varying from very degraded to very good. Mattiske (2005) and Ninox (2003) both noted that the the vegetation within the Ellendale lease area had been subjected to extensive grazing activities and frequent fires. Mattiske noted that the impacts of the proposed mining operations are relatively minor in a local and regional context. Disturbance from previous mining exploration activity was also noted by Mattiske (2005) and several tracks run through the purpose permit application area. Clearing permit CPS 896/2 was granted by the Department of Industry and Resources on 8 June 2006, and is valid from 8 April 2007 to 8 April 2009. The clearing permit authorised the clearing of 11 hectares of native vegetation. An application for an amendment to clearing permit CPS 896/2 was submitted by Blina Diamonds NL on 24 March 2009. The proponent has requested an extension to the duration of clearing permit CPS 896/2 to 30 April 2011. The size of the area and clearing area boundary that was approved to clear under clearing permit CPS 896/2 will remain unchanged.

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 application area is located within the Fitzroy Trough Interim Biogeographical Regionalisation of Australia (IBRA) subregion (GIS Database). The biodiversity values of the Fitzroy Trough IBRA subregion are described by Graham (2001). High species diversity and ecosystem diversity are stated for rainforests patches which are also noted as centres of endemism for the subregion.

No rainforest patches were noted by the vegetation survey and report of Mattiske Consulting Pty Ltd (2005) which covered the broader Ellendale project area and included approximately half of the area under this purpose permit application. A good quality aerial photo of the purpose permit area was provided was Blina Diamonds for this application and no rainforest patches are located within the purpose permit area. The plant communities recorded in the Ellendale area were judged by Mattiske Consulting Pty Ltd (2005) to be well represented in the regional context with no plant communities considered to be of regional or national significance.

Department of Conservation and Land Management advice received (CALM, 2006) stated that based on the level of previous disturbance due to fire, grazing and exploration and the well represented nature of the vegetation in a regional context as recorded by Mattiske Consulting Pty Ltd (2005), this proposal is unlikely to represent an area of high biodiversity value in a local or regional context.

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

Methodology

CALM (2006)
Graham (2001)
Mattiske Consulting Pty Ltd (2005)
GIS Database
- Interim Biogeographic Regionalisation of Australia

(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

The fauna of the Ellendale area has been the subject of a number of wildlife surveys and reports since 1980 which have been analysed and their findings discussed in a report produced by Ninox Wildlife Consulting (2003). Surveys in the Ellendale area were conducted in May 1980, May 2001 (sampling some of the 1980 sites) and December 2002. Three of the sites surveyed in 2001 (KD 03, KD 04 and OP 2) are located within the areas subject to this purpose clearing permit. A further four sites (KD 02, OP1, OP 3-1, OP3-3) are located in close proximity to the area subject to this permit and in similar vegetation types. Ninox Wildlife Consulting notes in their report that the vegetation in the vicinity of site KD04 had been severely degraded between the 2001 and 2002 survey due to cattle activity with a lack of grass cover, dead or dying shrubs and severe soil disturbance from cattle hooves.

In their 2003 report Ninox Wildlife Consulting state that 20 rare or Priority listed vertebrate fauna species are known or could potentially occur in the habitats of the Ellendale area. These consist of 11 mammals, three reptiles and six bird species.

Of the 20 species listed, one Priority listed mammal, the Lakeland Down Mouse (*Leggadina lakedownensis*) (Priority 4) was recorded at sites KD03 and KD04 in 2001 and two Priority listed bird species the Australian Bustard (*Ardeotis australis*) (P4) and Pictorella mannikin (*Heteromunia pectoralis*) (Vulnerable) were also recorded at both sites in 2001/2002.

The Lakeland Down Mouse tends to occur in areas with clay based soils supporting native grasses (Ninox Wildlife Consulting, 2003). Ninox Wildlife Consulting (2003) stated in their report that based on the extensive areas of remaining habitat suitable within and outside of the Ellendale project area the impact of the proposed mining activities is unlikely to be significant to the Lakeland Down Mouse.

Similarly the impact of mining on the Australian Bustard was judged by Ninox Wildlife Consulting (2003) to be minimal and that no specific management measures were required beyond generalised impact reduction measures outlined in their report.

