



1. Application details

1.1. Permit application details

Permit application No.: 1888/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: B&T Versaci Pty Ltd

1.3. Property details

Property: LOT 689 ON PLAN 250087 (MYALUP 6220)
Local Government Area: Shire Of Harvey
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.5		Mechanical Removal	Extractive Industry

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 6: Medium woodland; tuart & jarrah (Shepherd et al. 2001).	The proposal involves clearing 7.5 hectares of native vegetation for extractive industry.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description of the clearing application area is based on a site inspection conducted by DEC officers on 5 September 2007.
Karrakatta Complex Central And/South: Open forest of tuart-jarrah-marri (Hedde et al. 1980).	The vegetation under application comprises Eucalyptus gomphocephala (Tuart) - Agonis flexuosa (WA Peppermint) woodland, with scattered Eucalyptus marginata (Jarrah) and Eucalyptus rudis (Flooded gum). There is a complete absence of understorey species, comprising mainly pasture grasses, bracken fern, arum lily and blue lupin (DEC Site Visit, 2007).		
	The area has been parkland cleared and is currently grazed by stock.		

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 may be at variance to this Principle

The proposed clearing is for 7.5 hectares of remnant vegetation on the Swan Coastal Plain. Flora species recorded during the site visit (DEC, 2007) include *Agonis flexuosa*, *Corymbia calophylla*, *Eucalyptus marginata* and *Eucalyptus gomphocephala*, these species are scattered through out the area under application.

The Vegetation under application is parkland cleared and therefore is in a degraded condition (Keighery 1994; DEC Site Visit 2007). Additionally the area under application acts as a significant buffer to the Yalgorup/Myalup/Leschenault Coastal Ecological Linkage identified in the EPAs report on the Greater Bunbury Regional Scheme (GBRS) (EPA, 2003).

The Western Ringtail Possum (*Pseudocheirus occidentalis*) is a declared threatened species, which was recorded 900m from the area under application. The clearing of this site is likely to effect the Possum as the

area under application is suitable habitat for the species due to presence of WA peppermint Trees (*Agonis flexuosa*).

Given the above, it is considered the vegetation under application may contain a high level of biodiversity; therefore the proposal may be at variance to this Principle.

Methodology DEC Site Visit (2007);
Keighery (1994);
Heddle et al. (1980);
EPA (2000);
AGPS (2001);
GIS Databases:
- CALM Managed Lands and Waters - CALM 1/6/04;
- Register of National Estate - EA 28/01/03;
- Bunbury 50m Orthomosaic - DLI 04

(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 at variance to this Principle

The local area is known to support habitat for populations of Western Ringtail Possums (*Pseudocheirus occidentalis*), being recorded within 900m of the proposed clearing. The Western Ringtail Possum is protected under two Acts as Vulnerable (Environmental Protection and Biodiversity Conservation Act 1999, Commonwealth) and Threatened (Wildlife Conservation Act 1950, Western Australia).

The Western Ringtail Possum habitat is recorded as being *Agonis flexuosa* either as the dominant tree or as an understorey component of Eucalypt forest or woodland (Jones et al. 1994a). The vegetation under application is in a degraded condition (Keighery, 1994) and contains WA Peppermints (*Agonis flexuosa*). The area under application is considered to be significant habitat for the Western Ringtail Possum.

Within a 10km radius of the proposed clearing site, there was one other record of declared threatened fauna species, (not including the Western Ringtail Possum), being the Brush-tail Phascogale (*Phascogale tapoatafa*). There were three records of priority fauna species, consisting of the Black Stripe Minnow (*Galaxiella nigrostriata*, Priority 3), the Hooded Plover (*Charadrius rubricollis*, Priority 4) and the Western False Pipistrelle (*Falsistrellus mackenziei*, Priority 4).

The proposed clearing area lies within a 50m buffer of a wetland, the wetland has potential to support species such as the Minnow (*Galaxiella nigrostriata*) and the Hooded Plover (*Charadrius rubricollis*), as these species have all been recorded in surrounding wetlands within a 10km radius. Although the clearing does not include the wetland, clearing may disturb water quality as the proposal is within a 50m buffer, additionally affecting the fauna species associated with the wetland.

The Western False Pipistrelle (*Falsistrellus mackenziei*) and the Brush-tail Phascogale (*Phascogale tapoatafa*) are unlikely to be found in the area under application as both species require good condition forest consisting of understorey (Environment Australia 1999 & nature base website, PDF File Brush-tailed Phascogale), as this site is degraded and has no understorey it is unlikely that these fauna species are associated with the area under application.

