



1. Application details

1.1. Permit application details

Permit application No.: 609/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Oasis Holdings Pty Ltd

1.3. Property details

Property: LOT 50 ON DIAGRAM 87061 (LESCHENAULT 6233)
 Local Government Area: Shire Of Harvey
 Colloquial name: Lot 50 Stanley Rd

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Mechanical Removal	Industrial
2.3		Mechanical Removal	Industrial
		Mechanical Removal	Industrial

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 1000: Medium forest - Jarrah / Marri/ Low woodland; Banksia / low forest Tea-tree (Melaleuca spp.) (Hopkins et al. 2001; Shepherd et al. 2001)	The proposal involves clearing up to 2.0ha of relatively undisturbed open woodland for industrial storage.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The description of the application area is based on a site visit conducted by DoE officers on 10 May 2005, and the results of a subsequent flora survey undertaken by Outback Ecology during September 2006.
Hedde Vegetation Complex - Bassendean Complex - Central and South No.44. Vegetation ranges from woodlands of E. marginata - C. fraseriana - Banksia spp. to low woodlands of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of E. marginata to E. todtiana in the vicinity of Perth (Hedde et al., 1980).	The vegetation under application consists of an Open Woodland of Eucalyptus marginata over low woodland of Banksia attenuata over a tall shrubland of Kunzea ericifolia over a mixed shrubland (Outback Ecology, 2006). The vegetation was generally considered to be in very good to excellent condition (Keighery, 1994; Outback Ecology, 2006), with some disturbance around the eastern edges in good condition (Keighery 1994; DEC Site Visit 2005). Over half of the property (approximately 5ha) has been cleared. A sand extraction activity occurs on the eastern boundary of the property, corresponding with the disturbed areas mentioned above (DEC, 2005).		

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 area proposed to be cleared contains a dense open woodland in very good to excellent condition (Keighery, 1994).

The vegetation under application consists of an Open Woodland of *Eucalyptus marginata* over low woodland of *Banksia attenuata* over a tall shrubland of *Kunzea ericifolia* over a mixed shrubland (Outback Ecology, 2006).

Despite the application area containing vegetation that is of very good to excellent condition, it is unlikely that the vegetation represents an area of higher biological diversity than other, larger areas of remnant vegetation within the 10km local area.

Based on the scale (up to 2.0ha) of the proposed clearing and the remaining remnants (approximately 30%) within the 10km local area, the proposal is unlikely to be at variance to this principle.

Methodology Keighery (1994)
Outback Ecology (2006)
GIS Databases:
-Pre European Vegetation - DA 01/01
-CALM Managed Lands and Waters - CALM 1/07/05
-Bunbury 50cm ORTHOMOSAIC - DLI04

(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 area proposed to be cleared contains a dense open woodland in very good to excellent condition (Keighery, 1994).

The vegetation under application consists of an Open Woodland of *Eucalyptus marginata* over low woodland of *Banksia attenuata* over a tall shrubland of *Kunzea ericifolia* over a mixed shrubland (Outback Ecology, 2006).

There is 1 record of 1 'Endangered', 4 occurrences of 2 'Vulnerable', 5 records of 2 'Priority', and 2 records of 2 'Specially Protected' fauna species within the 10km local area. The closest record, Chuditch (*Dasyurus geoffroii*), is approximately 1.5km north west of the application area (SAC Bio Datasets 080607).

The proposed clearing is highly likely to result in displacement of (and some loss of) individual fauna within the application area, and place pressure on resources within adjacent bushland as refugee fauna attempt to re-establish within these areas. However this proposed clearing of 2.0 hectares is not likely to have a significant impact on the survival of any Threatened, Priority, locally significant or other indigenous fauna populations.

Aerial photography shows that there are extensive areas of native vegetation remaining in the 10km local area that appear to be in similar condition to that of the application area. Therefore, the fauna species are likely to find habitat in equal or better condition (with fewer disturbances) within the nearby remnants.

Given the scale (up to 2.0ha) of the proposed clearing, and because of the presence of extensive areas of similar vegetation in similar condition and in close proximity to the area under application, the 2.0 hectare area under application is not considered to be significant habitat for indigenous fauna and the proposal is therefore considered unlikely to be at variance to this principle.

Methodology Keighery (1994)
Outback Ecology (2006)
SAC Bio Datasets (080607)
GIS Databases:
-CALM Managed Lands and Waters - CALM 1/06/04
-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**

The area proposed to be cleared contains a dense open woodland in very good to excellent condition (Keighery, 1994).

The vegetation under application consists of an Open Woodland of *Eucalyptus marginata* over low woodland of *Banksia attenuata* over a tall shrubland of *Kunzea ericifolia* over a mixed shrubland (Outback Ecology, 2006).

There are 15 records of 5 Declared Rare taxa and 44 records of 12 Priority flora species occurring within the 10km local area (SAC Bio Datasets 080507). The closest record, *Verticordia attenuata* (Priority 3), is approximately 256m south of the application area (SAC Bio Datasets 080607).