The potential impacts of mining on the Pictorella Mannikin were not discussed in the Ninox Wildlife Consulting 2003 report. The Action Plan for Australian Birds (Garnett & Crowley, 2000) list the threatening processes to that species as changes to fire regimes and stock grazing leading to an increased incidence of air sac mite which is a potential indicator of environmental stress (the same concerns apply to the Gouldian Finch - *Erythrura gouldiae*). Recommended actions under that action plan do not include any actions in relation to land clearing or specific habitat protection.

Ninox Wildlife Consulting (2003) listed a number of specific management measures that relate to Declared or

priority listed fauna that although not recorded within the areas subject to this application are listed as potentially occurring in the Ellendale Project area.

The minimisation of impacts to rocky habitats is listed for the Rock Ringtail Possum (*Petropseudes dahli*) (P3) and three listed bat species that use rocky areas as roosting habitats Ghost Bat (*Macroderma gigas*) (P4), Orange Leaf-nosed Bat (*Rhinonycteris aurantius*) (Declared Threatened Fauna) and Yellow-lipped Bat (*Vespedalus douglasorum*) (P2). No rocky habitats were reported to occur in the area by Ninox Wildlife Consulting (2003) or Mattiske Consulting Pty Ltd (2005).

In relation to the potential for the Northern Marsupial Mole (*Notoryctes caurinus*) (Declared Threatened Fauna) to occur within the Ellendale area, the clearing of vegetation on deep red sands should be minimised and access tracks should where possible follow existing roads and tracks.

The Gouldian Finch (*Erythrura gouldiae*) (Declared Threatened Fauna) was recorded in the 1980 study of the Ellendale area but not during the more recent 2001 and 2002 surveys. The decline of this species is linked to changes in fire regimes and native grass seed availability as well as increased mortality from diseases due to lower food supply levels. Ninox Wildlife Consulting (2003) state that the development of the mine is unlikely to significantly impact on that species given the large areas of suitable habitat present in the general area. Ninox Wildlife Consulting (2003) further recommends that clearing be kept to a minimum and where possible access tracks should follow existing access track routes.

The Bilby (*Macrotis lagotis*) is a Declared Threatened Fauna species that is most likely to occur within *Acacia* shrublands on deep red sands in the Ellendale project area (Ninox Wildlife Consulting, 2003). A relatively recent but abandoned burrow system was located at site KD05 in December 2002 to the south of the area subject to this purpose permit. The impact of the mine in the Ellendale project area was judged unlikely by Ninox Wildlife Consulting to add significantly to the existing impacts of cattle grazing, feral cat predation and changed fire regimes that have contributed to the decline of that species. General impact reduction measures were deemed sufficient to address the impact of mining to that species.

In its assessment of the Fitzroy Trough IBRA subregion biodiversity Graham (2001) listed Riparian zones as being significant by providing dry season refuges. The riparian vegetation within the purpose permit area has been degraded by cattle grazing. Some vegetation monitoring points downstream of the Ellendale 9 pit within the purpose permit area were established in January 2005. Seventeen herb and grass species were found within those quadrats with the most common species being Buffel Grass (*Cenchrus ciliaris*), a weed introduced for pasture production. Pictures of the vegetation taken in April 2005 show creeklines dominated by grasses with no obvious differences in height or species composition closer to the creekline which may indicatew dominance by Buffel Grass (Kimberley Diamond Company, 2005). Assuming that those quadrats are representative of the vegetation of the creeklines in the purpose permit area, the value of any riparian vegetation within the purpose permit area as a dry season refuge may be minimal.

Department of Conservation and Land Management advice received (CALM, 2006) stated that: having reviewed the associated fauna survey summary provided with the application and DoIR's assessment of this Principle, it would appear that this proposal is unlikely to impact on habitat significant for native fauna.

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

Methodology

CALM (2006)
Garnett & Crowley (2000)
Graham (2001)
Kimberley Diamond Company (2005)
Mattiske Consulting Pty Ltd (2005)
Ninox Wildlife Consulting (2003)

(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

The closest known Declared Rare Flora (DRF) in the region is the DRF *Eucalyptus mooreana* located approximately 65 kilometres to the east of the areas applied to clear (GIS Database).

Previous botanical surveys have been undertaken in the Ellendale area by Dames and Moore in 1981 for the CRA exploration Ashton Joint Venture. More recent surveys in the area have been carried out by Mattiske Consulting for the Kimberley Diamond Company in April 2001 (wet season survey) and December 2002 (dry season survey). The information collected has been further updated with botanical records from the Kimberley Diamond Company. A new updated vegetation map and report for the Ellendale Diamond Project was produced in May 2005 by Mattiske Consulting Pty Ltd (2005). The map produced covers the western half of the purpose permit area applied for as well as large areas to the North and South.

