



1. Application details

1.1. Permit application details

Permit application No.: 1456/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Upper Gascoyne

1.3. Property details

Property: DOLA_LAND_DESCRIPTION
Local Government Area: LGA
Colloquial name: COLLOQUIAL_NAME

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.64		Mechanical Removal	Road construction or maintenance
0.76		Mechanical Removal	Road construction or maintenance
1.2		Mechanical Removal	Road construction or maintenance
2.4		Mechanical Removal	Road construction or maintenance
1.65		Mechanical Removal	Road construction or maintenance
0.25		Mechanical Removal	Road construction or maintenance
0.9		Mechanical Removal	Road construction or maintenance
0.45		Mechanical Removal	Bore construction
3.6		Mechanical Removal	Road construction or maintenance
2.11		Mechanical Removal	Road construction or maintenance
0.35		Mechanical Removal	Road construction or maintenance
15.3		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
Vegetation types in the areas under application have been recorded under assessment activities due to space restrictions. All vegetation types are of 'Least Concern' (>50%) in terms of biodiversity conservation (Department of Natural Resources and Environment, 2002)	The vegetation under application ranges from completely degraded to good condition. Most of the 39 areas under application are for the purpose of gravel extraction. Three of the sites are for road realignment and six sites are for the construction of fenced bores. The vegetation proposed to be cleared is predominantly mulga scrub (Acacia species) on gravel/red soils (Application 2006, DEC TRIM Ref Doc 2453).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The assessment of the condition of native vegetation has resulted from information and photographs provided by the applicant (Information provided by the proponent, 2006, DEC TRIM Ref DOC 2453)
			Pre European Vegetation Types (Beard)
			Veg Association 29: Sparse low woodland; mulga, discontinuous in scattered groups
			Veg Association 39: Shrublands; mulga scrub
			Veg Association 18: Low woodland; mulga (Acacia aneura)
			Veg Association 2081: Shrublands; bowgada and associated spp. scrub
			Veg Association 244: Shrublands; Acacia sclerosperma & A. victoriae scrub
			Veg Association 283: Shrublands; Acacia sclerosperma, bowgada & A. victoriae scrub
			Veg Association 183: Low woodland; mulga, Acacia victoriae &

snakewood
 Veg Association 264:
 Low woodland; Acacia victoriae & snakewood
 Veg Association 266:
 Mosaic: Shrublands; bowgada scrub / Succulent
 steppe; saltbush & bluebush
 Veg Association 265:
 Low woodland; Acacia sclerosperma & A. victoriae
 Veg Association 282:
 Shrublands; Acacia sclerosperma & A. victoriae
 sparse scrub
 Veg Association 165:
 Low woodland; mulga & snakewood (Acacia
 eremaea)
 Veg Association 160:
 Shrublands; snakewood & Acacia victoriae scrub
 Veg Association 167:
 Shrublands; Acacia victoriae & snakewood open
 scrub
 Veg Association 163:
 Shrublands; eremophila and cassia dwarf scrub
 Veg Association 222:
 Sparse low woodland; mulga & Acacia victoriae in
 scattered groups
 Veg Association 181:
 Shrublands; mulga & snakewood scrub

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 under application is in a degraded to good condition (Keighery, 1994) having previously been used for grazing.

 The proposed clearing areas fall within the Carnarvon and Gascoyne Bioregion both of which are listed with having 100% representation.

 Given the extensive surrounding vegetation, disturbance and condition of vegetation it is unlikely that proposed clearing areas are representative of an area of outstanding biodiversity in the Bioregion or local area.

Methodology Keighery, 1994
 Sheperd et al (2001)
 Hopkins et al (2001)
 Photo's provided by applicant (2006)
 GIS Databases:
 - Pre European Vegetation - DA 01/01
 - 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**
 Biodiversity Coordination Section (BCS) advises that a range of fauna species of conservation significance have been recorded from a variety of habitats adjoining the areas proposed to be cleared. Due to the degraded condition of the land, disturbance and proximity to road reserves it is unlikely that significant habitat known to support protected fauna will be compromised by clearing of native vegetation.

