



1. Application details

1.1. Permit application details

Permit application No.: 1398/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Warrebanda Pty Ltd

1.3. Property details

Property: LOT 1 ON DIAGRAM 60868 (House No. 208 SOUTH RIVER SOUTH PLANTATIONS 6701)
 Local Government Area: Shire Of Carnarvon & Shire Of Esperance
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		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 & bluebush. Shepherd et al. 2001.	The vegetation is indeed a mosaic of shrubland, ranging from areas densely vegetated with medium shrubs and small eucalyptus trees to areas of sparse low scrub with bare areas. DAFWA (2006) described the vegetation as including lignin (Muehlenbeckia spp.), northern swamp bluebush (Chenopodium auricomum), river saltbush (Atriplex amnicola) and coolabah. Apart from some areas containing rubbish and the incidence of the introduced buffel grass (Cenchrus ciliaris) to the south of the block, the vegetation is in excellent condition.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of the vegetation was determined during the site visit conducted on the 2nd of November 2006. Site visit DEC officer, 2006.

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 consists of shrubland, ranging from areas densely vegetated with medium shrubs and small eucalyptus trees to areas of sparse low scrub with bare areas (Site visit, 2006). DAFWA (2006) described the vegetation as including lignin (Muehlenbeckia spp.), northern swamp bluebush (Chenopodium auricomum), river saltbush (Atriplex amnicola) and coolabah. Apart from some areas containing rubbish and the incidence of the introduced buffel grass (Cenchrus ciliaris) to the south of the block, the vegetation is in excellent condition (Site visit, 2006).

The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG).

The area under application is described as Beard vegetation association 308, which is common to Carnarvon and is well represented in terms of the area that it covers. The proposal also occurs within a well vegetated

landscape, as the Carnarvon Interim Biogeographic Region remains mostly uncleared. Given the common occurrence of vegetation association 308, it is unlikely that the area under application has a higher biodiversity than the surrounding area. In addition, considering that much of the original vegetation remains intact, it is unlikely that the biodiversity of the local area would be reduced by the removal of approximately 6ha. This proposal is therefore unlikely to be at variance with this principle.

Methodology GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
Shepherd et al. 2001.
Site visit (2006).
DAFWA (2006)

(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**

The vegetation under application consists of shrubland, ranging from areas densely vegetated with medium shrubs and small eucalyptus trees to areas of sparse low scrub with bare areas (Site visit, 2006). DAFWA (2006) described the vegetation as including lignin (*Muehlenbeckia* spp.), northern swamp bluebush (*Chenopodium auricomum*), river saltbush (*Atriplex amnicola*) and coolabah. Apart from some areas containing rubbish and the incidence of the introduced buffel grass (*Cenchrus ciliaris*) to the south of the block, the vegetation is in excellent condition (Site visit, 2006).

The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG).

It is likely that the area under application provides habitat for fauna, however as the area does occur within a well vegetated landscape, alternative habitat of a similar nature is available nearby. Given the relatively small size of the area under application it is unlikely to represent significant habitat when considering the surrounding landscape. The proposal is therefore not likely to be at variance with this Principle.

Methodology GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
Keighery (1994).
Site visit (2006).
DAFWA (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**

The data available indicates that there are no records of Declared Rare or Priority flora occurring in the local or wider area. The closest occurrence of significant flora is a Priority 2 species that is located some 87km from the area under application. Therefore it is unlikely that the proposed clearing would affect significant flora.

Methodology GIS Databases:
- Declared Rare and Priority Flora list - CALM 01/07/05
- Clearing Regulations - Environmentally Sensitive Areas - DoE 30/05/05

(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 at variance to this Principle**

There are no records of Threatened Ecological Communities occurring within 100km of the area under application. This proposal is therefore not at variance with this Principle.

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 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	11.3
Shire - Carnarvon	Not available	Not available	Not available	Not available	Not available
Beard veg type - 308	447,098	444,535	99.4	Least concern	0.7

* (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**
No watercourses or wetlands are located within the area under application. The Gascoyne River is located approximately 500m North and the McNeill Claypan System is located approximately 500m south of the notified area. The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG). Due to the previous clearing and the distance to any watercourse or wetland it is unlikely that the vegetation within the area under application is growing in association with the two identified watercourses. This proposal is therefore unlikely to be at variance with this Principle.

Methodology 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 may be at variance to this Principle**
The area under application is located within a low rainfall zone of 300mm per annum. This proposal will extend the current horticultural development on the property. The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG).

DAFWA (2006) advised that 'The area forms part of the broad coastal plain of Quaternary sediments along the western margin of the Carnarvon Basin and lies on the Gascoyne River delta. The predominant Ri3 river backplain soil is an imperfectly to poorly drained reddish brown non-cracking light clay. The area of duplex De4 soil on the north end of the block is a hard setting red duplex. The assessment identified the potential for land degradation in the form of salinity and waterlogging on those soils under irrigation if not carefully managed. Therefore, I conclude that the proposed clearing of 6 hectares may be at variance with principle (g) for salinity and waterlogging.'

Therefore the proposed clearing may be at variance to this Principle.

Methodology DAFWA (2006)
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 5km West and One Tree Point Nature Reserve is located approximately 7km from the area under application. In addition the Wooramel Seagrass Bank, which is registered as National Estate is located 7.5km from the notified area. The McNeill Claypan System, registered

as an ANCA (Australian Nature Conservation Agency) Wetland and an Environmentally Sensitive Area is located approximately 500m south from the proposal.