No DRF or Priority Flora (P1 to P3) were located in those surveys (Mattiske Consulting Pty Ltd, 2005).

Based on the absence of DRF or Priority Flora records from the extensive vegetation surveys that have been carried out in the Ellendale project area it is unlikely that DRF or Priority Flora occur in the areas subject to this clearing permit application.

Department of Conservation and Land Management advice received (CALM, 2006) stated that: having regard to the previous flora survey information, CALM concurs with DoIR's assessment report findings that this proposal is unlikely to be at variance with this principle.

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

Methodology CALM (2006)
Mattiske Consulting Pty Ltd (2005)
GIS Database
- Declared Rare and Priority Flora List

(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**

No known Threatened Ecological Communities (TEC's) occur within the areas proposed to be cleared (GIS Database). The closest known TEC is the Assemblages of Big Springs organic mound springs located more than 100 kilometres from the proposed clearing areas (CALM TEC Database, 2006). No plant communities within the Ellendale Diamond Project Area were found to be of national or regional significance by Mattiske Consulting Pty Ltd (2005).

None of the ecosystems found within the purpose permit area are listed as ecosystems at risk in the assessment of the Fitzroy Trough IBRA subregion biodiversity values by Graham (2001).

Based on the lack of known records of TEC's from the local area, defined as a 50km radius from the proposed clearing, Department of Conservation and Land Management advises that this proposal is unlikely to be at variance with this Principle (CALM, 2006).

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

Methodology CALM (2006)
CALM TEC Database (2006)
Graham (2001)
Mattiske Consulting Pty Ltd (2005)
GIS Database
-Threatened Ecological Communities

(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 at variance to this Principle**

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002; EPA, 2000). The vegetation of the site is classified as Beard Vegetation Association 760 (Hopkins et al., 2001) which has 100 % of the pre-European extent remaining (Shepherd et al. 2001) (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves
IBRA Bioregion – Dampierland	8,345,180	8,316,461	~99.7%	Least Concern	~1.0%
Beard veg assoc. – State					
760	270	270	~100.0%	Least Concern	~0.0%
Beard veg assoc. – Bioregion					
760	270	270	~100.0%	Least Concern	~0.0%

* Shepherd et al. (2001) updated 2005
** Department of Natural Resources and Environment (2002)

Approximately 0.5 % of Beard Vegetation Type 760 is protected in IUCN class I-IV reserves (Shepherd et al.,

2001). The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for Beard vegetation association 760. The Vegetation Type 152 is expected to remain at its current pre-European extent and that the proposed clearing will not reduce the extent of these vegetation types to less than 30 % in the bioregion it is of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment 2002).

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

Methodology Department of Natural Resources and Environment (2002)
EPA (2000)
Hopkins et al. (2001)
JANIS Forests Criteria (1997)
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 at variance to this Principle**

There is a minor non-perennial watercourse located in the area subject to this clearing permit (GIS Database). Vegetation survey plots located on the edge of that creek within the purpose permit area by the Kimberley Diamond Company (2005) indicate that the area in the vicinity of the creek is dominated by the introduced weed Buffel grass. No riparian vegetation types were identified by Mattiske Consulting Pty Ltd (2005).

Based on the above, the proposed clearing is at variance to this Principle. However that watercourse has not been identified as having significant environmental values by Ninox Wildlife Consulting (2003) or Mattiske Consulting Pty Ltd (2005).

Methodology Kimberley Diamond Company (2005)
Mattiske Consulting Pty Ltd (2005)
Ninox Wildlife Consulting (2003)
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**

Advice received from the Commissioner for Soil and Land Conservation in relation to the assessment of this principle stated:

The area to be cleared in the vicinity of Ellendale Pipe 9 Mine is mapped as Yeeda Land System (Speck et. al., 1964). This is described as being deep red or yellow sandplain supporting pindan vegetation. This vegetation is quite resilientand regenerates quite readily after disturbance. The land is generally quite flat and therefore not particularly erosion prone (DAWA, 2005).

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

Methodology DAWA (2005)
Speck et. al. (1964)

(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 Napier, Oscar and Geikie Ranges area, listed as an Indicative Place on the Register of National Estate, is located within 10-15km of the proposed clearing (CALM, 2006; GIS Database).

