



1. Application details

1.1. Permit application details

Permit application No.: 470/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Carnarvon

1.3. Property details

Property:

Local Government Area: Shire Of Carnarvon & Shire Of Upper Gascoyne
Colloquial name: Road Reserves between Carnarvon and Gasgoyne Junction

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
80		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 182: Low woodland; mulga & bowgada (<i>A. ramulosa</i>).	The area under application is a linear tract of vegetation in an otherwise uncleared landscape. The vegetation to be cleared is open Acacia shrubland dominated by <i>Acacia sclerosperma</i> with <i>A. xiphophylla</i> , <i>Hakea preissii</i> , <i>Eremophila pterocarpa</i> interspersed. The understorey consists of <i>Stylobasium spathulatum</i> , <i>Ptilotus obovatus</i> and numerous grasses and annuals (DoE 2005). The area to be cleared is unaltered except for the effects of grazing. This has resulted in the selected removal of understorey species and grasses, damage to the lower sections of the larger shrubs and timber has been knocked down by stock. There have been recent rains and there was a medium density of germinants including <i>Acacia</i> spp. and annuals (DoE 2005).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The description of the vegetation under application was obtained after a site visit on 17th May 2005 (DoE TRIM ref GD507) and photographs provided by applicant (DoE TRIM ref GD519).
Beard vegetation association 186: Shrublands; <i>Acacia sclerosperma</i> & <i>A. victoriae</i> open scrub.			
Beard vegetation association 265: Low woodland; <i>Acacia sclerosperma</i> & <i>A. victoriae</i> .			
Beard vegetation association 267: Succulent steppe with open scrub; scattered <i>Acacia sclerosperma</i> and <i>A. victoriae</i> over saltbush & bluebush.			
Beard vegetation association 281: Shrublands; mulga & bowgada open scrub.			
Beard vegetation association 282: Shrublands; <i>Acacia sclerosperma</i> & <i>A. victoriae</i> sparse scrub.			
Beard vegetation association 308: Mosaic: Shrublands; <i>Acacia sclerosperma</i> sparse scrub / Succulent steppe; saltbush & bluebush.			

Beard vegetation
association 320:
Shrublands; bowgada &
Acacia victoriae scrub.

Beard vegetation
association 321: Mosaic:
Shrublands; Acacia
sclerosperma and
bowgada scrub / Succulent
steppe; saltbush &
bluebush.

Beard vegetation
association 342: Mosaic:
Low woodland; waterwood
/ Shrublands; Acacia
sclerosperma & bowgada.

Beard vegetation
association 3432: Mosaic:
Low woodland; waterwood
/ Shrublands; Acacia
sclerosperma, A. victoriae
& A. subtressarogona
scrub.

(Hopkins et al. 2001,
Shepherd et al. 2001).

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 Carnarvon Bioregion; a region recognised for its biodiversity. The vegetation to be cleared is open Acacia shrubland dominated by *Acacia sclerosperma* with *A. xiphophylla*, *Hakea preissii*, and *Eremophila pterocarpa* interspersed. The understorey consists of *Stylobasium spathulatum*, *Ptilotus obovatus* and numerous grasses and annuals. The proposal covers eleven Beard vegetation association types, which represents the level of biodiversity in the area. The area to be cleared is unaltered except for the effects of grazing. This has resulted in the selected removal of understorey species and grasses, damage to the lower sections of the larger shrubs and timber has been knocked down by stock. There have been recent rains and there was a medium density of germinants including *Acacia* spp. and annuals noted during a recent site visit. (DoE, 2005) The proposal is to clear a linear strip of vegetation adjacent to the road reserve, which is unlikely to be of greater biodiversity than the surrounding uncleared landscape and conservation areas. Therefore the proposal is unlikely to be at variance to this Principle.

Methodology Site visit (17th May 2005)
GIS Databases:
- Interim Biogeographic Regionalisation of Australia-EA 18/10/00.

(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**

No fauna survey has been undertaken. During the site visit it was noted that there were Gilberts dragons present (*Amphibolurus gilberti*) and numerous species of passerines as indicated by the high level of calls. Claypans in the area are host to a wide range of short lived aquatic species such as shield shrimps (*Triops australiensis*), water fleas (*Daphnia* sp), and multiple copepod and ostracod species (DoE, 2005). CALM advise there is a likelihood of the area under application of providing a habitat for two priority one species and two priority 4 species within a 50km radius, however insufficient site information and fauna records are available to make a comprehensive assessment of the potential impact of the proposed clearing on any significant fauna habitat found in the area proposed to be cleared. Providing the proponent restricts clearing to the minimum amount required and the area is rehabilitated, CALM advises there is no evidence to suggest that this proposal is likely to have a significant long term impact on habitat and is therefore not likely to be at variance to this Principle (CALM 2005).