Methodology BCS (2006)

(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

A total of two Declared Rare Flora (DRF) taxa and two Priority 1 flora taxa have been recorded within a 50km radius of the some of the proposed clearing sites.

DRF

Pityrodia augustensis, closest proposed clearing site is Dooley Downs Rd (species is approx 8km to the east)
Thryptomene wittweri, closest proposed clearing site is Landor-Mt Augustus Rd (species is approx 15km to the north west)

Priority Flora

Eremophila flaccida subsp *attenuata*, closest proposed clearing site is Cobra-Dairy Creek Rd (Species is approx 5km to the south)
Hermigenia sp. *glenburgh*, closest proposed clearing site is Carnarvon-Mullewa Rd (Species is approx 12km to the south)
Ptilotus astrolasius var. *luteolus*, closest proposed clearing site is Carnarvon-Mullewa Rd (Species is approx 15km to the south)

These species, with the exception of *Thryptomene wittweri*, occur on the same vegetation type as the proposed clearing. However, given all species distance from the proposed areas to be cleared, the small scale of clearing and the likely disturbance from existing transport corridors it is unlikely that the vegetation proposed to be cleared is necessary for the continued existence of rare flora.

The remaining clearing sites do not fall within a 50km radius of any DRF or Priority flora taxa.

Methodology GIS Databases:
 - Declared Rare and Priority Flora List - CALM 01/07/05

(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

There are no known Threatened Ecological Communities within a 50km radius of the sites proposed to be cleared.

Methodology GIS Databases:
 - Threatened Ecological Communities - CALM 12/04/05

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

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

A breakdown of the vegetation complexes and associations can be found in Table 1 below. All mapped vegetation complexes have a conservation status of 'least concern' (>50%) in terms of biodiversity conservation. The areas under application are mapped within the Carnarvona IBRA region and the Gascoyne IBRA region. Both regions have 100% of native vegetation remaining. Given the size of the proposed clearing compared to the area of remnant vegetation remaining within the region, the proposed clearing will not be significant as remnants of native vegetation.

Table 1: Pre-European Vegetation

Beard Unit	Pre – European	Current Extent	Remaining %	% IUCN Class I-IV Reserves	% in reserves /CALM managed land
2081	1,477,161	1,471,859	99.6	4.4	7.8
244	98,426	98,426	100	0	0
283	79,411	79,411	100	0	12.9
183	355,999	355,999	100	0	34.2
264	926,791	926,791	100	0.1	2.2
266	151,419	150,756	99.6	0	5.7
265	24,273	24,273	100	0	0
282	13,355	13,355	100	0	0
165	594,076	594,076	100	0	2.6
160	69,166	69,166	100	0	0
167	134,185	134,185	100	0	0
18	24,675,970	24,659,110	99.9	2	2.5
163	704,872	704,872	100	0	1.4
222	250,536	250,536	100	27.7	0
29	7,782,264	7,782,264	100	0.3	2.4

39	5,382,170	5,380,712	100	8.2	3.6
181	1,922,170	1,922,170	100	1.9	2

Methodology Shepherd et al 2001
 GIS Databases:
 - Interim Biogeographic Regionalisation of Australia - EM 18/10/00
 - Pre-European Vegetation - DA 01/01

(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**
 There are no watercourses or wetlands within 50m of any of the proposed clearing sites.

Methodology GIS Databases:
 - Geodata, Lakes - GA 28/06/02
 - 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 proposed clearing is within roadsides for realignment and also on adjoining land for extraction sites and bore construction these works may cause some short term land degradation issues in terms of localised flooding and soil erosion.

However these issues should be minimised as works on realignment of roads will include roadside infrastructure to prevent land degradation associated with roads ie. table drains and culverts. Additionally conditions placed on the permit to undertake revegetation on completion of gravel extraction will minimise long term land degradation associated with extraction sites.