If the area under application is cleared, this may affect the Western Ringtail Possum as the site is part of the North, South Yalgorup/Myalup/Leschenault Coastal Ecological Linkage identified in the EPAs report on the Greater Bunbury Regional Scheme (GBRS) (EPA, 2003). Any clearing will degrade this identified ecological link, exposing the Western Ringtail Possum when travelling north and south.

The area under application is likely to contain significant habitat for fauna indigenous to WA the proposal is at variance to this Principle.

Methodology DEWR (2007)
Environment Australia (1999)
DEC (2008)
GIS Databases:
SAC Bio Datasets - Threatened Fauna 15/05/08
- Bunbury 50cm Orthomosaic - DLI04

(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

A desktop study found several records of threatened and priority flora within the local area (10 km radius), including *Diuris purdiei* (DRF), *Drakaea elastica* (DRF), *Boronia capitata* subsp. *gracilis* (P2), *Acacia semitrullata* (P3) and *Caladenia speciosa* (P4).

Given the area has been parkland cleared and grazed (DEC Site Visit, 2007) and is in a degraded condition (Keighery 1994), it is unlikely that the area includes or is necessary for the continued existence of, rare flora.

Methodology DEC Site Visit, 2007
 GIS databases:
 - DEFL SAC Bio Datasets - 9/10/07;
 - Bunbury 50cm Orthomosaic - DLI04

(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**
 Two Threatened Ecological Communities (TECs) occur within the local area (10 km radius). The nearest is located approximately 6.5 km from the applied area and therefore, the proposal is considered unlikely to impact on any of these known occurrences.

Given the area has been parkland cleared and grazed (DEC Site Visit, 2007) and is in a degraded condition (Keighery 1994), it is unlikely that the area includes or is necessary for the continued existence of, TECs.

Methodology DEC Site Visit, 2007;
 GIS databases:
 - TEC SAC Bio Datasets - 9/10/07;
 - Bunbury 50cm Orthomosaic - DLI04

(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 likely to be at variance to this Principle**

Pre-European	Current extent (ha)*	Remaining (ha)*	(%)*
IBRA Bioregions			
Swan Coastal Plain	1,529,235	657,450	43
Shire of Harvey	168,294	101,085	60.1
Vegetation type:			
Beard: Unit 6	67,725	24,558	26.2
Heddle:			
Karrakatta Central And/South	49,912	14,729	29.5

* (Shepherd et al. 2001)
 ** (Department of Natural Resources and Environment 2002)
 *** Within the Intensive Landuse Zone

The area under application is located in the Swan Coastal Plain Bioregion. The extent of pre-European vegetation within this area is 43.0% (Shepherd et al. 2001); however the Karrakatta - Central and South vegetation complex (Heddle et al. 1980) has been extensively cleared within this region, and is lower than the desirable 30% threshold level target identified by the EPA (2000).

The Beard Vegetation Association of the area under application is 26.2% of the remaining pre-European vegetation (Hopkins et al., 2001). As the area under application is considered degraded, consisting of a high infestation of weeds within the under storey and sparsely scattered trees through the site, the vegetation under application is not considered to be representative of these vegetation types.

The site is part of the North, South Yalgorup/Myalup/Leschenault Coastal Ecological Linkage identified in the EPAs report on the Greater Bunbury Regional Scheme (GBRS) (EPA, 2003). Any clearing will degrade this identified ecological link.

Based on the above information, the proposal is not likely to be at variance to this Principle.

Methodology Shepherd et al. (2001);
 Hopkins et al. (2001);
 Heddle et al. (1980);
 GIS Databases:
 - Pre-European Vegetation - DA 01/01
 - Heddle Vegetation Complexes - DEP 21/06/95

(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 at variance to this Principle

The proposed clearing will occur approximately 30m to 40m to the east of a resource enhancement wetland. The vegetation consist of largely *Agonis flexuosa*, *Corymbia calophylla*, *Eucalyptus marginata* and *Eucalyptus gomphocephala*, these species are scattered through out the area under application (Site Visit 2007). These species are not considered to be in association with the watercourse or wetland; however according to aerial photography some vegetation on the western boundary of the site maybe in association with the wetland. The vegetation under application is partially within the recommended buffer, being 50m from the wetland (WRC), the buffer is required to protect the wetland from degradation (WRC). As this proposed site is within a buffer zone, clearing may affect the wetland's water quality.

Given the above information the clearing of vegetation within the buffer is at variance to this principle.