Methodology Site visit (17th May 2005)
CALM (2005)
CALM's Threatened and Priority Fauna 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)].

(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

No Declared Rare or Priority Flora species were identified within the project area. One priority 2, one priority 3 and one priority 4 species was located within a 50km radius of the area under application. Limited flora records are available from within the local area of the proposed clearing and based on the historic land use of the area and subsequent modified condition of the vegetation, the proposal is unlikely to impact on flora taxa of conservation significance (CALM 2005). The proposal is therefore not likely to be at variance to this Principle.

Methodology CALM (2005).

GIS Databases:

- Declared Rare and Priority Flora list - CALM 13/08/03.

CALM's Threatened Flora Data Management System, CALM's Herbarium Specimen Collection Database [The comprehensiveness of these databases are 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 threatened ecological community.

Comments Proposal is not at variance to this Principle

No Threatened Ecological Communities (TEC's) were located within a 50km radius of the area under application and is therefore not at variance to this Principle (CALM 2005).

Methodology CALM (2005).

GIS Databases:

- Threatened Ecological Communities - CALM 15/07/03

CALM's Threatened Ecological Community 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)].

(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 Carnarvon Bioregion and Beard vegetation associations 182, 186, 265, 267, 281, 282, 308, 320, 321, 342 and 3432 all have greater than 50% of the native vegetation remaining, making them of least concern by conservation status standards. The proposed clearing is therefore not at variance to this Principle.

	Pre-European Reserves/CALM-area (ha)	Current extent (ha)	Remaining %*	Conservation status**	managed land,
%					
IBRA Bioregion - Carnarvon	8,523,963	8,523,963	100	Least concern	Not available
Shire - Carnarvon	Not available	Not available	Not available	Not available	Not available
Shire - Upper Gascoyne	Not available	Not available	Not available	Not available	Not available
Beard veg type - 182	105,877	105,877	100	Least concern	4.5
Beard veg type - 186	23,284	23,284	100	Least concern	0.0
Beard veg type - 265	24,273	24,273	100	Least concern	0.0
Beard veg type - 267	36,030	36,030	100	Least concern	0.0
Beard veg type - 281	879	879	100	Least concern	0.0
Beard veg type - 282	13,355	13,355	100	Least concern	0.0
Beard veg type - 308	496,965	491,901	99.0	Least concern	0.4
Beard veg type - 320	8,318	8,318	100	Least concern	0.7
Beard veg type - 321	165,466	165,323	99.9	Least concern	0.0
Beard veg type - 342	328,192	328,192	100	Least concern	20.6
Beard veg type - 3432	182,088	182,088	100	Least concern	0.0

* (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 at variance to this Principle

The Gascoyne River runs parallel to the proposal, and varies between 4km to 900m away from the area under application. There are numerous minor non-perennial lakes that lie adjacent to the application. Claypans are also a feature to the North of the application and distributed mainly on the eastern end of the area under application. A number of minor non-perennial watercourses exist within the area under application, however none represent a habitat of environmental significance. Due to the distance from the Gascoyne River the proposed clearing is therefore, not at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DoE 01/02/04

(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 area under proposal is on the Yalbalgo Plain adjacent to the Gascoyne River. It is a flat plain covered with sandy ridges and is dominated by open Acacia shrubland. Drainage is disorganised and the soil on the flats is heavy with poor infiltration and drainage (Beard, 1976). The rainfall in the area is low with only 300mm per year and the area does not fall within an acid sulphate soil risk area or in a salinity risk area. The area under application, although relatively large, mainly falls within the road reserve and adjacent pastoral land, however all road construction is completed under the supervision of engineers and have taken land degradation issues into account and incorporated this into the design. In addition the area will be scarified and reseeded after completion of each stage of development, therefore the proposal is unlikely to be at variance to this Principle.

Methodology Beard, 1976.
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Salinity Risk LM 25m - DOLA 00.
- Acid Sulphate Soil risk map, SCP DOE 01/02/04.

