



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2545/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: MR J. S and P.H Tomkins

### 1.3. Property details

Property: LOT 10879 ON PLAN 210796 ( CARNAMAH 6517)  
 LOT 10879 ON PLAN 210796 ( CARNAMAH 6517)  
 Local Government Area: Shire Of Carnamah  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
195		Mechanical Removal	Grazing & Pasture

## 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 type 379: Shrublands; scrub-heath on lateritic sandplain in the central Geraldton Sandplain Region	Vegetation to be cleared was in good to very good condition. It consisted of low shrub and heath with some Eucalypt species and Banksia woodland. There were overstorey species of Eucalyptus tottiana, E.falcata, E.accedens and E.camaldulensis. The middle storey was diverse in some areas, with species of Hibbertia, Hakea, Xanthorrhoea, Calothamnus and Conospermum noted. There was a Banksia menziesii woodland in the eastern section of the property, however some of this is dying.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Condition of vegetation assessed during a DEC site visit in July 2008. (TRIM ref DOC58170)
Beard vegetation type 49: Shrublands; mixed heath			

## 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 at variance to this Principle**

The application area is within the Geraldton Sandplains bioregion, which is recognised as containing very high biological diversity. This bioregion is known for proteaceous shrub heaths, rich in endemic species on sandy undulating earths (Desmond and Chant, 2001).

The proposed area is situated near to Tathra and Alexander Morrison National Parks. These national parks are renowned for their diversity of endemic wildflowers. The vegetation in these areas is kwongan which is known to contain over 70% of the species known to South-Western Australia. The application area shares the same soil and vegetation types as those within the nearby Tathra and Alexander Morrison National Parks. Therefore it is likely that the vegetation proposed to be cleared contains similar environmental values.

During a DEC site inspection (2008a) it was noted that there was a diversity of species and habitats. The soil type changed progressively from north to south, giving rise to a wide range of flora species and fauna habitats. Some areas of vegetation were quite dense with mature specimens ready to set seed, and other areas were open, allowing for more recruitment and less competition thereby promoting greater diversity. This range of

vegetation species and habitat type results in a diversity of fauna species attracted to the property to meet their food, nesting, mating and shelter requirements.

There has been historical grazing on the property which is likely to have affected the diversity of species in the short term, however the diversity across the 195 hectares is still considered to be high and the capacity for diverse regrowth was noted during the site inspection (DEC 2008a). A Priority 4 species, *Hemiandra hancocksiana* has been recorded on the lot outside the proposed clearing area.

The significance of the vegetation within the application area is an integral part of a larger consolidated area of native vegetation. The vegetation is currently contiguous with other large tracts of vegetation. Larger areas of vegetation are better situated to protect biodiversity (EPA, 2003).

The clearing proposal is within an area identified by the Environmental Protection Authority (EPA) Position Statement No. 2 (Environmental Protection of Native Vegetation in Western Australia). This position statement was implemented due to high levels of native vegetation clearing which has 'lead to a reduction in biodiversity and increase in land salinisation' (p.7 EPA, 2000), and it was recommended that land within this zone be managed to maintain environmental values. This position statement also stated that 'any further reduction in native vegetation through clearing for agriculture cannot be supported' (p.7 EPA, 2000). The local area (10km radius) is highly cleared with ~25 to 30% of native vegetation remaining.

Given the above factors the proposed clearing is at variance to this principle.

**Methodology** Keighery, 1994  
EPA, 2000  
EPA, 2003  
DEC 2008a  
GIS Databases:  
- Interim Biogeographic Regionalisation of Australia  
- Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002  
- Carnamah 50cm Orthomosaic - Landgate 2006  
- SAC Biodatasets - accessed 24 June 2008

**(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 may be at variance to this Principle**

The area proposed to be cleared is in 'good' - 'very good' (Keighery, 1994) condition. The vegetation provides a range of habitats from denser shrub areas, to more open disturbed patches and some patches of Eucalypt and mallee species. This vegetation is connected with better condition vegetation to the west, which forms a link through the landscape to conservation areas.

Within the local area (10km radius) there has been some significant clearing with ~25 to 30% of native vegetation remaining. A broader regional view (30km radius) displays a highly cleared environment (~20% of native vegetation remaining), which is likely to place habitat pressure on remaining stands of vegetation. Further clearing in this local and regional area will increase the fragmentation.

It is considered the clearing may be at variance to this principle.

**Methodology** Keighery, 1994  
DEC 2008a  
GIS Databases:  
- Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002  
- Carnamah 50cm Orthomosaic - Landgate 2006  
- SAC Biodatasets - Accessed 25 June 2008

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal may be at variance to this Principle**

There is one rare flora species occurrence within the local area (10km radius), being *Daviesia speciosa*. The closest population is 9km north west of the area under application and all other known populations of this species within a 40km radius are situated in the north west, mostly within Tathra National Park (DEC 2007 - 2008). Therefore, this species is unlikely to occur within the area under application as the population within the local area is an outlier to all other known populations.

There are 11 known populations of priority species within the local area (DEC 2007 - 2008).

The lot under application contains a former rare flora species, *Hemiandra hancocksiana*, however this species has now been amended to a Priority 4 species.

As there is little available information available on plant species within the local area and the application area has similar soil and vegetation types as the flora of conservation significance in the local area (DEC 2008b). Without a specific flora survey of the area, the proposal may be at variance to this Principle.

**Methodology** DEC 2007 - 2008  
 DEC 2008a  
 DEC 2008b  
 GIS Databases:  
 - SAC Biodatasets - accessed 24 June 2008  
 - Carnamah 50cm Orthomosaic - Landgate 2006  
 - Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002

**(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 threatened ecological communities (TEC's) within the local area (10km radius). The nearest ecological community is approximately 17km to the northwest. This community is labelled Ferricrete and is found in seasonally inundated areas, therefore, it is unlikely to occur within the application area. The proposed clearing area does not contain any known TEC habitat characteristics. It is unlikely that the proposed clearing is at variance to this principle.