Methodology GIS Databases:

- Hydrography, Linear - DOE 1/2/04
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC;
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC;
- ANCA Wetlands - CALM 06/95
- EPP Area - DEP 06/95
- EPP Lakes - DEP 1/12/92
- RAMSAR, Wetlands - CALM 14/02/03

(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 soils of the area under application are described as Undulating dune landscape with some steep dune slopes and underlain by aeolianite at depth: chief soils are brown sands. (Northcote 1960-68).

According to DAFWA's site survey (2007) the property is located in high rainfall, with sands prone to leaching and the landscape drains to the ocean. These factors will minimise salinity risks. The risk of salinity causing land degradation is low. Removal of native vegetation is unlikely to cause water logging on the site.

Given the location of the proposed clearing, without adequate management there is a high risk of wind erosion (due to sand extraction), therefore the proposed clearing is therefore at variance to this principle.

Methodology DAFWA (2007);

- GIS databases:
- Acid Sulfate Soil Risk Map, SCP - DoE 01/02/04;
 - Salinity Risk LM 25m - DOLA 00;
 - Groundwater Salinity, Statewide - 22/02/00

(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 applied area is abutting the Myalup State Forest (east). Crampton Nature Reserve is 1.5km north, Yalgorup National Park is 3.6km west and there are 3 other nature reserves and an unnamed C-class reserve for tuart conservation and restoration in the local area (10km South).

The Myalup State Forest contains pine plantations where it adjoins the property in question; due to this the conservation value of this reserve is low.

The applied area has been identified as a constrained area and forms part of the larger Yalgorup/Myalup/Leschenault Coastal Ecological Linkage identified in the EPAs report on the Greater Bunbury Regional Scheme (GBRS) (EPA, Appendix 4, 2003). In addition to this, according to the EPA GBRS, Appendix 4 the applied area is within the recognised Protection area.

Given the above, the proposal is at variance to this Principle.

Methodology EPA (2003);

- GIS Databases:
- CALM Managed Lands and Waters - CALM 01/07/05;
 - Bunbury 50m Orthomosaic - DLI 04

(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 wetland adjacent to the applied area (West) is listed in two management categories (Wetland evaluation, process of assessing the level of significance of a wetland) in accordance to the Water and Rivers Commission Position Statement (2001). The two categories are multiple use (Wetlands with few important ecological attributes and functions remaining) and Recourse enhancement (Wetlands which may have been partially modified but still support substantial ecological attributes and functions).

The proposed clearing lies within the Harvey Diversion-Harvey River Catchment. The salinity levels in this area are listed as being between 1000-3000 TDS, with an average annual rainfall of 900mm and the soils do not have a high salt store. This indicates that salinity in local groundwater areas is not considered to be a high risk.

The proposed clearing is on soils that are at risk to nutrient loss; however eutrophication is unlikely due to the clearing activities.

Methodology Water and Rivers Commission (2001);
GIS Databases:
- Geomorphic Wetlands (Classification), Swan Coastal Plain;
- 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

DAFWA (2007) advises the risk of waterlogging when clearing native vegetation is low. Therefore is not likely to be at variance to this principle.

Methodology DAFWA (2007)

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

Comments

The Shire of Harvey (2007) has advised that an application for an extractive industry on the property was refused on 17 September 2007 due to Council considering, the native vegetation to be significant in terms of providing linkages between the wetland and vegetation on adjoining properties. Refer to TRIM reference DOC34688.

One public submission received expressed concerns over the proximity to wetlands, conservation areas, accessing groundwater, and a reduction in amenity. Refer to TRIM reference DOC32717.

The applied area lies within a RIWI groundwater approved Plan area, and any dewatering requires a licence issued by the Department of Water (DoW), as the Shire of Harvey did not approve the application no licence was granted.

Methodology Shire of Harvey (2007)

4. Assessor's comments

Comment

The assessing officer advises that assessable criteria have been addressed the proposal is at variance to Principles (b) and (h); may be at variance to Principles (a), (f) and (g); and is not likely to be at variance to the remaining clearing principles.

5. References

- AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
- DAFWA Land Degradation Assessment Report (2007). Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref: DOC32650.
- DEC Site Visit (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC33362.
- 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.
- Department of the Environment and water Resources (DEWR), (2007), Threatened Species Fact Sheet, Western Ringtail Possum
- Environment Australia (1999), The Action Plan for Australian Bats
- 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.
- EPA (2001) Environmental Protection of Wetlands. Preliminary Position Statement No.4. Perth, Western Australia.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In

Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
 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.
 Shire of Harvey (2007). Advice of refusal for EIL on Lot 689 Old Coast Rd, Myalup, TRIM Ref: DOC34688.
 Water and Rivers Commission (2001). Water and Rivers Commission Position Statement: Wetlands. Water and Rivers Commission, Perth.

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)