



1. Application details

1.1. Permit application details

Permit application No.: 327/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: PMR Quarries P/L

1.3. Property details

Property: M70/883
Local Government Area: City Of Rockingham
Colloquial name:

1.4. Application

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

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 998: Medium woodland; tuart. (Hopkins et al. 2001, Sheperd et al. 2001).	The vegetation under application consists Eucalyptus gomphocephala (Tuart), E. marginata, Allocasuriana sp, Banksia attenuata, B. menziesii overstorey over Acacia pulchella, Macrozamia riedlei, Hibbertia sp, and various herbaceous understorey species.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Observed during site visit (12 May 2005) The proposal is for sand extraction. There is already an existing working quarry on the property. The land is zoned urban and other regional roads. The lands to the north and south have been cleared and are currently being developed for housing. It is proposed that the land under assessment will form part of the new housing development following the exhaustion of quarry material.
Heddl vegetation complex - Karrakatta Complex Central and South (Heddl et al. 1980).	Mature Tuart trees in good condition were observed on the property. The vegetation condition on the property ranges from degraded to very good condition (Keighery, 1994).		The western section of the application is within an Environmentally Sensitive Area being within 2.5km of Walyungup04 and Walyungup05 TEC's. These TEC's are described as woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain. Inspection of the area and the plant species observed indicates that the TEC is unlikely to be present on the property.

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 vegetation was assessed during a site visit as being in degraded to very good condition (Keighery, 1994). The vegetation of the Swan Coastal Plain is recognised as having high biodiversity value (Bush Forever, 2000). In addition, the location contains mature tuart trees in good condition. Tuart ecological communities have been noted to be under conservation threat from development throughout its range.

Methodology Site visit 12 May 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 fauna database indicates there are 2 Priority Listed Fauna species within a 5km radius of the proposed clearing.

It is unlikely that the Priority Listed Fauna recorded in the local area would be found in the areas under assessment. The majority of the fauna has disparate habitat requirements and are unlikely to be extant or utilize the remnants which are proposed to be cleared. Furthermore, the information provided is based on historical records and thus the likelihood of finding the listed species under present urban/ industrial conditions is minimal.

Methodology CALM advice

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

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

There are no known DRF or Priority species located within 5 km of the proposed clearing. There is a low probability of the proposal impacting on declare rare or priority flora.

Methodology Declared Rare and Priority Flora List - 13/8/03

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

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

There are at least 20 known records of Threatened Ecological Communities (TECs) within the local area (5km radius). These TEC's do not occur on the within the same vegetation types.

The western part of the land to be cleared is within an Environmentally Sensitive Area - being within 2.5 km of Walyungup04 and Walyungup05 TEC's. These TEC's are described as woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain.

Inspection of the area and the plant species observed indicates that neither of these TECs is unlikely to be present on the property.

This was confirmed by CALM.

Methodology Site visit (12 May 2005)
CALM advice
GIS databases:
Threatened Ecological Communities - CALM 12/4/05
Threatened Plant Communities - DEP 06/95.
Site Visit (HD23892)

(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 may be at variance to this Principle**

The State Government is committed to the National Objectives Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European (Department of Natural Resources and Environment 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported.

The application is located in the Swan Coastal Plain Bioregion in the City of Rockingham. The extent of native vegetation in these areas is 43.0% and 35.1% respectively. The vegetation is also located within the Bush Forever study area of the Perth Metropolitan Region (Bush Forever, 2000). Bush Forever seeks to ensure that at least 10% of each vegetation complex is retained. EPA Guidance Statement No. 10 has similarly recognised that in constrained areas there is a target at least 10% of vegetation complex for retention.

The vegetation proposed to be cleared is part of Beard vegetation association 998 (Hopkins et al. 2001) and Heddle vegetation complex Karrakatta Complex Central and South (Heddle, 1980).

Karrakatta Complex Central and South has less than 30% of its association remaining. This vegetation complex is also poorly reserved.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	In Reserves/CALM-managed land, %
IBRA Bioregion - Swan Coastal Plain	1,529,235	657,450	43.0	Depleted	
City of Rockingham	24,326	8,534	35.1	Depleted	
Beard veg type - 998	51,094	18,320	35.9	Depleted	35.9
Heddle- Karrakatta Complex Central and south	49,912	14,729	29.5	Vulnerable	2.5

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Methodology GIS Databases:
Heddle, 1980
Hopkins et al, 2001
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**
There are no watercourses or wetlands present in this location. However Outridge Swamp occurs about 100 m to the south west of the proposed clearing. The vegetation west of the proposed clearing has already been parkland cleared and has market garden development present.