**Methodology** DEC 2008a  
 GIS Databases:  
 - SAC Biodatasets, accessed 3 July 2008

**(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**

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Geraldton Sandplain	833,981	663,141	42.7
Shire**			
Carnamah	287,132	110,758	38.6
Beard Vegetation Complex*			
49	52,491	24,365	46.4
379	547,737	122,098	22.3

The area falls within the Intensive Land Use Zone identified within the Environmental Protection Authority (EPA) Position Statement No.2 on Agriculture Regions. This position statement was implemented due to high levels of native vegetation clearing which has 'led to a reduction in biodiversity and increase in land salinisation' (p.7 EPA, 2000), and it was recommended that land within this zone be managed to maintain environmental values. There is ~25 to 30% of native vegetation remaining in the local area (10km radius). The vegetation under application is a significant part of a larger remnant in this highly cleared landscape. The proposed clearing is likely to significantly compromise the ecological function of the remnant by reducing biodiversity, increasing disturbance and reducing connectivity to nearby remnants.

Vegetation type 379 is below the targeted figure of 30% which indicates that species extinction is believed to occur at an exponential rate (EPA, 2000).

The area proposed to be cleared is in 'good' to 'very good' (Keighery, 1994) condition, and contains low shrub, banksia woodland and various Eucalypt and mallee species. This large stand of vegetation is likely to be performing significant ecological processes, and the removal of it will negatively impact upon surrounding land. Given local and regional land degradation issues, and regional loss of biodiversity, it is considered that the proposed clearing is at variance to this principle.

**Methodology** Keighery, 1994  
 EPA, 2000  
 DEC 2008a  
 GIS Databases:  
 - SAC Bio Datasets - accessed 3 July 2008  
 - Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002  
 - Carnamah 50cm Orthomosaic - Landgate 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**

The area proposed to be cleared does not lie within any mapped wetlands and does not contain riparian vegetation. It is unlikely that the proposed clearing would be at variance to this principle.

**Methodology** DEC 2008a  
GIS Databases:  
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

**(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 proposed to be cleared was inspected by a representative of the Department of Agriculture and Food WA (DAFWA, 2008). DAFWA (2008) advised that soils found within the property were pale/yellow deep sands and sandy gravels over laterite. DAFWA (2008) advise that these soils are at a high wind erosion risk if exposed by clearing.

Clearing 195ha would result in an increased recharge to water table. DAFWA (2008) have advised that the risk of rising salinity levels from this increased recharge is unknown.

Given the above, clearing within the proposed area may be at variance to this principle.

**Methodology** DAFWA, 2008  
DEC 2008a

**(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 at variance to this Principle**

The application area is part of the connecting vegetation between two National Parks (Alexendar Morrison and Tathra) in the regional area. This vegetation linkage increases genetic diversity and species diversification.

The proposed clearing of 195ha of vegetation is a significant part of a larger remnant within this highly cleared landscape. The proposed clearing will reduce the ecological linkage of this remnant, which provides connectivity for flora and fauna, to nearby conservation areas.

The proposed clearing is at variance to this principle.

**Methodology** DEC 2008a  
GIS Databases:  
- CALM Managed Lands and Waters  
- Carnamah 50cm Orthomosaic - Landgate 2006  
- Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002

**(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**

Clearing 195ha within the application area would result in an increased recharge. DAFWA (2008) have advised that the risk of rising salinity levels from this increased recharge is unknown.

The proposed clearing is not in close proximity to any wetlands or watercourses and is not likely to increase sedimentation, erosion or turbidity impacts.

As the risk of clearing on surface and underground water quality is unknown it is considered that clearing may be at variance to this principle.

**Methodology** DAFWA, 2008  
DEC, 2008a  
GIS Databases:  
- Hydrography, linear  
- Hill River Arrowsmith 1.4m Orthomosaic - Landgate 2000/2001/2002  
- Carnamah 50cm Orthomosaic - Landgate 2006

**(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 clearing of 195ha of native vegetation is likely to increase surface water runoff, however the permeable sands and low topography will prevent an accumulation of surface water resulting in flooding. The proposed clearing is unlikely to be at variance to this principle.

**Methodology** DAFWA, 2008  
DEC, 2008a  
GIS Databases:  
- Hydrography, linear

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

**Comments**

The area proposed to be cleared lies within EPA Position Statement No.2 Agricultural Region. This position statement does not support further clearing for the purpose of agriculture in the agricultural region, except under some conditions.

The Lot under application had a previous NOI granted which expired in 2006. A condition under this NOI was to place an Agreement to Reserve on the property. This was done over 20% of the property or 392.4 ha. The proposed clearing is outside of this ATR (DAFWA 2008).

**Methodology**

**4. Assessor's comments**

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to principle (a), (e) and (i), maybe at variance to principle (b), (g), and (h) and is not likely to be at variance to the remaining principles.

**5. References**

- DAFWA Land degradation assessment report. (2008) Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM ref DOC 59511
- DEC (2007 - 2008) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>
- DEC (2008a) Site Inspection Report for Clearing Permit Application CPS 2545/1, Lot 10879 Carnamah. Site inspection undertaken 16/07/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC58170).
- DEC (2008b) Midwest Regional Advice. Department of Environment and Conservation Trim Ref DOC56765
- 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, Western Australia.
- EPA 2003, Clearing of up to 95 hectares of native vegetation for agriculture: Victoria Location 10883 Shire of Carnamah, Bulletin 1105, Environmental Protection Authority.
- 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. (2007). 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.

**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)