



1. Application details

1.1. Permit application details

Permit application No.: 724/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Forest Products Commission

1.3. Property details

Property: GASCOYNE LOCATION 461 (House No. 262 SOUTH RIVER SOUTH PLANTATIONS 6701)
GASCOYNE LOCATION 460 (House No. 262 SOUTH RIVER SOUTH PLANTATIONS 6701)
Local Government Area: Shire Of Carnarvon
Colloquial name: South River Road - Locations 460 and 461 on Reserve 18009

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
27		Mechanical Removal	Miscellaneous

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 308: Mosaic: Shrublands; Acacia sclerosperma sparse scrub/Succulent steppe; saltbush and bluebush (Hopkins et al. 2001, Shepherd et al. 2001).	Native flora species that may be affected by this proposal include open Acacia shrubland including Acacia sclerosperma, A. victoriae, A. tetragonaphylla; characteristically stunted Eucalyptus coolabah and E. camaldulensis; and understorey comprising of Maireana polypterygia, M. aphylla, Atriplex bunburyana, Rhagodia eremea and Cenchrus ciliaris.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Observed during site visit: the area covered by clearing permit 724 consisted of Acacia sclerosperma, A. victoriae, A. tetragonaphylla, Eucalyptus coolabah, E. camaldulensis, Maireana polypterygia, M. aphylla, Atriplex bunburyana, Rhagodia eremea and Cenchrus ciliaris with significant weed invasion. The site has been earmarked to establish a sandalwood plantation and forms part of the Department of Agriculture Research Station in Carnarvon. The majority of the proposal falls within the River Land System (Tille and Molinski, 2003) that is a floodplain of the Gascoyne River and the surrounding area has already been extensively cleared. The site is zoned Intensive Horticultural under the Carnarvon Town Planning Scheme and the proposal is in line with this zone.

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; an area recognised for its biodiversity. DAWA officers reported that substantial parts of the notified area are partially cleared, with the northern end of the block already cleared of shrub and tree vegetation. The parts that have been partially cleared in the past support strong regrowth. CALM officers reported that the area being considered is utilised by a variety of bird species but the only sign of mammal species were rabbit and fox tracks. In addition, there was a variety of weed species present due to the proximity to the Carnarvon horticultural zone. DoE officers reported that the site falls within a predominantly uncleared bioregion, degraded through the effects of overgrazing. Given the pastoral history of the land and the high density of introduced weed species, it is unlikely that the area being considered is representative of an area of outstanding biodiversity in the bioregion. This application is therefore unlikely to be at variance to this Principle.

Methodology DAWA, 2005.
CALM, 2005.
GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.
Site visit, DoE Officer, 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

CALM advised that the Priority bird species such as the *Neochima ruficauda* (Western Star Finch) and the *Ardeotis australis* (Australian Bustard) may occasionally utilise the open Acacia shrubland of the notified area particularly as the site is close to the Gascoyne River. However, open Acacia shrubland does not appear to be significant habitat for these species. This proposal is therefore unlikely to be at variance to this Principle.

Methodology 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)].

Site visit, DoE Officer, 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

CALM advised that the preferable habitat for priority flora species found in the area is either sand dunes, sand ridges, mud flats or clay pans. These habitats are unlikely to occur within the notified area given the site description given by the local CALM officer and analysis of the photographs of the site. Occurrences of the Priority flora are very sporadic within the local area and there are no identified records for DRF within the area proposed to be cleared. This proposal is therefore unlikely to be at variance to this Principle.

Methodology CALM, 2005.

GIS Databases: Declared Rare and Priority Flora list - CALM 01/07/05.

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 threatened ecological community.

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

CALM advised that there is no evidence to suggest that any EPBC Act listed TECs or State listed TECs are present on the site of the proposed clearing. 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 CALM, 2005.

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 at variance to this Principle

There is greater than 100% pre-European vegetation remaining in the Carnarvon Bioregion and 99.4% in Beard vegetation association 308. The Shire of Carnarvon does not fall within the Intensive Land Use Zone. This proposal 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	100.0	Least concern	Not available
Shire - Carnarvon	Not available	Not available	Not available	Not available	Not available
Beard veg type - 308	496,965	491,901	99.4	Least concern	0.1

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Methodology CALM, 2005.

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 under application falls within the Gascoyne River catchment and lies approximately 330m from the major non-perennial Gascoyne River. In addition there are minor non-perennial watercourses, perennial natural pools and non-perennial lakes in the area. CALM advised that the drainage line 100m south of the notified area flows through the McNeill Claypan System and also through Chinaman's Pool Nature Reserve on the Gascoyne River. CALM also advised that further clearing in the area has the potential to impact the biodiversity values of these important wetland habitats and nature reserves through runoff, siltation and eutrophication. However appropriate management of the clearing should minimise these risks. This proposal is therefore unlikely to be at variance to this Principle.

