



1. Application details

1.1. Permit application details

Permit application No.: 430/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Coorow

1.3. Property details

Property:

Local Government Area: Shire Of Coorow
Colloquial name: Road Reserve 0164

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1		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 142: Medium woodland; York gum and salmon gum	A total of 9 adult trees and 50m2 of native vegetation need to be removed from the application area. Six mature Salmon Gums and three mature Gimlets need to be removed from a 5km section of the Coorow-Latham road (between the junction of the Coorow-Latham Rd and Lampard-Tremlett Rd to the junction of Coorow Latham Rd and Chapman Rd). Five of these trees are on the north side of the road and four are on the south side. Collectively 50m2 of understorey will be removed around the base of the 9 adult trees.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The area under application consists of roadside vegetation along a 5km section of road. The vegetation for the first 1km consists predominantly of mature salmon gums with branches that span the road in an arch formation (typical 'Waddy forest'). The remainder of the section of road has excellent vegetation on the south side with large trees and intact understorey while in comparison the vegetation to the north of the road is more degraded with less large trees. The proponent provided photos of the flora road (IN19933) showing roadside vegetation dominated by mature salmon gums. A site visit was carried out and the selected trees were inspected and photographed. The vegetation at the base of each of the trees is largely made up of weeds, a limited amount of native vegetation will be removed and these are well represented in other areas along the road.
Beard vegetation association 551: Shrublands; Allocasuarina campestris thicket (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 Avon Wheatbelt bioregion, a region that is recognised for its high biodiversity. The area is also designated a flora road due to its high biodiversity conservation value. It represents an area of salmon gum woodland that has been heavily cleared in the past and of which only 7% remains in the Moore River catchment (Clarke et. al. 2002). The proponent has agreed to reduce the area of vegetation to be cleared from 1 hectare to 9 mature trees and 50m2 native vegetation. The removal of trees will be carried out by a tree surgeon with care taken to minimise disturbance to other individuals growing in the area. In addition 1000 seedlings will be planted on ~1hectare of land adjacent to the road, 1km east of the Coorow-Latham Rd and Lampard-Tremlett Rd junction. The Department of Environment recommends that a range of species, propagated from locally collected seed be planted in this area. Due to the relatively small number of trees to be removed and the planting of an area of vegetation the clearing is unlikely to be at variance to this Principle.

Methodology GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.
Waddy Forrest LCDC Discussion Paper (TRIM - IN20414)

(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**
Populations of Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) and Major Mitchell's Cockatoo (*Cacatua leadbeateri*) are known to exist in the Waddy forest area.

Carnaby's Black-Cockatoo are listed as endangered on the Department of CALM's Threatened and priority fauna database. Mature salmon gums, particularly with suitable breeding hollows, are rare in the region. Two breeding pairs are believed to have nesting sites on private property adjacent to the area to be cleared and there is also evidence that breeding Carnaby's Black-Cockatoo's forage through-out the roadside area.

Major Mitchell's Cockatoo are listed as specially protected the Department of CALM's Threatened and priority fauna database. They are also known to nest and forage along the roadside vegetation area.

Advice received from CALM expressed concern that the removal of 10 Salmon Gums and 25 York Gums will impact the to the existing road verge wildlife corridor that links the limited remaining surrounding matrix of uncleared vegetation. Since the number of trees to be removed has been reduced to one third of this amount (9 trees) it is felt that the impact will be nominal. CALM also noted the commitment outlined by the Shire of Coorow to plant 1000 salmon gum seedlings in the property adjacent to the road reserve owned by Mr Patton. However they advised that if these trees reach maturity, they are unlikely to provide suitable nesting hollows for Carnaby's Black-Cockatoo for approximately 100 years. Department of Environment acknowledges this but also notes that the trees that will be planted will serve other environmental purposes before this time.

Due to the small number of trees to be removed the proposed clearing is not likely to be at variance to this Principle.