Methodology Site visit (12 May 2005)
Aerial photography
GIS databases:
Hydrography, linear - DoE 01/02/04
Geomorphic wetlands - Swan Coastal Plain - DoE 15/09/04
EPP Lakes - DEP 28/07/03
EPP Wetlands (draft) - DEP 21/07/04
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 of 31.19 ha it is unlikely to raise any potential land degradation issues for this proposal. There were no signs of salinity or waterlogging present at time of site visit.

There is no recognised acid sulphate soils risk from the clearing of this area.

Methodology Acid Sulphate Soil risk map, SCP DoE 04/11/04
Salinity Risk LM 25m

(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 at variance to this Principle**
One CALM managed reserves is located within a 5km radius of the proposed clearing. The un-named reserve is located about 4km to the south of the proposed clearing and is reserved for explosives and forestry purposes.

Clearing should not adversely affect the conservation areas in the area.

Methodology CALM Managed Lands and Waters - 1/8/04

(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**
Proposed clearing is not expected to impact on groundwater tables. The property is not in a water catchment or groundwater protection area.

Clearing is likely to increase groundwater recharge so lowering groundwater salinity slightly. The depth to groundwater is likely to be less than 5m in the lower lying areas in the west-northwest. It is not advisable to mine closer than 3 m to the water table as this will increase the groundwater salinity through evaporation loss. This may already be covered by the mining lease conditions.

Water quality could be affected by any hydrocarbons and nutrients spilled during mining due to the close proximity of the water table (pers. comm. Robin Smith).

Methodology Robin Smith, Senior Hydrologist DoE
GIS database: Public Drinking Water Source Areas (PDWAs) - DoE 4/11/04

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Comments **Proposal is not likely to be at variance to this Principle**
Flooding impacts are unlikely to occur as a result of the proposed clearing due to its size and location. The located is more than 100 m from any wetland and is elevated 10-45m.

Methodology GIS database: Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
The City of Rockingham has concerns that the amount of sand extraction appears excessive and will result in the landform being unreasonably modified. The City has requested a detailed earthworks plan, a plan depicting vegetation that will not be affected, and a traffic management plan from LandCorp who will be taking over the site after the sand extraction. As local government issues extractive industry licences and the City of Rockingham should be able to control these issues.

The area is zoned as urban under the Metropolitan Region Scheme. As such, its ultimate development as an urban area has been planned by the Government.

Baldivis Community Association has requested that preservation of mature trees and accompanying native vegetation on the land, given the mining permit has been revoked and the land to be used for urban development. It is noted that the mining lease is still current and therefore these issues are not relevant.

There is a Native Title Claim over the area under application by the Gnaala Karla Booja peoples. However, the mining lease has been granted, and the clearing is for a purpose consistent with the lease, therefore the granting of a clearing permit is not a future act under the Native Title Act 1993.

The Conservation Council's concerns regarding clearing in this part of the South West of WA have been addressed in the above clearing principles. It should also be noted that the land is zoned urban.

LandCorp are supporting the clearing application as they are negotiating with the current tenants to acquire the land for housing in the future. They also advised that the areas with Tuarts and an area with Banksias will be cordoned off with a suitable surrounding buffer, and not subject to any clearing/extraction (refer to IN22060 attachment 2).

Methodology

5. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mining	Mechanical Removal	31.19	Grant	<p>Whilst the application maybe at variance with clearing principles a) and e) the vegetation proposed to be clearing is located within the Bush Forever study area of the Perth Metropolitan Region (Bush Forever, 2000). Bush Forever seeks to ensure that at least 10% of each vegetation complex is retained. EPA Guidance Statement No. 10 has similarly recognised that in constrained areas there is a target at least 10% of vegetation complex for retention. The vegetation representation for this area is well above 10%.</p> <p>It is also noted that the land is zoned urban and will be cleared for housing in the future.</p>

6. References

- AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
- 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 HD24065.
- 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.
- EPA (2003) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- 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.
- 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, 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.