Methodology CALM, 2005.

GIS Databases: Hydrography, linear - DoE 01/02/04, Hydrographic Catchments - Catchments DoE 23/03/05.
Site visit, DoE Officer, 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

DAWA advised that without careful management, there is potential for land degradation in the form of salinity and wind erosion. However, the Forest Products Commission propose to plant Sandalwood on site, and as such, the proposal is unlikely to be at variance to Principle (g) for salinity and wind erosion.

Methodology DAWA, 2005.

Department of Agriculture (2005) Map Unit Database.
Site visit, DoE Officer, 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 likely to be at variance to this Principle

CALM advised that the McNeill Claypan System is listed on a Directory of Important Wetlands in Australia (Department of Environment and Heritage). It is approximately 500m south of the notified area and is significant as a good example of a freshwater claypan system of the arid zone and one of the largest shrub swamps in the north west of Western Australia. In addition CALM advised that there were other reserves in the local area. These included numerous Crown Reserves vested in Local Government, Crown Reserves (the notified area is within Crown Reserve 18009), Unallocated Crown Lands (many over 500ha in size), Unvested Crown Reserves and large pastoral leases (may contain large areas of remnant vegetation). The drainage line 100m south of the notified area flows through the McNeill Claypan System and also through Chinaman's Pool Nature Reserve on the Gascoyne River. CALM advises that further clearing in the area has the potential to impact the biodiversity values of these important wetland habitats and nature reserves through runoff, siltation and eutrophication. However appropriate management of the clearing should minimise these risks. This proposal is therefore unlikely to be at variance to this Principle.

Methodology CALM, 2005.

GIS Databases - CALM Regional Parks - CALM 12/04/02, CALM Managed Lands & Waters - CALM 01/07/05, 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

The area under application is in the Gascoyne River catchment and does not include any Public Drinking Water Source Areas (PDWSA) or PDWSA Protection Zones. The Carnarvon Water Reserve is approximately 4400m from this site and is of a suitable distance from the proposal such that it should not be impacted. There is a superficial aquifer 5-10m below the site and this is underlain by a saline aquifer. The alluvial groundwater is fresh to brackish, increasing in salinity away from the riverbed. A confined artesian aquifer lies 600m (DWAID, 2005) below the superficial aquifers. Removal of the vegetation will not adversely impact or alter the hydrogeological regimes in the surficial or confined aquifers, therefore this proposal is not at variance to this Principle.

Methodology GIS Databases - Current WIN data sets, PDWSA Protection Zones - DOE 07/01/04, Public Drinking Water Sources (PDWSAs) - DOE 09/08/05, Hydrographic Catchments - Catchments - DOE 23/03/05.

DAWA, 2005.
DWAID, 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 at variance to this Principle

The vegetation under application lies in the Gascoyne River catchment in an area that experiences low (300mm) rainfall. The site being considered is an area that is prone to flooding during large flow events of the Gascoyne River, however the vegetation under consideration is not located in an area that would lead to an incremental increase in peak flood height or duration (R Bretnall, Pers. Comm.). In addition, the proposed flood mitigation works (a State government initiative to reduce the damage sustained during flood events in this horticultural precinct) will reduce the level of flooding and water velocity at this location (Sinclair Knight Mertz, 2002). Therefore this proposal is not at variance to this Principle.

Methodology GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, 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 Sinclair Knight Mertz, 2002.

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

Comments

The Department of Environment received a submission from the native title claimants that the rights granted pursuant to a Native Vegetation clearing permit would constitute a future act, and as such, the claimants have the right to be notified and compensated.

The Carnarvon Shire advised that correspondence has been received from the Forest Products Commission advising of its proposal to establish a Sandalwood (*Santalum album*) plantation on Lots 460 and 461 (Reserve 18009) North West Coastal Highway South Plantations. The Shire advised that it is satisfied that the proposed use of the land is consistent with the existing primary use of the land and therefore, pursuant to clause 2.6.1(c) of TPS No. 10, is exempt from the necessity to obtain approval pursuant to TPS No. 10.

The Director of Asset Management, DAWA confirmed that the proposed clearing is consistent with their agricultural research activities. As the proposed land use is consistent with the land's vested purpose, the clearing is not deemed to be a Future Act.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	27	Grant	The assessable criteria have been addressed and no objections were raised. The proponent should ensure that the clearing does not interfere with any Aboriginal sites and that any clearing is undertaken in compliance with the Aboriginal Heritage Act 1972. The assessing officer therefore recommends that the clearing permit be granted.

5. References

CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref GD619.

DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref HD24898.

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.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

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, 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. Report to the Waters and Rivers Commission. Perth, Western Australia.

Tille, P. and Smolinski H. (2003). Lower Gascoyne land resources survey. Land resources series No. 17. Department of Agriculture. Perth, 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)