



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1937/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Okeland Pty Ltd

### 1.3. Property details

Property: Lot 19 on Plan 14716 (Lot No. 19 Clyde Road BALDIVIS 6171)  
 Lot 20 on Plan 14716 (Lot No. 20 Clyde Road BALDIVIS 6171)  
 Lot 21 on Plan 14716 (Lot No. 21 Baldivis Road BALDIVIS 6171)  
 Local Government Area: City Of Rockingham  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	26	Mechanical Removal	Building or Structure

## 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
Hedde Complex: Vegetation	The proposal is to clear 26 <i>Eucalyptus gomphocephala</i> trees for the purpose of conducting bulk earthworks for a residential subdivision.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on 25 July 2007.
Karrakatta Central and South - Predominantly open forest of <i>E. gomphocephala</i> - <i>E. marginata</i> - <i>E. calophylla</i> and woodland of <i>E. marginata</i> - <i>Banksia</i> species	The vegetation under application comprises individual <i>Eucalyptus gomphocephala</i> trees with no understorey present.		
Beard Associations: Vegetation			
1001 - Medium very sparse woodland; jarrah, with low woodland; banksia and casuarina			
998 - Medium woodland; tuart			

(Shepherd 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 comprises *Eucalyptus gomphocephala* with no understorey present, and is in completely degraded condition. Given the completely degraded condition and the low species diversity of the vegetation under application it is not considered likely that it comprises a high level of biodiversity.

**Methodology** DEC site visit 25/7/07

**(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 vegetation under application comprises individual *Eucalyptus gomphocephala* with no understorey present and therefore would not be likely to provide suitable vegetation cover for ground-dwelling fauna such as Quenda.

Some of the mature *E. gomphocephala* are likely to be of hollow-bearing age, and therefore may contain hollows with the potential to be used for habitat by fauna species such as the threatened Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*).

Given that the vegetation under application may include habitat hollows that could be utilised by Carnaby's Black Cockatoo, it is considered that it may comprise significant habitat for this species or other threatened fauna. A condition has been placed on the permit requiring a fauna survey to identify potential habitat hollows, and relocation of fauna as necessary.

**Methodology** DEC site visit 25/7/07

**(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**

There are two known populations of the Declared Rare Flora (DRF) *Drakaea elastica* and *Dillwynia dillwynioides* within the local area (5km radius), which are located approximately 4km to the east of the area under application. *D. elastica* is generally found in low-lying situations adjoining winter-wet swamps (Western Australian Herbarium 1994) and *D. dillwynioides* is generally found in winter-wet depressions (Western Australian Herbarium 1996).

There are also two known populations of the Priority flora *Acacia benthamii* (P2) and *Jacksonia sericea* located approximately 4.5km to the southwest of the applied area. *A. benthamii* is a shrub generally found on limestone breakaways, and *J. sericea* is a low spreading shrub found on sandy soils (Western Australian Herbarium 1996).

Given that the vegetation under application is in completely degraded condition with no understorey present, it is therefore not considered likely to include the aforementioned Priority listed shrubs.

In addition, given that the DRF in the local area are found in winter-wet areas and the area under application is located on a sandy rise, and given the distance to the nearest DRF population, the vegetation under application is not considered likely to include, or be necessary for the maintenance of, rare flora.

**Methodology** DEC site visit 25/7/07  
Western Australian Herbarium (1994)  
Western Australian Herbarium (1996)  
GIS Database:  
SAC Bio datasets accessed 27/07/07

**(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 15 known occurrences of Threatened Ecological Communities (TEC) within the local area (5km radius), with the closest located approximately 2.9km to the northwest of the applied area.

These TECs have been identified as Floristic Community Types 19a (sedgeland in Holocene dune swales of the southern Swan Coastal Plain) and 19b (woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain), and are associated with seasonal wetlands (Government of Western Australia (2000)).

Given that the TEC in the local area are associated with Holocene dune swales, and the area under application is located on a sandy rise, and given the distance to the nearest TEC, the vegetation under application is not considered likely to include, or be necessary for the maintenance of, a TEC.

**Methodology** DEC site visit 25/7/07  
Government of Western Australia (2000)  
GIS Databases:  
SAC Bio datasets accessed 27/07/07

**(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**

The vegetation under application is identified by Heddle et al. (1980) as 'Karrakatta complex - Central and South' of which there is 29.5% of pre-European vegetation remaining, which is considered to be of vulnerable status for biodiversity conservation (Department of Natural Resources and Environment 2002, EPA 2006).

The vegetation under application is also part of Beard vegetation associations 998 and 1001 of which there is 41.5% and 26.5% respectively remaining (Shepherd 2006), which are considered to be depleted and vulnerable respectively (Department of Natural Resources and Environment 2002).

The vegetation under application comprises 26 *Eucalyptus gomphocephala* trees and is considered to be in completely degraded condition, with no understorey present, and it is therefore not considered likely that the vegetation is significant as a remnant in an area that has been extensively cleared.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status***	% in reserves
Swan Coastal Plain	1,501,456	571,758	38.1**	Depleted	
City of Rockingham	24,326	8,534	35.1*	Depleted	
Heddle vegetation complex			***		
Karrakatta Complex - Central and South	49,912	14,729	29.5	Vulnerable	2.5
Beard vegetation associations					
1001	57,412	15,241	26.5	Vulnerable	
998	51,017	21,178	41.5**	Depleted	

\* (Shepherd et al. 2001)

\*\* (Shepherd 2006)

\*\*\* (EPA, 2006)

\*\*\* (Department of Natural Resources and Environment 2002)

**Methodology** DEC site visit 25/7/07  
 Department of Natural Resources and Environment (2002)  
 EPA (2006)  
 Shepherd (2006)  
 GIS Databases:  
 Heddle Vegetation Complexes - DEP 21/06/95  
 Pre-European Vegetation - DA 01/01

**(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 nearest wetland is a multiple use wetland located approximately 340m to the northeast of the northern extent of the area under application. There is also a Conservation Category Wetland located approximately 800m to the north and the Peel Main Drain is located 1.3km to the east. The vegetation under application comprises individual *Eucalyptus gomphocephala* trees.