The Devonian Reef Conservation Park is located approximately 10km to the South-East of the proposed clearing. Windjana Gorge National Park is situated approximately 16km 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 being at variance with Principle (h) (CALM, 2005). CALM advice (2006) stated that: CALM's previous advice for CPS 410/1 is still applicable for the consideration of this application.

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

Methodology CALM (2005)
CALM (2006)
GIS Database
- CALM Managed Land and Waters
- Clearing Regulations Schedule 1 Areas

(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 (GIS Database) or in proximity to any mangroves, tidal flats or acid sulphate soil areas.

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

Methodology DoE Decision Report for permit 410/1 (2005)
GIS Database
-Public Drinking Water Supply Areas

(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 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 (GIS Database) so there is unlikely to be exacerbated local flooding from the proposed clearing.

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

Methodology GIS Database
- Hydrographic Catchments - Subcatchments

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

Comments

Clearing permit CPS 896/2 was granted by the Department of Industry and Resources on 8 June 2006, and is valid from 8 April 2007 to 8 April 2009. The clearing permit authorised the clearing of 11 hectares of native vegetation. An application for an amendment to clearing permit CPS 896/2 was submitted by Blina Diamonds NL on 24 March 2009. The proponent has requested an extension to the duration of clearing permit CPS 896/2 to 30 April 2011. The size of the area and clearing area boundary that was approved to clear under clearing permit CPS 896/2 will remain unchanged.

There are no known Aboriginal sites 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 and Conservation 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.

Blina Diamonds do not hold any licences for taking water on Mining Lease 04/372. Both Blina Diamonds and the Kimberley Diamond Company have been requested by the Department of Environment to install monitoring bores at various locations in the Ellendale vicinity to monitor the effects (if any) of their drawdown on the springs and groundwater dependent ecosystems. Department of Environment (DoE) advice received on the 19th October 2005 states that: there is unlikely to be an issue with clearing the area proposed under this permit from a water licensing point of view but that DoE would need more information in order to accurately determine whether or not a water licence would be granted if required (DoE, 2005).

Methodology DoE (2005)
GIS Database
-Aboriginal Sites of Significance
-Native Title Claims

4. Assessor's comments

Comment

The amended proposal has been assessed against the Clearing Principles, and the amended proposal is not at variance to Principle (e), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j) and is at variance to Principle (f).

It is recommended that should the amendment be granted, conditions be imposed on the permit for the purposes of record keeping and permit reporting.

5. References

CALM (2005) Advice given for clearing permit 410/1 overlapping permit 896/1 in the Department of Environment Decision Report for clearing permit 410/1.

CALM (2006) Land Clearing Proposal Advice. Advice to the Native Vegetation Assessor, DoIR, Email advice received on 9th February 2006 in relation to principles a, b, c, d and h.

Department of Environment (2005) Decision report for Clearing permit 410/1. Granted by DoE on 30th March 2005.

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.

DoE (2005) Advice received on 19/10/2005 by the Native Vegetation Assessor, DoIR, from DoE Kununurra office in relation to water and EP licensing.

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.

Graham G (2001) Dampierland 1 (DL1-Fitzroy Trough subregion) pp 170-178 in A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002. Report published by the Department of Conservation and Land Management, Western Australia.

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.

Kimberley Diamond Company (2005) Vegetation Plots Survey at E9 Creek. Unpublished report by the Kimberley Diamond Company.

Mattiske Consulting Pty Ltd (2005) Flora and Vegetation Survey Kimberley Diamond Company NL Ellendale Diamond Project. Unpublished report prepared by Mattiske Consulting Pty Ltd for the Kimberley Diamond Company NL, dated May 2005.

Ninox Wildlife Consulting (2003) Ellendale Diamond Project Report. Unpublished report by Ninox Wildlife Consulting, dated March 2003.

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 (updated 2005).

Speck, N.H., Wright, R.L., Rutherford, G.K., Fitzgerald, K., Thomas, F., Arnold, Jennifer M., Basinski, J.J., Fitzpatrick, E.A., Lazarides, M. and Perry, R.A. (1964) General report on lands of the West Kimberley area, W.A. Land Research Series No. 9, CSIRO.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DMP	Department of Mines and Petroleum
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
IBRA	Interim Biogeographic Regionalisation for Australia.
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P2 **Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P3 **Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.

P4 **Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.

R **Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

X **Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1 **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.

Schedule 2 **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.

Schedule 3 **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.

Schedule 4 **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past

range; or

(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:

(a) is not critically endangered; and

(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:

(a) is not critically endangered or endangered; and

(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.