A floristic survey including the application area was conducted by Oasis Holdings Pty Ltd in September (Spring) 2006 involving 3.6 hectares of native bushland at Lot 50 Stanley Road. The area was examined by aerial photography and from this analysis seven transects were selected to be surveyed, allowing for a representation of geographical and floristic variation (Outback Ecology, 2006).

A total of 101 plant taxa were identified within the study area. No Declared Rare Flora (DRF) were recorded during the survey, however two Priority flora species *Acacia semitrullata* (Priority 3) and *Caladenia speciosa* (Priority 4) were documented (Outback Ecology, 2006).

Acacia semitrullata (Priority 3) was not targeted during the survey but was however opportunistically identified (Outback Ecology, 2006). Advice from the DEC Regional Botanist (2007) advised that this species is not considered 'regionally significant'. Given that this population of *Acacia semitrullata* (Priority 3) was not surveyed and small in scale, it is unlikely to be a significant loss in species population (TRIM ref DOC15916).

Advice from the DEC Species and Communities Branch (2007) advised that *Caladenia speciosa* (Priority 4) 'is more widely spread than what appears on our databases' and based on the population size of the species within the application the clearing could go ahead. Therefore, the protection of the identified population within the application area is considered unnecessary, given its' small size (TRIM ref DOC15916) and unlikely to be a significant loss in species population.

Based on the scale (up to 2.0ha) of clearing proposed, the small populations of *Acacia semitrullata* (Priority 3) and *Caladenia speciosa* (Priority 4) identified within the application area, the advice received from the Species and Communities Branch and DEC Regional Botanist as well as the extensive areas (Ex Dir Freehold) of remnant vegetation adjoining the application to the north (which may contain populations of the species in question, currently unsurveyed), it is unlikely that the proposal is at variance to this Principle.

Methodology Keighery (1994)
Outback Ecology (2006)
SAC Bio Datasets (080607)
BCI Threatened Orchids Project Officer, South West Region (2007) (TRIM ref DOC24055)
DEC Regional Botanist, South West Region (2007) (TRIM ref DOC15916)

(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 4 occurrences of 2 Threatened Ecological Communities (TEC's) within the 10km local area. The closest of the records, community type SCP3c (*Eucalyptus calophylla* - *Xanthorrhoea preissii* woodlands and shrub lands, Swan Coastal Plain), is approximately 9.5km south, south-east of the application area (SAC Bio Datasets 070607).

The area proposed to be cleared contains a dense open woodland in very good to excellent condition (Keighery, 1994). Specifically, the vegetation under application comprises open *Eucalyptus marginata* woodland over low *Banksia attenuata* woodland over a tall *Kunzea ericifolia* shrubland over a mixed shrubland (Outback Ecology, 2006).

From GIS Database analysis, both TEC types found within the 10km local area are associated with different soils and vegetation complexes than those found within the application area.

There is the possibility of the community type Muchea Limestone (shrublands and woodlands on Muchea Limestone) occurring within the application area, due to similarities in soil and vegetation complexes. The Muchea Limestone TEC favours habitat around the Bassendean/Pinjarra Plain interface.

Given the above, it is unlikely that the proposed clearing would be at variance to this principle.

Methodology Keighery (1994)
SAC Bio Datasets (070607)

(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 area proposed to be cleared contains a dense open woodland in very good to excellent condition (Keighery, 1994).

(ha)*	Current Extent (ha)		Remaining (%)	
IBRA Bioregion Swan Coastal Plain*** Shire (LGA)	94,176	22,514	23.9	
Harvey#	168,294	101,085	60.1	
Beard Vegetation Association: 1000	99,841	25,683	25.7	
Mattiske Vegetation Complex: N/A				
Hedde Vegetation Complex: Bassendean Complex - Central and South No. 44			87,520	23,417
				26.8

statistics from Shepherd et al 2001 (Technical Report 249)

* statistics from AGWA 2005 (Shepherd et al)

*** Within the Intensive Landuse Zone

The application area consists of Swan Coastal Plain IBRA Bioregion of which has a vegetation representation remaining of 23.9%. The State Government is committed to the National Objectives Target for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (EPA, 2000).

There are extensive areas of remnant vegetation within the 10km local area (north of the application area). Given this, it is unlikely that the 2.0 hectares of vegetation within the application area would be considered 'significant' as a remnant in a local context even though the vegetation is in very good to excellent condition (Keighery, 1994).

However, the application is situated on the edge of the remnant near degraded areas, which by clearing, will further degraded the remnant.

Furthermore, the remnant may not be 'significant' in a local context but the vegetation represents a vegetative association that is in very good to excellent condition that has been extensively cleared

Given the above reasonings, the application may be at variance to this principle.

Methodology EPA (2000)
Keighery (1994)
Shepherd et al. (2006)
Department of Natural Resources and Environment (2002)
Shepherd et al. (2001)
Hedde et al (2002)
CALM (2005)
GIS databases:
Interim Biogeographic Regionalisation of Australia - EM 18/10/00
-Local Government Authorities - DLI 8/07/04
-Pre European Vegetation - DA 01/01
-Hedde 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 not likely to be at variance to this Principle**
The closest of the wetland records is an un-named dampland approximately 1.0km north east of the area under application, and the closest of the river records is the Brunswick River approximately 1.1km south of the area under application.

