



1. Application details

1.1. Permit application details

Permit application No.: 2002/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Craig Mann

1.3. Property details

Property: LOT 3 ON DIAGRAM 75974 (House No. 582 NORTH RIVER NORTH PLANTATIONS 6701)
 Local Government Area: Shire Of Carnarvon
 Colloquial name:

1.4. Application

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

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)	The vegetation is best described as shrubland, with shrubs ranging in size from 1 to 3 m and consisting mostly of Acacia species. The density of the native vegetation varies over the property, however the understorey is consistently dominated by weeds, in particular doublegee, with some buffel grass, wild turnip and thistles. The weed invasion is extensive and indicates that the property may have been previously cleared in parts, or suffered other significant disturbances. (DEC Site visit, 2007)	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of the vegetation was determined during the site visit conducted on the 20 August 2007. (DEC Site visit, 2007)

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
	<p>The vegetation is best described as shrubland, with shrubs ranging in size from 1 to 3 m and consisting mostly of Acacia species. The density of the native vegetation varies over the property, however the understorey is consistently dominated by weeds, in particular doublegee, with some buffel grass, wild turnip and thistles. The weed invasion is extensive and indicates that the property may have been previously cleared in parts, or suffered other significant disturbances. (DEC Site visit, 2007)</p> <p>The vegetation under application is a component of Beard Vegetation Association 308 (Hopkins et al. 2001), which is common to Carnarvon and is well represented in the local area. In addition the proposal occurs within a well vegetated landscape as the Carnarvon Interim Biogeographic Region remains mostly uncleared. Given the surrounding original vegetation remains mostly intact, the relatively small area under application and the condition of the vegetation, it is unlikely that the vegetation under application comprises a high level of biodiversity. Therefore this proposal is unlikely to be at variance with this Principle.</p>
Methodology	DEC Site Visit (2007) Shepherd et al. (2001) Hopkins et al. (2001)

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**
 There are three records of Priority Four fauna and one record of Threatened Fauna located within 10 km of the area under application, with the closest occurrence approximately 5 km away. The vegetation is best described as shrubland, with shrubs ranging in size from 1 to 3 m and consisting mostly of Acacia species. The density of the native vegetation varies over the property, however the understorey is consistently dominated by weeds, in particular doublegee, with some buffel grass, wild turnip and thistles. The weed invasion is extensive and indicates that the property may have been previously cleared in parts, or suffered other significant disturbances. (DEC Site visit, 2007)

It is likely that the area under application provides habitat for fauna, however given the surrounding original vegetation remains mostly intact, the relatively small area under application and the condition of the vegetation, it is unlikely to represent a significant habitat for fauna. This proposal is therefore unlikely to be at variance with this Principle.

Methodology SAC Bio datasets 170807
 DEC Site visit (2007)

(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**
 There are no known records of Declared Rare Flora in the local or wider area. There are two records of Priority One flora and 3 records of Priority Two flora located within 10 km from the area under application. The area under application consists of approximately 6.522ha that is likely to have been previously cleared or subjected to a number of other disturbances given the loss of vegetation structure and the extent of weed invasion (DEC Site Visit, 2007). It is therefore unlikely that the area under application includes, or is necessary for the continued existence of rare flora.

Methodology DEC Site Visit (2007)
 GIS Databases:
 - Declared Rare and Priority Flora list - CALM 01/07/05
 - Clearing Regulations - Environmentally Sensitive Areas - DoE 30/05/05
 SAC Bio datasets 170807

(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 records of Threatened Ecological Communities (TEC's) occurring within the local or wider area. The closest occurrence is located over 100 km from the area under application. This proposal is therefore not likely to be at variance with this Principle.

Methodology GIS Databases:
 - Threatened Ecological Communities - CALM 12/04/05
 SAC Bio Datasets 170807

(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 vegetation under application is representative of Beard Vegetation Association 308 (Hopkins et al. 2001) of which there is 99.4% of the pre-European extent remaining (Shepherd et al. 2001). In addition the application falls within the Carnarvon IBRA Bioregion which has 99.8% of the pre-European extent remaining (Shepherd et al. 2001). Beard Vegetation Association 308 and the Carnarvon IBRA Bioregion are therefore both of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment 2002). This proposal is therefore not at variance with this Principle.

