



1. Application details

1.1. Permit application details

Permit application No.: 570/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: James Arthur Millar

1.3. Property details

Property: M9/90

Local Government Area: Shire Of Carnarvon

Colloquial name: Scrubby Hill M09/90

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
11.25		Mechanical Removal	Extractive Industry

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 308: Mosaic: Shrublands; Acacia sclerosperma sparse scrub/succulently steppe; saltbush and bluebush.	The vegetation under notice is open Acacia shrubland dominated by Acacia sclerosperma and A. tetragonophylla. Santalum spicatum is present in significant numbers. The groundcover is made up of grasses and annuals including Maireana brevifolia, Maireana brevifolia, Atriplex spp. and grasses.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The site showed some signs of disturbance due to its grazing history. The condition of the vegetation has improved condition after being classed as severely degraded in the 1980 Rangelands survey. The vegetation structure was intact with no evidence of grazing and a high level of ground cover.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**
The area under application falls within the Southern Carnarvon Basin (Carnarvon Bioregion); an area recognised for its biodiversity. Mining tenement 09/90 hosts a variety of native vegetation including Santalum spicatum, Acacia tetragonophylla, A. sclerosperma, Maireana brevifolia, Atriplex spp., and annual grasses. The site showed signs of disturbance, though the vegetation has improved condition after being classed as severely degraded in the 1980 Rangelands survey. The vegetation under consideration is representative of the vegetation type that is well represented in the area. This proposal is therefore not likely to be variance to this Principle.

Methodology GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.
Site visit, DoE Officer, 2005.
Burbidge et. al. (2000)
Agriculture Western Australia (2005)

(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 Carnarvon Basin is particularly rich in reptiles and aquatic invertebrates. Given the representation of the vegetation association in the region, it is unlikely that this area of vegetation provides significant habitat for fauna species in the local area. Therefore, this proposal is not likely to be at variance to this Principle.

Methodology A.H. Burbidge et. al. (2000)

A.H. Burbidge (2001)
Site visit, DoE Officer, 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 priority flora species have been recorded within the area under application. This proposal is unlikely to be at variance to this Principle.

Methodology GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03.
Site visit, DoE Officer, 2005.
Florabase, 2005.
CALM's Threatened and Priority Flora Database [The comprehensiveness of the database is dependent on the amount of survey carried out in the area and does not necessarily represent a comprehensive listing (CALM, 2005)].

(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**
The Threatened Ecological Community (TEC) data base did not include the vegetation affected by this application, therefore this proposal is not likely to be at variance to this Principle.

Methodology GIS Databases: Threatened Ecological Communities - CALM 15/07/03

(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**
Bioregion is predominantly uncleared, though degraded through the effects of overgrazing. 99% of the pre-European extent of this vegetation remains, of which 0.3% is in conservation reserves. 0.1% of the vegetation type is in pastoral leases managed by CALM. This proposal is therefore at not at variance to this Principle.

Pre-European	Current area (ha)	Remaining extent (ha)	Conservation %*	% in reserves / status**	CALM-managed land
IBRA Bioregion - Carnarvon available	8,523,963	8,523,963	~100%	Least concern	No information
Shire - Carnarvon	No information available				
Beard veg type - 308	491,901	486,990	~99%	Least concern	0.4%

*Shepherd et al. 2001

**Department of Natural Resources and Environment 2002.

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.
Shepherd et al, 2001.
Department of Natural Resources and Environment, 2002

(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 area to be cleared is on the Northern section of the Gascoyne River Floodplain. A drainage line occurs through the proposed area. Flows in the area are sporadic and short lived and there are no factors identified that are likely to affect the environmental values of the floodplain or groundwater dependant ecosystems. This proposal is therefore unlikely to be at variance to this Principle.

Methodology GIS Databases: Hydrography, linear - DoE 01/02/04, Hydrographic Catchments (Basins and Catchments) - DoE 03/04/03.
Site visit, DoE Officer, 2005.
Department of Environment 2005

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

Comments **Proposal is not likely to be at variance to this Principle**
The land was described by a 1992 Department of Agriculture Land Resources Study as being sub-unit SB1 of the Sable land system. The soil of this sub-unit is described as alluvial plain underlain by limestone; calcareous red duplex and calcareous gradational soils.
The land system has clay loam subsoils contain moderately high to extreme levels of salt and an inherently

poor structure. They have a high risk of soil structure decline and a moderate to high risk of inundation or prolonged waterlogging.

The process of excavation could increase the risk of off site water erosion but this is manageable with implementation of management and rehabilitation techniques. The removal of this vegetation in this proposal is therefore unlikely to increase on, or off site land degradation.

Methodology Department of Agriculture (1992).
Site visit, DoE Officer, 2005
DAWA, 2005.

(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 at variance to this Principle

There is no conservation areas near the proposed site. Therefore this proposal is not at variance to this Principle.

Methodology GIS Databases - CALM Regional Parks - CALM 12/04/02, WRC Estate - WRC 05/99, CALM Managed Lands & Waters - CALM 01/06/04, Proposed National Parks FMP-CALM 19/03/03, Register of National Estate - EA 28/01/03
Site visit, DoE Officer, 2005.

(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 at variance to this Principle

There is a limited storage of surficial groundwater in the area and no current usages. The artesian aquifer is confined and very deep (600 m), and therefore unlikely to be affected by the proposal. No potential impacts on the groundwater resource have been identified, therefore this proposal is not at variance to this Principle.

Methodology Department of Environment (2004)

(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 proposed site is in an area that is prone to flooding during Gascoyne River flood events. No issues were identified with the proposal as it is unlikely to affect flood levels or duration. The modelling completed for the proposed Carnarvon Flood Mitigation works shows that there will be an overall decrease in flood levels at this location. This proposal is unlikely to be at variance to this Principle.

Methodology Department of Environment 2005.
Sinclair Knight Mertz 2002.
Site visit, DoE Officer, 2005

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

Comments

The proposal is on vacant crown land within the Shire of Carnarvon. There are no competing land uses in the area. The Shire of Carnarvon has stated that they have no objection to the application.

Methodology Western Australian Spatial Cadastral Database (March 2004) - DLI Metadata

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Extractive Industry	Mechanical Removal	11.25	Grant	The assessable criteria have been addressed. An objection was raised by the Yamatji Land and Sea Council stating that to approve the application would not be in accordance with EPA's clearing principles as it is an environment associated with a watercourse or wetland. The assessing officer has examined the available information and determined that there is no significant risk given the size and location of the of the application. The assessing officer therefore recommends that the permit should be granted.

5. References

Beard, J.S. (1976). Pilbara. Explanatory Notes to Sheet 5. 1:1 000 000 Vegetation Series. Vegetation Survey of Western Australia. University of WA Press.
Burbidge, A.H. , Harvey, M.S. and McKenzie, N.L. (2000). Biodiversity of the southern Carnarvon Basin. Records of the Western Australian Museum, Supplement No. 61.

Department of Conservation and Land Management. 2001. Companion to Biodiversity of the southern Carnarvon Basin.

Department of Agriculture (1992). Land Resources study of the Carnarvon Land Conservation District. Land Resources Series No. 9. August 1992.

Department of Agriculture (2003). Lower Gascoyne Land Resources Survey. Land Resources Series No. 17. June 2003.

Department of Environment (2005) Site Visit Report. DoE TRIM ref CN850.

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.

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

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

Sinclair Knight Mertz. 2002. Lower Gascoyne River, Carnarvon Floodplain Management Study. Volume 1. Report prepared for the Water and Rivers Commission.