



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3850/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Rey Kimberley Pty Ltd**

1.3. Property details

Property: Exploration Licence 04/1943
Local Government Area: Shire of Derby-West Kimberley
Colloquial name: Camballin Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.66		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

Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. The following Beard Vegetation Association is located within the application area (GIS Database):

706: Grasslands, tall bunch grass savanna, Mitchell & ribbon/blue grass.

Clearing Description

Rey Kimberley Pty Ltd has applied to clear up to 0.66 hectares within an application area of approximately 0.93 hectares (GIS Database). The application area is located approximately 105 kilometres south-east of Derby (GIS Database).

The purpose of the application is for mineral exploration. The application includes the construction of 4 drill pads, sumps and tracks. Clearing will be by mechanical means.

Vegetation Condition

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

to

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation condition was determined by the assessing officer using aerial photography and photographs.

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 within the application area has been mapped as Beard Vegetation Association 706: Grasslands, tall bunch grass savanna, Mitchell & ribbon/blue grass (GIS Database). The native Emu Bush (*Eremophila longifolia*) has invaded parts of the floodplain and its presence may affect the suitability of the area as a habitat for some waders and waterbirds (DEC, 2009).

The application area is within the Camballin Floodplain which is significant as water bird habitat (DEC, 2009). A total of 67 waterbird species have been recorded on the Camballin floodplain, including 20 species listed under international migratory treaties (DEC, 2009).

Parts of the application area have already been degraded by the Camballin irrigation scheme. Although the area supports a high level of avian diversity, the clearing of 0.66 hectares is not likely to have a significant impact on diversity on the Camballin Floodplain.

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

Methodology

DEC (2009)
GIS Database
- Pre-European Vegetation

(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

According to available databases, there are records of four conservation significant fauna species within 15 kilometres of the application area (DEC, 2010):

- West Kimberley Rock-wallaby (*Petrogale lateralis subsp. (WAM M15135)*) – Vulnerable;
- Prince Regent Hardyhead (*Craterocephalus lentiginosus*) – Priority 2;
- Spectacled Hare-wallaby (*Lagorchestes conspicillatus leichardti*) – Priority 3; and
- Freshwater Sawfish (*Pristis microdon*) – Priority 3.

Based on their known habitats, both wallabies are not expected to be found within the application area (Van Dyck and Strahan, 2008). Being aquatic species, the Prince Regent Hardyhead and Freshwater Sawfish are also not expected to be found within the application area (Larson et al., 2006).

The Camballin Floodplain has been recognised as being significant as water bird habitat (DEC, 2009). The Floodplain regularly supports 20,000 waterfowl and is a major post-breed refuge for waterbirds in the Kimberley (DEC, 2009). It is also a major migratory stop-over point for many species and is considered internationally significant for the Australian Pratincole (*Stiltia isabella*) (Department of Environment, Water, Heritage and the Arts, 2010).

Whilst the Camballin Floodplain is significant for waterfowl, the clearing of 0.66 hectares is not expected to have a significant impact on their habitat.

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

Methodology DEC (2009)
DEC (2010)
Department of Environment, Water, Heritage and the Arts (2010)
Larson et al. (2006)
Van Dyck and Strahan (2008)

(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

According to available databases, there are no records of Declared Rare Flora (DRF) within the application area (GIS Database). The nearest record of DRF is over 100 kilometres from the application area (GIS Database). No flora survey has been conducted of the application area.

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

Methodology 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

According to available databases, there are no known Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest record of a TEC is over 100 kilometres from the application area (GIS Database). No vegetation survey has been conducted over the application area.

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

Methodology 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 at variance to this Principle

The application area falls within the Dampierland Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.66% of the Pre-European vegetation remains (see table) (GIS Database, Shepherd, 2007).

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

706: Grasslands, tall bunch grass savanna, Mitchell & ribbon/blue grass.

According to Shepherd (2007) over 99% of this Beard vegetation association remains at both a state and bioregional level. Therefore the area proposed to be cleared does not 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 IUCN Class I-IV Reserves
IBRA Bioregion – Dampierland	8,345,180	8,316,459	~99.66	Least Concern	1.03
Beard veg assoc. – State					
706	288,443	287,133	~99.55	Least Concern	0.12
Beard veg assoc. – Bioregion					
706	272,803	272,052	~99.72	Least Concern	0.13

* Shepherd (2007)

** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2007)
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 at variance to this Principle

According to available databases, the application area does not contain any watercourses (GIS Database). However, the application area is within an area subject to inundation, namely the Camballin Floodplain (GIS Database). The application area is also within five kilometres of Le Lievre Swamp which is listed on the Directory of Important Wetlands in Australia (Environment Australia, 2001; GIS Database).

Given the proposed clearing involves clearing vegetation on the floodplain adjacent to Le Lievre Swamp, it will result in the clearing of vegetation associated with a wetland. However, the main threats to the maintenance of ecological processes and functions of the wetland are most likely to be impacts from pastoral activities and agriculture (DEC, 2009). Cattle grazing has the potential to increase the number of weed species present and allow soil erosion to occur (DEC, 2009). The construction of levees to contain flood flows for irrigation is likely to be having a negative effect on the hydrology and ecology of the Camballin Floodplain (DEC, 2009).

Mining has also been identified as a potential threat to the floodplain (DEC, 2009), however, the clearing of 0.66 hectares for mineral exploration is likely to have a negligible impact compared to the impacts posed by agricultural activities.