Methodology GIS database: Topographic Contours, Statewide - DOLA 12/09/02

(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 nearest CALM managed lands lie within 5kms of the northern proposed clearing areas (Mt Augustus National Park) and 14kms north-west of the western most proposed clearing areas (Kennedy Range National Park). The proposed clearing is unlikely to significantly impact on these conservation areas as the majority of clearing will be small select areas (0.12ha) of sparse ground cover and shrubs.

Methodology Photo's provided by applicant (2006)
 GIS Databases:
 CALM Managed Lands and Water - CALM 01/07/05
 System 1 to 5 and 7 to 12 Areas - DEP 06/98

(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 areas under application lie within the Gascoyne River catchment.

DEC monitoring bore located 274km north east of the nearest area proposed to be cleared has an average static water level of 9.85m from ground level, with a mapped groundwater salinity of 500 to 7000 mg/L.

The proposed clearing for realignment, extraction sites and bore construction may cause some short term water quality issues in terms of localised surface water sedimentation during works. However these issues should be minimised as works on realignment of roads will include roadside infrastructure to prevent land degradation associated with roads ie. table drains and culverts.

Additionally conditions placed on the permit to undertake revegetation on completion of gravel extraction will minimise long term water quality issues associated with gravel extraction.

Due to the small and isolated areas proposed to be cleared, associated with roads works, extraction sites and bore construction it is unlikely the areas under application will exacerbate salinity issues or increase water levels within the shire boundary. Conditions to revegetate used extraction sites will also mitigate any issues associated with groundwater salinity.

Methodology GIS Database:
 - Groundwater salinity, Statewide - 22/02/00
 - Hydrographic Catchments - Catchments - DOE 23/3/05
 - WIN Groundwater Sites, Monitoring DEWCP (current)

(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 Gascoyne area is known for periods of flooding intensity. Due to this history and the scale of the proposed clearing, impacts from clearing are not likely to exacerbate flooding in the region.

Methodology GIS Database:
 - Topographic Contours - Statewide - DOLA 12/09/02

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

Comments
 There is a Native Title Claim over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

The Department advises that the proponent contact the relevant authorities to seek advice on whether or not the road works will impact upon the Aboriginal Sites of Significance listed within the area under application.

There is no RIWI Act Licence or Works approval required for the proposed works.

Methodology GIS Databases:
 - Aboriginal Sites of Significance - DIA 28/02/03
 - Native Title Claims - DLI 07/11/05
 - RIWI Act, Groundwater Areas - WRC 13/06/00
 - RIWI Act, Surface Water Areas - WRC 18/10/02

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Bore constructional	Mechanic Removal	0.45		3 bores to be cleared on Carnarvon - Mullewa Rd
Road constructional or maintenance	Mechanic Removal	1.64		Cobra - Dairy Creek Rd. 7 sites
Road constructional or maintenance	Mechanic Removal	0.76		Dalgety Downs - Landor Rd
Road constructional or maintenance	Mechanic Removal	1.2		Dooley Downs Rd. 2 sites
Road constructional or maintenance	Mechanic Removal	2.4		Landor - Mt Augustus
Road constructional or maintenance	Mechanic Removal	2.11		Carnarvon - Mullewa Rd (2). 5 sites
Road constructional or maintenance	Mechanic Removal	15.3	Grant	It is recommended to grant a permit to clear 15.3 hectares for the puposes of road and gravel pit construction with mangement conditions relating to revegetation, recording and reporting.
Road constructional or maintenance	Mechanic Removal	0.35		Pimbee Rd (2) - 1 site

e Road constructional or maintenanc e	Mechanic Removal	3.6	Ullawarra rd (2) - 5 sites
Road constructional or maintenanc e	Mechanic Removal	1.65	Cobra - Mt Augustus
Road constructional or maintenanc e	Mechanic Removal	0.25	Dalgety - Glenburgh Rd. 1 site
Road constructional or maintenanc e	Mechanic Removal	0.9	Landor - Meekatharra Rd. 4 sites

5. References

- Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC 4816
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Photos of Gravel sites within Upper Gascoyne application, Upper Gascoyne, 2006. DEC TRIM Ref DOC 2453.
- 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)