The area under application is located within the Carnarvon horticulture district and is surrounded by horticulture proposals. The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG). The proposed clearing is not likely to impact on the environmental values of the identified conservation reserves due to the distance, small area under application and the area itself is not being managed for conservation. This proposal is therefore not likely to be at variance with this Principle.

Methodology Site visit (2006)
GIS Databases:
- ANCA Wetlands - CALM 08/01
- 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
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05

(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 may be at variance to this Principle

The area under application is located within the Carnarvon horticulture district and is surrounded by horticulture proposals. The area under application is located within a low rainfall zone of 300 mm per annum. The Gascoyne River is located approximately 500m north of the notified area. The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG).

DAFWA (2006) advised that 'It is not anticipated that eutrophication will become an issue. Long term dripper irrigation use can over time promote acute soil salt concentrations on the margins of the root zones of crop plants. When a significant proportion of the salt accumulation is sodium; future flooding, changes in irrigation practice or to the positions of high volume drippers and future rainfall events can potentially promote a migration of the harmful accumulation within the root zone of the crop. The assessment identified the potential for land degradation in the form of salinity and waterlogging on those soils under irrigation if not carefully managed. Therefore, I conclude that the proposed clearing of 6 hectares may be at variance with principle (g) for salinity and waterlogging.'

Therefore the proposed clearing may be at variance to this principle.

Methodology DAFWA (2006)
GIS Databases:
- Current WIN data sets
- Public Drinking Water Sources (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 may be at variance to this Principle

The area under application is located within a low rainfall zone of 300 mm per annum. The Gascoyne River is located approximately 500m north of the notified area. The area under application is located within the Carnarvon horticulture district and is surrounded by horticulture proposals. The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG).

DAFWA (2006) advise that 'The entire block is flood affected at times of major river flooding. Commencing in 2006, some relief floodway development and changes to prevailing roadway levels are planned, that are intended to lessen the future adverse impact of floods on the plantation area. The area forms part of the broad coastal plain of Quaternary sediments along the western margin of the Carnarvon Basin and lies on the Gascoyne River delta. The predominant Ri3 river backplain soil is an imperfectly to poorly drained reddish brown non-cracking light clay. The area of duplex De4 soil on the north end of the block is a hard setting red duplex. The assessment identified the potential for land degradation in the form of salinity and waterlogging on those soils under irrigation if not carefully managed. Therefore, I conclude that the proposed clearing of 6 hectares may be at variance with principle (g) for salinity and waterlogging.'

Therefore the proposed clearing may be at variance to this principle.

Methodology DAFWA (2006)
 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

There is no further requirement for a Works Approval or EP Act Licence for the area under application.

The proponent has an existing water licence for the property and received an amended water licence for 56,000kL/yr on 7 November 2006.

The Shire of Carnarvon advised that the land is zone 'Intensive Horticulture' under the Shire of Carnarvon Town Planning Scheme (TPS) No 10. No objections are raised to the clearing of land as proposed if the purpose is to extend only, the existing adjoining cultivated areas into the intended cleared areas. If the clearing is required to develop new land uses, or new buildings, or to implement 'downstream processing' of any adjoining horticultural use then approval for that is required pursuant to the Shire's Town Planning Scheme (TPS) No.10. As the area under application is an extension of the current horticultural development on the property there are no approvals required.

The Shire of Carnarvon Town Planning Scheme number 12 is currently being reviewed by the EPA. Apart from this no other assessment by the EPA exists for the area under application.

There is a Native Title Claim over the area under application. As the property is freehold land 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.

The proposal includes clearing of 6ha, approximately 1ha of which has already been cleared and pushed into piles (Site visit, 2006). The area cleared was determined using GPS coordinates collected during a site visit conducted on 2 November 2006. This matter has been addressed through the Mid West Regions, Local Environmental Enforcement Group (LEEG) and a Letter of Warning was sent.

DAFWA Land Degradation Assessment Report (2006) advised that 'Notwithstanding the 1992 Land Resources study report, the horticultural development of similar adjoining areas has continued. On these properties and on soil types that area in part similar, some successful banana crop development has been undertaken.'

Methodology

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Horticulture	Mechanical Removal	5	<p>The assessable criteria have been addressed and the proposal may be at variance to Principles (g, i and j).</p> <p>Principle (g, i and j): DAFWA advised that 'the assessment identified the potential for land degradation in the form of salinity and waterlogging on those soils under irrigation if not carefully managed.'</p> <p>This proposal is expected to extend the current horticultural development on the property, which is zoned for 'Intensive Horticulture'. DAFWA Land Degradation Assessment Report (2006) advised that 'Notwithstanding the 1992 Land Resources study report, the horticultural development of similar adjoining areas has continued. On these properties and on soil types that are in part similar, some successful banana crop development has been undertaken.'</p> <p>The assessing officer therefore recommends that the permit be granted with advice in the covering letter for the applicant to seek further advice from the Department of Agriculture and Food on Best Management Practices.</p> <p>It is recommended that a clearing permit be issued for 5ha of the area under application. The remaining area under application has been found to be illegally cleared and addressed by the DEC, Mid West Region, Local Environmental Enforcement Group. As such the area cleared under application has not been addressed in this assessment.</p>

5. References

DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DEC TRIM Ref DOC6625.

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.

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.

Site Visit Report (2006) Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC12831.

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)