Given the distance to the nearest wetland, and that no wetland dependent vegetation was observed during the site visit, it is not considered likely that the vegetation under application is growing in, or in association with a watercourse or wetland.

**Methodology** DEC site visit 25/7/07  
 GIS Databases:  
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain y DEC  
 Hydrography, linear (hierarchy) - DOW

**(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 soils within the area under application are identified as part of Spearwood S2a and S4a Phase, which are described as deep siliceous yellow-brown sands or pale sands. S2a phase soils are associated with a low risk of land degradation, however S4a soils are associated with a very high risk of wind erosion, a high risk of phosphorus export and a moderate to low risk of acid sulphate soils (State of Western Australia 2005).

The removal of vegetation from site will expose the sandy soils resulting in the potential to cause wind erosion.

Although the soils identified on site have a very high risk of wind erosion and a high risk of phosphorus export, the vegetation under application is limited to 26 *Eucalyptus* trees and is considered to be in a completely degraded condition. In addition, although the ground within the area under application is covered with non-native grasses, which would minimise the risk of wind erosion. It is therefore not considered likely that the proposed clearing would result in appreciable land degradation.

In addition, the risk of wind erosion will be addressed by the dust suppression requirements of the Bulk Earthworks approval issued by the City of Rockingham. The City of Rockingham has also imposed a moratorium on summer bulk earthworks, to minimise wind erosion and dust.

**Methodology** State of Western Australia (2005)

**(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 nearest conservation reserve is the Rockingham Lakes Regional Park and a Bush Forever site, which is located approximately 600m to the north of the area under application.

The vegetation under application comprises individual *Eucalyptus* trees and is in completely degraded condition with limited connectivity to the surrounding vegetation. Therefore the vegetation under application has limited value as an ecological corridor to facilitate the movement of fauna.

Given the distance to the nearest conservation reserve, and that the vegetation under application is in completely degraded condition, it is not considered likely that the proposed clearing would have an impact on the environmental values of any nearby conservation reserve.

**Methodology** DEC site visit 25/7/07  
GIS Databases:  
Bushforever - MFP 07/01  
CALM Regional Parks - CALM 12/04/02

**(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 nearest wetland is located 340m to the northeast of the applied area and the nearest watercourse is the Peel Main Drain which is located approximately 1.3km to the east. The area under application has a low salinity risk and a moderate to low acid sulphate soil risk.

Due to the high infiltration rates of the sandy soils identified within the area under application, and the distance to the nearest wetland it is not considered likely that the proposed clearing would cause water erosion resulting in a deterioration in surface water quality. In addition, it is not considered likely that the proposed clearing of 26 individual trees in completely degraded condition would cause a deterioration in the quality of underground water.

**Methodology** State of Western Australia (2005)  
GIS Database:  
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC  
Salinity Risk LM 25m - DOLA 00

**(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 area under application is located approximately 340m from the nearest wetland, at an elevation of 15-30 metres. Given the location of the site on a sandy rise, and given the low risk of waterlogging associated with the sandy soils, it is not considered likely that the proposed clearing would have an impact on peak flood height or duration.

**Methodology** DEC site visit 25/7/07  
GIS Databases:  
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain y DEC  
Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The lot under application is part of a Native Title Claim however, since it is privately owned Native Title is extinguished under the Native Title Act. Therefore the clearing as proposed should not fall under the future acts

process of the Native Title Act 1993.

A subdivision application has been lodged with the WAPC, but has not yet been approved. Schedule 6, Clause 1 of the Environmental Protection Act 1986 provides an exemption to clear in accordance within an approved subdivision, however the subdivision approval is not likely to be approved prior to the Bulk Earthworks Moratorium imposed from 1 October to 15 March by the City of Rockingham. The proponent has applied for a clearing permit in pre-emption of the statutory planning process to be able to clear prior to the Moratorium period and without subdivision approval.

A Bulk Earthworks approval has been issued by the City of Rockingham, which includes a condition to comply with the approved tree retention plan. The proposed clearing is consistent with the tree retention plan.

The City of Rockingham advise that they did not identify any environmental constraints relating to the proposal.

**Methodology** City of Rockingham submission (2007)  
GIS Database:  
Native Title Claims - DLI

#### 4. Assessor's comments

Purpose	Method Applied	area (ha)/ trees	Comment
Building Structure	cMechanical Removal	26	The assessable criteria have been addressed and the clearing as proposed may be at variance to Principle b.

#### 5. References

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 (2006) 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 (1997) Wetlands Conservation Policy for Western Australia, Department of Conservation and Land Management and the Water and Rivers 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.

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 (2006) 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.

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.

Western Australian Herbarium (1994) Department of Environment and Conservation. Text used with permission (<http://florabase.calm.wa.gov.au/help/copyright>). Accessed on Friday, 27 July 2007.

Western Australian Herbarium (1996) Department of Environment and Conservation. Text used with permission (<http://florabase.calm.wa.gov.au/help/copyright>). Accessed on Friday, 27 July 2007.

#### 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)