	Pre-European Reserves/CALM- area (ha)	Current extent (ha)	Remaining %*	Conservation status**	managed land,
%					
IBRA Bioregion - Carnarvon	8,382,974	8,369,554	99.8	Least concern	11.4
Shire - Carnarvon	Not available	Not available	Not available	Not available	Not available

Beard veg type - 308 447,098 444,535 99.4 Least concern 0.6
* (Shepherd et al. 2001; Shepherd, 2006)
** (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
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
Shepherd et al, 2001.
Department of Natural Resources and Environment, 2002
Shepherd (2006)

(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**
No watercourses or wetlands are located within the area under application. The Gascoyne River is located approximately 700m south and the McNeill Claypan System is located approximately 2km south of the notified area. A minor non-perennial watercourse lies approximately 50m east and continues along the boundary to the north.

The area under application consists of approximately 6.522ha that is likely to have been previously cleared or subjected to a number of other disturbances given the loss of vegetation structure and the extent of weed invasion (DEC Site Visit, 2007). Due to the relatively small area under application and the distance to any watercourse or wetland, it is unlikely that the vegetation within the area under application is growing in association with any of the identified watercourses or wetlands.

This proposal is therefore unlikely to be at variance with this Principle.

Methodology DEC Site Visit (2007)
GIS Databases:
- Hydrography, linear - DoE 01/02/04
- Hydrographic Catchments - Catchments - DoE 23/03/05
- ANCA Wetlands - CALM 08/01

(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 application is located within a low rainfall zone of 300 mm per annum. The proposal consists of approximately 6.522 ha that is likely to have been previously cleared or subjected to a number of other disturbances given the loss of vegetation structure and the extent of weed invasion (DEC Site Visit, 2007).

DAFWA (2007) advised that 'An estimated 70% of the area of the Lot is River 2 Alluvial backplain soil type. These soils are generally red earthy loams but less commonly are gradational red earths. They are a soil type that is moderately well to well drained and at relatively minor risk of erosion. Discontinuous areas of the Ri3 reddish brown non-cracking clays soil type that is imperfectly to poorly drained are also present. These areas are concentrated more to the north and east; but two narrow extensions reach the west boundary. If the present perennial plant cover is retained until crop establishment commences and provided the future cropping program is sustained and the land is not abandoned in a 'bare soil' condition, the future risk of soil erosion can be considered low and manageable. The proposed clearing of 6.522 hectares of land within Lot 3 is unlikely to cause appreciable land degradation.'

This proposal is therefore unlikely to be at variance with this Principle.

Methodology DAFWA (2007)
DEC Site Visit (2007)
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Salinity Risk LM 25m - DOLA 00
- Acid Sulphate Soil risk map, SCP DOE 04/11/04
- Soils, Statewide - DA 11/99

(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 Chinaman's Pool Nature Reserve is located approximately 3.6 km south west and One Tree Point Nature Reserve is located approximately 6 km west of the area under application. In addition the Wooramel Seagrass Bank, which is registered as National Estate is located 8 km from the notified area. The McNeill Claypan System, registered as an Australian Nature Conservation Agency (ANCA) Wetland and an Environmentally Sensitive Area is located approximately 2 km south from the proposal.

The area under application is located within the Carnarvon horticulture district and is surrounded by horticulture developments. The proposal consists of approximately 6.5 ha that is likely to have been previously cleared and subjected to a number of disturbances given the loss of vegetation structure and extensive weed invasion (DEC Site Visit, 2007). The proposed clearing is not likely to impact on the environmental values of the identified conservation reserves due to the distance, relatively small area under application as the area itself is not being managed for conservation. This proposal is therefore unlikely to be at variance with this Principle.

Methodology DEC Site Visit (2007)

GIS Databases:

- ANCA Wetlands } CALM 08/01
- CALM Regional Parks - CALM 12/04/02
- CALM Managed Lands & Waters - CALM 01/07/05
- Clearing Regulations - Environmentally Sensitive Areas - DoE 30/05/05
- 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 is located within the Carnarvon horticulture district and is surrounded by horticulture proposals. The notified area is located within a low rainfall zone of 300 mm per annum. The Gascoyne River is located approximately 700 m south of the notified area. The proposal consists of approximately 6.5 ha that is likely to have been previously cleared and subjected to a number of disturbances given the loss of vegetation structure and extensive weed invasion (DEC Site Visit, 2007).