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

Methodology DEC (2009)
Environment Australia (2001)
GIS Database
- ANCA Wetlands
- 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

According to available databases, the application area is comprised of the Djada land system (GIS Database).

This land system is characterised by active flood plains with extensive back plains of cracking clays, grasslands and grassy woodlands (Speck et al., 1964). The soils of the application area are mapped as CC49: Active flood-plains, many channels, and some broad low ridges: chief soils are grey and brown clays (Northcote et al., 2001).

The application area is within the Camballin Floodplain and thus is seasonally inundated. The clearing of native vegetation may decrease the ability of the land to drain water from the surface of the land (chiefly clay soils), however, given the small scale of clearing it is not expected to be appreciable.

Information from DAFWA (2008) indicates that water in the local area has a low total soluble salt content (100 milliSiemens per metre) and therefore, a significant build up of salt in the soil is not expected. DAFWA (2008) also suggests that the risk of water erosion in the local area is low given that the floodplain soils are extensive, slopes are minimal and floodwater is very slow moving.

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

Methodology DAFWA (2008)
Northcote et al. (2001)
Speck et al. (1964)
GIS Database
- Rangeland Land System Management

(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 application area is located within the Camballin Floodplain which has been placed on the Register of National Estate for its significance as migratory waterbird habitat (Department of Environment, Water, Heritage and the Arts, 2010; GIS Database).

Whilst the proposal will result in the clearing of native vegetation within a conservation area, given the small scale of clearing (0.66 hectares) the impacts on its environmental values are likely to be minimal.

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

Methodology Department of Environment, Water, Heritage and the Arts (2010)
GIS Database
- Register of National Estate

(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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The application area is located within the Camballin Floodplain and is seasonally inundated (GIS Database).

The wetlands of the nearby Le Lievre Swamp System (5 kilometres east) are surface water fed (DEC, 2009). The Le Lievre Swamp is known to discharge to the groundwater aquifer when full, but does not receive groundwater recharge during the dry season (Lindsay and Commander, 2005).

The biggest threat to the hydrology of the Camballin Floodplain is levees and irrigation infrastructure that has resulted in lasting land degradation and altered flood regimes (Vernes, 2007). Parts of the application area have already been disturbed by the Camballin irrigation scheme. Given the significant impacts posed by irrigation activities, the clearing of 0.66 hectares is not likely to have an impact on surface or groundwater quality in the area.

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

Methodology DEC (2009)
Lindsay and Commander (2005)
Vernes (2007)
GIS Database
- Hydrology, linear
- Public Drinking Water Source Areas (PDWSA's)

(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 application area is located on the Camballin Floodplain and therefore, is seasonally inundated (GIS

Database). Given the Camballin Floodplain is over 44,500 hectares, the proposed clearing of 0.66 hectares is not likely to exacerbate the incidence or intensity of flooding (GIS Database).

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

Methodology GIS Database
- Hydrology, linear
- Register of National Estate

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

Comments

There is one native title claim over the application area under application; WC99/025 (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. However, the mining tenement 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*.

According to available databases, there are no registered 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 proposed works.

The clearing permit application was advertised on 9 August 2010 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology GIS Database
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), may be at variance to Principles (b) and (h), is not likely to be at variance to Principles (a), (c), (d), (g), (i) and (j) and is not at variance to Principle (e).

5. References

- DAFWA (2008) Land Degradation Assessment Report. Advice to the Assessing Officer, Department of Environment and Conservation for Clearing Permit Application 2286/1. Department of Agriculture and Food Western Australia.
- DEC (2009) Resource Condition Report for a Significant Western Australian Wetland: Le Lievre Swamp (Iljamalkarda). Prepared for the Inland Aquatic Integrity Resource Condition Monitoring (IAI RCM) Project, Department of Environment and Conservation, Perth, Western Australia.
- DEC (2010) NatureMap - Department of Environment and Conservation and Western Australian Museum. <http://naturemap.dec.wa.gov.au/default.aspx> Accessed 20 August 2010.
- Department of Environment, Water, Heritage and the Arts (2010) Australian Heritage Database Place Details: Camballin Floodplain, Fitzroy River Rd, Camballin, WA, Australia. Available online at: http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=place_name%3Dcamballin%2520floodplain%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=18366 Accessed 20 August 2010.
- 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.
- Environment Australia (2001) A Directory of Important Wetlands in Australia, Third Edition. Environment 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.
- Larson, H., Stirrat, S. and Woinarski, J. (2006) Threatened Species of the Northern Territory: Freshwater Sawfish *Pristis microdon*. Prepared for the Department of Natural Resources, Environment and the Arts, Northern Territory.
- Lindsay, R.P. and Commander, D.P. (2005) Hydrogeological Assessment of the Fitzroy Alluvium, Western Australia. Department of Water, Hydrogeological Record Series HG 16.
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- Shepherd, D.P. (2007) 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.

- Speck, N.H., Wright, R.L. and Rutherford, G.K. (1964) General Report on Lands of the West Kimberley Area, W.A. Land Research Series No. 9. Commonwealth Scientific and Industrial Research Organisation (CSIRO), Melbourne.
- Van Dyck, S. & Strahan, R. (eds.) (2008) The Mammals of Australia. Third Edition. New Holland Publisher (Australia) Pty Ltd, Sydney.
- Vernes, T. (2007) Establishing Priorities for Wetland Conservation and Management in the Kimberley. Unpublished report by Tanya Vernes for WWF Australia.

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, Western Australia.
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.
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- 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 taxa 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 taxa 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 taxa 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.