Methodology 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)].
Submission from the Roadside Conservation Committee (TRIM GD348)
CALM Advice (TRIM GD492)

(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**
Flora species list for the 1.1km section of Coorow-Latham road verges (north and south sides) east from junction a Fowler-Patton road and Coorow-Latham road recorded 31 species of plants. None of these species were assigned special conservation status under the Wildlife Conservation [Rare Flora] Notice [2002] and Declared Rare and Priority Flora List for Western Australia.

There is one specimen of *Grevillea huegelli* that has been identified in the area. This species is common in the Southwest of WA but is on the edge of its range in Coorow and therefore has local significance. The specimen does not need to be cleared in order to widen the road and the Shire has agreed to protect the specimen and make sure the removal of trees does not inhibit the growth of this plant.

CALM advice indicates that a number of declared rare and priority flora taxa have been recorded from within 10km of the proposed clearing.

DRF taxa *Ptilotus fasciculatus* and *Caladenia drakeoides* are both recorded from within 10km of the proposed clearing however their preferred habitat is the edge of salt lakes and they are therefore unlikely to occur within the area proposed to be cleared.

DRF *Chorizema humile* has been recorded from within very close proximity of the proposed clearing in similar soil / vegetation community types, and on this basis there is a possibility that it may also be found in the area proposed to be cleared.

DRF *Eremophila koobabbiensis* ms. There appears to be a paucity of data describing the habitat and geomorphology preferences of this declared rare species that is only known from a single nearby location. CALM WATSCU researchers advise that *Eremophila koobabbiensis* ms and DRF *Chorizema humile* are found within 100 metres of each other on a nearby property (pers.comms). CALM recommends that a targeted flora survey be undertaken to determine whether DRF *Chorizema humile* and DRF *Eremophila koobabbiensis* ms are present in the area that is proposed to be cleared.

The clearing proposal plans to remove only Salmon Gums and Gimlet trees, 9 trees in total. Trees will be removed by a professional tree contractor in order to limit the amount of damage to surrounding vegetation. During a site visit the species at the base of each tree were inspected and photographed. No species similar the description of *Eremophila koobabbiensis* and *Chorizema humile* were noted.

It seems unlikely that the proposed clearing will affect DRF therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03
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)].
Submission from the Roadside Conservation Committee (TRIM GD348)
CALM Advice
Site visit

(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 at variance to this Principle**
The Threatened Ecological Community (TEC) database did not include the area under application.

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 at variance to this Principle**
The Avon Wheatbelt Bioregion and the Beard vegetation associations 142 and 551 have between 10-30% of their pre-European vegetation remaining. This makes them 'vulnerable' by conservation status. Therefore the clearing is at variance to this principle.

	Pre-European Reserves/CALM- area (ha)	Current extent (ha)	Remaining %*	Conservation status**	managed land,
%					
IBRA Bioregion - Avon Wheatbelt	9,578,995	1,536,296	16%	Vulnerable	10.3%
Shire - Coorow	424,583	164, 895	38.8%	Depleted	Not available
Beard veg type - 142	1,134,385	281, 570	24.8%	Vulnerable	14.5%
Beard veg type - 551	422,337	102,167	24.2%	Vulnerable	18.8%
* (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 5km area of the Coorow Latham Road under application transverses several minor, non-perennial watercourses and one major drain (un-named). None of these have been identified as having significant environmental values. Vegetation along the Coorow Latham Road through the Waddy Forest district has been identified as the main corridor linking the upper catchment to a saline drainage system. However none of the trees being removed exist in or provide a buffer to a watercourse. In addition it is unlikely that the removal of such a small amount of vegetation along this road will lead to a change in the water table. Therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology Waddy Forrest LCDDC Discussion Paper (TRIM - IN20414)
GIS Databases: Hydrography, linear - DoE 01/02/04
Midwest Gascoyne Hydro Unit

(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**
This area has been noted as a salinity risk area (Clarke 2002). However it is unlikely that the removal of 9 trees and 50m2 of native vegetation will increase the risk of wind or water erosion, pH of soils, waterlogging or salinity. Therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00, Soils Statewide -