(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

No conservation areas have been identified within the area under application. Pimbee Station, Mooka Station, Jimba Jimba and Bidgemia Station have recently been purchased by CALM for conservation purposes and are located within a 50km radius of the area under application. The Kennedy Range National Park lies approximately 15km to the North and there are a number of WRC Estates that lie approximately 6km to the West of the application. The identified conservation areas are located within a predominantly uncleared landscape and although the proposed clearing is linear in shape, it is not considered to provide a strategic link to these areas that is not already well represented in the surrounding vegetation, therefore the area under application does not provide a buffer or ecological link to these conservation areas (CALM 2005). The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria 1997) has not been met for Beard vegetation types 182, 186, 265, 267, 281, 282, 308, 320, 321 and 3432. However, because of the uncleared state of these vegetation types, this is not considered to be a serious conservation issue. The proposed clearing is unlikely to impact on any lands managed for conservation, and is therefore unlikely to be at variance to this Principle (CALM 2005).

Methodology CALM (2005).
JANIS Forests Criteria, 1997.
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

(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 falls within the Gascoyne River catchment and does not occur within a Public Drinking Water Source Area or Protection Zone. The area under proposal is on the Yalbalgo Plain adjacent to the Gascoyne River and varies between 4km to 900m away from the area under application. Drainage is disorganised and the soil on the flats is heavy with poor infiltration and drainage (Beard, 1976). There is an alluvial aquifer below the site that is up to 30 metres thick and consists of coarse alluvium adjacent to the river, and fine floodplain silts elsewhere. Ground water levels are generally within 5 to 10 metres of the surface (DoE, 2005). Due to the distance from the Gascoyne River the area under application, although relatively large, is not

likely to cause deterioration in the quality of surface or underground water (Midwest Gascoyne Hydro Unit, 2005).

Methodology Beard, 1976.
 GIS Databases:
 - Current WIN data sets
 - PDWSA Protection Zones - DOE 07/01/04
 - Public Drinking Water Sources (PDWSAs) - DOE 29/11/04
 - Hydrographic Catchments - Catchments - DOE 03/04/03.
 Midwest Gascoyne Hydro Unit, 2005.

(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 area under application is on the Yalbalgo Plain adjacent to the Gascoyne River. It is flat plain covered with sandy ridges and is dominated by open Acacia shrubland. Drainage is disorganised and the soil on the flats is heavy with poor infiltration and drainage (Beard, 1976). The area is subject to low rainfall of 300mm per year however has been known to flood in high rainfall events. Due to the high likelihood of flooding during large rainfall events and that the Carnarvon Bioregion is mostly uncleared, it is unlikely that the clearing of vegetation from the area under application will increase peak flood height or duration.

Methodology Beard, 1976.
 GIS Databases:
 - Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Department of Environment received a submission from the Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (YMBBMAC) Yamatji Land and Sea Council Pilbara Native Title Service representing the Gnulli people whose traditional land is affected by this proposal. YMBBMAC claim that the rights granted pursuant to a Native Vegetation clearing permit constitute a future act, and as such, the Gnulli people have the right to be notified and compensated.

The Shire of Carnarvon has indicated that there are no planning requirements or approvals that would affect the clearing.

The Shire of Upper Gascoyne has indicated that there are no planning requirements or approvals that would affect the clearing application.

An Environmental Impact Assessment (EIA) was conducted over the western half of the area under application as part of the Carnarvon Town Planning Scheme which identifies proposed areas for infrastructure and areas of conservation within the Gascoyne region. This EIA does not affect this application as the road has already been constructed and is requiring this clearing application to provide a bypass road so that the road can be sealed.

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

The clearing is required to construct a temporary bypass road in order for the Gascoyne Junction Road to be reconstructed in accordance with a 'Deed of Agreement' between the Shire of Carnarvon and Main Roads WA.

Methodology Submission - YMBBMAC
 Submission - Shire of Upper Gascoyne
 Submission - Shire of Carnarvon

4. Assessor's recommendations

Purpose	Method Applied	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	80 ha/ trees	Grant
			The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted.
			The applicant will be required to liase with the Department of Indigenous Affairs regarding their obligations under the Aboriginal Heritage Act 1972 and comply with any requirements under the Native Title Act 1993.

5. References

Beard, J.S. (1976) Murchison - Explanatory Notes to sheet 6 1:1000000 Vegetation Series, Vegetation Survey of Western

- Australia. University of WA Press.
- CALM (2005) Land clearing proposal advice. Advice to the A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref GD568.
- 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.
- 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.
- 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, 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.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)