Given the scale (up to 2.0ha) of the clearing and the distance to the closest wetland and river to the area under application the proposed clearing is not likely to be at variance to this principle.

Methodology GIS databases:
-ANCA, Wetlands - CALM 08/01
-EPP Areas - DEP 06/95
-EPP Lakes - DEP 28/07/03
-Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DoE 21/07/03
-Hydrography Linear - DoE 1/2/04
-RAMSAR, Wetlands - CALM 21/10/02

(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 proposed clearing for industrial site purposes has been assessed against the original land degradation risk assessment. That assessment identified soil erosion and eutrophication hazards' (DAFWA, 2007).

'There is some risk that soil erosion may occur after the initial clearing prior to the development of the proposed industrial site. The eutrophication risk associated with the proposed clearing is also low as the site is separated from the Leschenault inlet by approx 2.5km and from the Wellesley River by about 1km' (DAFWA, 2007).

Therefore, it is concluded that the proposed clearing is unlikely to be at variance with principle (g) (DAFWA, 2007)

The major land degradation issues are associated with the final land use of the application area. As the purpose has changed from extractive industry to industrial development, the land degradation issues are unlikely to cause appreciable land degradation.

In addition, the applicant has committed to a land degradation management plan, focusing on implementing hydromulching, P.V.A., wind breaks, replanting and the use of limestone (TRIM ref DOC24594).

Given the advice provided from DAFWA and the and the proponent's commitment to a land degradation management plan the proposal is not likely to be at variance to this principle.

Methodology

(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 application area shares a common boundary (to the north) with DEC (Ex Dir Freehold) managed land.

The proponent has proposed to retain a 15m wide buffer along this boundary to protect against potential edge effects from the proposed clearing (CALM, 2005).

Given the above, the application area is unlikely to impact on the values of the conservation area. Therefore, the application is unlikely to be at variance to this principle.

Methodology CALM (2005)
GIS database:
- CALM Managed Lands and Waters - CALM 1/06/04

(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 area under application is located within the Leschenault Estuary - Collie River catchment and is not within a gazetted public drinking water source area or a defined Country Areas Water Supply (CAWS) catchment.

The area proposed to be cleared has a low salinity risk (GIS Database) and a groundwater salinity of 500 - 1000 mg/L (GIS database).

Due to the small scale (up to 2.0ha) of the proposed clearing and the remaining remnants within the local area, the proposed clearing is not likely to cause deterioration of water quality.

Methodology GIS databases:
-Hydrographic Catchments, Catchments - DoE 3/4/03
-Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
-CAWSA Part IIA Clearing Control Catchments - DoE 17/11/05
-Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
-Salinity Risk LM 25m - DOLA 00
-250K Map Series, Groundwater Salinity - DOW
-RIWI Act, Surface Water Areas - DOW

(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 application consists of yellow deep sands and pale deep sands with a majority of the land being comprised

of yellow deep sands (DAFWA, 2005). As the application is associated with sandy soils, the site is likely to be free draining.

Given the scale of the application (up to 2.0ha), the associated sandy soils and the remaining remnants within the local area, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology (DAFWA, 2005)
GIS databases:
-Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The property is zoned with the Kemerton Buffer under the Shire of Harvey TPS No.1 within the Kemerton Industrial Zone Buffer Area (SCA No.2).

- * Light industry uses, as defined in the State Industrial Buffer Policy (Statement of Planning Policy No.4) are not permitted.
- * The objective of this zone is 'to serve as a low intensity use area between the Kemerton Heavy and Ancillary Industrial zone and surrounding land uses' (TRIM ref DOC27044).
- * 'No further residential or incompatible development shall take place in this zone and where possible public recreation and flora and fauna conservation shall be encouraged' (TRIM ref DOC27044).

The applicant requires developmental approval from the Shire of Harvey. This has not been issued.

No other approvals are required from the Department of Environment and Conservation or Department of Water.

No other public submissions have been made for this proposal to date.

Methodology GIS Database:
-Town Planning Scheme Zones - MFP 8/98

4. Assessor's comments

Comment

Assessable criteria have been addressed and the proposal was found to maybe be at variance to principle (e) and not likely to be at variance to all remaining principles.

5. References

- BCI Threatened Orchids Project Officer, South West Region (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC20455.
- CALM (2005). Comments on Clearing Application, Department of Conservation and Land Management, Western Australia. TRIM Ref: IN24786.
- DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref XXXXX.
- 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.
- Heddle, 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 (updated 2002).
- Heddle, 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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Outback Ecology (2006). Vegetation Survey of Bushland at Lot 50 Stanley Rd, Leschenault, and General Recommendations to Minimise Soil Erosion. TRIM Ref: DOC17592.
- Regional Botanist, South West Region (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC
- SAC Bio Datasets (080607) Department of Environment and Conservation, Kensington, 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.

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)