DAFWA (2007) advised that it is not anticipated that eutrophication will become an issue. An estimated 70% of the area of the Lot is River 2 Alluvial backplain soil type. They are a soil type that is moderately well to well drained and at relatively minor risk of erosion, however the potential productivity of the soils of the area is not uniform. The risk associated with future development of the Ri3 soils can be lessened if gypsum is used to enhance water infiltration and land is cleared only as it is required for crop purposes.

Due to the relatively small area under application, the low rainfall rate and that the proposal will extend the current horticulture district it is unlikely that the clearing of vegetation will cause deterioration in the quality of surface or underground water. This proposal is therefore unlikely to be at variance with this Principle.

Methodology DEC Site Visit (2007)

DAFWA (2007)

GIS Databases:

- Current WIN data sets
- Public Drinking Water Source Areas (PDWSAs) - DOE 09/08/05
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Hydrography, linear - DoE 01/02/04
- Rainfall, Mean Annual - BOM 30/09/01

(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 located within the Carnarvon horticulture district and is surrounded by horticulture proposals. The notified area is located within a low rainfall zone of 300 mm per annum. The Gascoyne River is located approximately 700 m south of the notified area. The proposal consists of approximately 6.5 ha that is likely to have been previously cleared and subjected to a number of disturbances given the loss of vegetation structure and extensive weed invasion (DEC Site Visit, 2007).

DAFWA (2007) advised that 'An estimated 70% of the area of the Lot is River 2 Alluvial backplain soil type. They are a soil type that is moderately well to well drained and at relatively minor risk of erosion. Discontinuous areas of the Ri3 reddish brown non-cracking clays soil type that is imperfectly to poorly drained are also present. The Ri3 land system soil type was not recommended for intensive horticultural use in the 1992 Land Resources study report. Poor inherent drainage characteristics and susceptibility to flooding are the primary

reasons. Notwithstanding the 1992 report, the horticultural development of this soil type is continuing within the Carnarvon horticultural area. The proposed clearing of 6.5 ha of land within Lot 3 is unlikely to cause appreciable land degradation.'

This proposal is therefore unlikely to be at variance with this Principle.

Methodology DEC Site Visit (2007)
DAFWA (2007)
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The Shire of Carnarvon advised that 'No objection is raised to the application as the land is zoned Intensive Horticulture under Town Planning Scheme (TPS) 10. This zoning allows for the productive use of that land, subject to an application being made to and being approved pursuant to TPS 10 in order to carry out such use.'

The Shire of Carnarvon (2008) advised that pursuant to section 2.4.2. of TPS 10, the Carnarvon Shire Council has conditionally approved your application. A copy of the approval, together with relevant advice and notes pertaining to the acting upon the approval granted, is enclosed. Shire approval received 16 May 2008 (TRIM DOC53354).

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

The Gascoyne Water Co-operative (GWC) advised that 'the C class Shares Certificate shows the number of shares owned which is equal to the shareholders water entitlement in Megalitres. Therefore, if the certificate shows 'No. of Water Entitlements: 5' then the holder of the certificate is entitled to 5 Megalitres (5000 Kilolitres) of water for Irrigation purposes. GWC Share Certificate received 16 May 2008 (TRIM DOC53355).

There is one Environmental Impact Assessment over the area under application relating to the Shire of Carnarvon Town Planning Scheme 10 and DPS 11 Scheme Review. The Level of Assessment was set on 29/9/1999 for Environmental Review with no appeals. This EIA does not impact this proposal as the property is zoned 'Intensive Horticulture'.

There is a Native Title Claim over the area under application. The property is freehold land and Native Title has therefore been extinguished.

Two Aboriginal Sites of Significance apply over the area under application. The proponent will be advised in the covering letter of their obligations.

Methodology GIS Databases:
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA 26/04/07
- Environmental Impact Assessments
Gascoyne Water Co-operative (2008)
Shire of Carnarvon (2008)

4. Assessor's comments

Comment

The assessable criteria have been addressed and no objections were raised.

5. References

- DAFWA (2007) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DEC TRIM Ref DOC36547.
- 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.
- Gascoyne Water Co-operative (2008) submission. DEC TRIM ref DOC52999.
- 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.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press:

Melbourne.

Shepherd, D.P. (2006). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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.

Shire of Carnarvon (2008) submission. DEC TRIM ref DOC52995.

Site Visit Report (2007) Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref DOC38381.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)