



1. Application details

1.1. Permit application details

Permit application No.: 1034/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Ngaanyatjarraku

1.3. Property details

Property: LOT 9 ON PLAN 91722 (NGAANYATJARRA-GILES 0872)
Local Government Area: Shire Of Ngaanyatjarraku
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
52.57		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 19: Low woodland; mulga between sand ridges (Hopkins et al. 2001; Shepherd et al. 2001).	The areas under application are for the purpose of an upgrade and maintenance of Great Central Road. The proposed roadwork comprises of the realignment for 3.9km and re-sheeting for 2.0km of Great Central Road between Warburton and Warakurna within a 40ha area, and a 400m diameter gravel pit within a 12.57ha area adjacent to Great Central Road. The roadwork and gravel pit will be undertaken within a total area of 52.57ha (Purpose Permit) on Lot 9 on Plan 91722 within Reserve 17614 (Shire of Ngaanyatjarraku 2006, DoE TRIM Ref HD28578).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	A clearing permit (CPS 990/1) with the same vegetation association and purpose of road construction or maintenance was granted by the Department of Environment for an area 110km east of the area under application. The condition of the vegetation for CPS 990/1 was described as excellent 'as the vegetation under application is likely to have been disturbed from previous works associated with the existing road. However, due to this limited disturbance, it is likely that the vegetation under application is still in excellent condition.'
	The vegetation proposed to be cleared is described as Spinifex (Triodia species) on sandy soils and wattle scrub (Acacia species) on gravel (DAFWA 2006, DoE TRIM Ref CRN219292).		Given the above and the relative homogeneity of the landscape in the local area, it is likely that the vegetation under application is similarly in excellent condition.

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 areas under application are located within Ranges of the Western Desert (Aboriginal Reserve 17614), an area listed on the Register of the National Estate. The Ranges are registered for natural values and are recognised as having 'Indigenous values of National Estate significance' and extend over 8,000,000ha. Given the linearity and size of the areas under application (52.57ha) relative to the area on the Register, it is unlikely that the clearing as proposed would have a significant impact on the natural values of the wider area. The

Hopkins et al. (2001)
Shepherd et al. (2001)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 waterbodies within or in close proximity to the areas under application with the nearest watercourse, a minor non-perennial watercourse, approximately 11.6km south-west of the areas under application. Therefore the vegetation within the areas under application is not considered to be wetland dependant and this clearing as proposed, therefore, is not likely to be 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 landscape of the areas under application and surrounds can be described as a dune-field with the chief soils being red earths and red sands, which could potentially be prone to erosion if exposed. DAFWA (2006) advised, 'some minor initial wind erosion may occur on the cleared sandy soils adjacent to the road. However standard revegetated techniques using cleared vegetation material should stabilise these soils'.

Given, the relatively small, linear (roadwork) and isolated areas (roadwork and gravel pit) proposed to be cleared, it is unlikely that large areas of soil would be bare and possibly subject to erosion. The Shire of Sandstone (Information provided by the proponent 2006) confirmed that wind erosion has not been a problem in the past 20 years of road construction within the Shire. Only necessary clearing is undertaken, with minimal sandy soils exposed which are recovered by topsoil.

Furthermore, given that the areas to be cleared are not densely vegetated but consist of sparse vegetation of spinifex and mulga associated with desert country, it is unlikely that minor wind erosion is likely to lead to appreciable land degradation.

DAFWA (2006) recommends that on completion of road works the gravel pit floor should be contour ripped to aid revegetation. Rehabilitation of the gravel pit will be conducted progressively as cleared areas are exhausted of gravel (Information provided by the proponent 2006). These areas cannot be determined prior to the commencement of roadworks and as such a general condition for rehabilitation has been recommended for this permit. An additional recommendation was requested from the Soil and Land Commissioner (DAFWA) to address rehabilitation. The recommendation (Dean 2006) included battering the sides of the pit, contour ripping and spreading of topsoil.

Methodology DAFWA (2006) (DoE TRIM Ref CRN219292)
Information provided by the proponent (2006) (DEC TRIM Ref EI6617)
Information provided by the proponent (2006) (DEC TRIM Ref DEC802)
J. Dean, (DAFWA) (2006) (DEC TRIM Ref EI6618)
GIS Databases:
- Soils, Statewide - DA 11/99
- Western Australia ETM 25m 543 - AGO 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

The areas under application are located within Ranges of the Western Desert (Aboriginal Reserve 17614), an area listed on the Register of the National Estate. The Ranges are registered for natural values and are recognised as having 'Indigenous values of National Estate significance' and extend over 8,000,000ha. Heritage clearance surveys were undertaken for areas of proposed roadworks and gravel pits within the Shire of Ngaanyatjarraku in 2003. As such, no heritage clearance requirements were listed for any proposed works within the Shire, including this proposal (Information provided by the proponent 2006). Furthermore, given the linearity and size of the areas under application (52.57ha) relative to the area on the Register, it is unlikely that the clearing as proposed would have a significant impact on the natural values of the wider area. The areas to be cleared are also isolated and are necessary for road construction and maintenance.

The nearest CALM managed lands are located approximately 86km north-west (Gibson Desert Nature Reserve) and 261km south south-west (Neale Junction Nature Reserve) of the proposed clearing. Given the

For Principle g) DAFWA (2006) have identified a possibility of minor erosion occurring with the disturbance of the sandy and gravel soils. Given the sparsity of the vegetation, it is unlikely that appreciable land degradation will result from the proposed clearing. DAFWA (2006) also recommends that on completion of road works the gravel pit floor should be contour ripped to aid revegetation. However, the rehabilitation of the gravel pit will be conducted progressively as cleared areas are exhausted of gravel. These areas cannot be determined prior to the commencement of roadworks and as such a general condition for rehabilitation has been recommended for this permit. The Soil and Land Commissioner's additional advice to address rehabilitation includes battering the sides of the pit, contour ripping and spreading of topsoil.

Therefore the assessing officer recommends that a permit should be granted with the following condition:

The Permit holder shall retain the vegetative material and topsoil removed by clearing in accordance with this Permit and shall, within one month of the area no longer being required for the purpose of gravel extraction, lay vegetative material and topsoil on the gravel pit within the area hatched red on attached Plan 1034/1.

5. References

- DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM Ref CRN219292.
- 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. CALM Science 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.
- 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)