(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	<p>Proposal is not likely to be at variance to this Principle</p> <p>The Waddy Hall Reserve is situated at the intersection of Fowler Patton Road and Coorow Latham Road and covers an area of 10Ha. The Waddy Well Reserve covers a slightly smaller area and is situated approx. 13km east, at the intersection of Coorow Latham and Waddy Forrest road. The Coorow Latham road provides a link between these two reserves. It is unlikely that the removal of 9 trees and 50m² of native vegetation will effect the ability of the remaining vegetation to carry out this role. Therefore the clearing proposal is unlikely to be at variance to this Principle.</p>
Methodology	<p>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</p> <p>Information received from the Waddy Forest Landcare District Committee</p>

(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	<p>Proposal is not likely to be at variance to this Principle</p> <p>Predictions indicate that 16% of the Moore River Catchment is at risk of developing a shallow water table (Clarke 2002). Salinity and waterlogging occur in paddocks adjoining the road under application. Monitoring boreholes in the vicinity indicate water tables within or approaching 2metres from the surface. However it is unlikely that the removal of such a small area of vegetation will have an impact on the surrounding water table. The Shire of Coorow has agreed to plant 1000seedlings in an area adjacent to the Coorow-Latham Road. Planting of perennial species is one of the recognised options for managing dryland salinity (Clarke 2002). Therefore the clearing proposal is not likely to be at variance to this Principle.</p>
Methodology	<p>Clarke M. and Rogers D., 2002. Rapid Catchment Appraisal 2002 - The Moore River Catchment, Department of Agriculture, Geraldton, Western Australia</p> <p>Midwest Gascoyne Hydro Unit</p>

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>Sections of the area under application are low-lying and prone to flooding. The mean annual rainfall is 400mm. It is unlikely that the removal of 9 trees and 50m² native vegetation will effect peak flood height or duration. Therefore it is not likely that the proposed clearing will be at variance to this Principle.</p>
Methodology	<p>GIS Databases - Rainfall, Mean Annual - BOM 30/09/01</p> <p>Midwest Gascoyne Hydro Unit</p>

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

Comments	<p>The Shire of Coorow has notified that there are no planning requirements/approvals that effect the clearing proposal (TRIM - GD357).</p>
Methodology	

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	1	Grant	<p>The assessable criteria have been addressed and the clearing is at variance to Principle e). The vegetation remaining in the area to be cleared is below 30%. However the as only 9 trees and 50m² of native vegetation will be removed, the effect of the clearing on vegetation extent for the region is insignificant.</p> <p>The Department of Environment notes that this area of roadside vegetation is important for its conservation of biodiversity, environmental and aesthetic values. The vegetation is being cleared in order for a 5km section of the Coorow-Latham Rd to be widened. The Mid West Roads Group's road standard for the amount and type of traffic that occurs along this road warrants a road with a 7m seal. Through investigation and community consultation and Shire of Coorow has reduced the number of trees to be removed to 9 trees and 50m² native vegetation. The conditions of the permit set out that the Permit Holder must not damage any other roadside vegetation other than that specified and must carry out revegetation of an area of 1Ha with 1000 native seedlings.</p>

Due to the requirement of the trees to be removed for road safety purposes, the small amount of vegetation to be cleared and the offset the Shire of Coorow is willing to put in place the permitting officer recommends that the permit should be granted.

In addition the Department of Environment recommends that the Permit holder,

1. Collect seed from the trees that are to be removed.
2. Ensure only ground cover vegetation that is required for the direct access and removal of trees are removed.
3. Make cleared material available for use by local wood turners and local rehabilitation works for habitat use compliant with CALM authorisation.
4. Seek advice from the Waddy Forrest LCDC, and other organisations such as Greening Australia and Northern Agricultural Catchments Council (NACC) when undertaking revegetation and seed collecting works.

5. References

- CALM advice: CALM (2005) Land clearing proposal advice. Advice to A/director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia DoE TRIM ref GD492
- Clarke M. and Rogers D., 2002. Rapid Catchment Appraisal 2002 - The Moore River Catchment, Department of Agriculture, Geraldton, Western Australia
- 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, 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.