



## **CLEARING PERMIT**

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose permit number:</b>	CPS 2807/2
<b>Permit holder:</b>	Oakford Land Company Pty Ltd (ACN 113 593 883)
<b>Duration of permit:</b>	30 December 2008 – 30 December 2013

The permit holder is authorised to clear native vegetation subject to the following conditions of this Permit.

### **PART I – CLEARING AUTHORISED**

#### **1. Purpose for which clearing may be done**

Extractive Industry

#### **2. Land on which clearing is to be done**

Lot 8 on Diagram 53380

#### **3. Area of Clearing**

The permit holder must not clear more than 9.96 hectares of native vegetation within the area hatched yellow on attached Plan 2807/2.

#### **4. Application**

This Permit allows the permit holder to authorise persons, including employees, contractors and agents of the permit holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

#### **5. Compliance with Assessment Sequence and Management Procedures**

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the permit holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

### **PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES**

#### **6. Avoid, minimise etc clearing**

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

## 7. Staged Clearing

The Permit Holder shall not clear native vegetation unless actively mining the area to be cleared within six months of the clearing.

## 8. Retention, revegetation and rehabilitation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) Within twelve months of the area no longer being required for sand or limestone extraction, the Permit Holder must revegetate and rehabilitate the area cross-hatched yellow on attached Plan 2807/2 by:
  - (i) deliberately laying the vegetative material and topsoil retained under condition 8(a) on the cleared area;
  - (ii) deliberately planting and/or direct seeding native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
  - (iii) ensuring only local provenance seeds and propagating material sourced from within 10 kilometres of the area cleared are used to *revegetate* and rehabilitate the area.
- (c) Within twelve months of undertaking *revegetation* and rehabilitation in accordance with condition 8(b) of this Permit, the Permit Holder must:
  - (i) determine the species composition, structure and density of the area *revegetated* and rehabilitated; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 8(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional planting or direct seeding of native vegetation in accordance with the requirements of condition 8(b)(ii) and (iii) of this Permit.

## PART III - RECORD KEEPING AND REPORTING

### 9. Records must be kept

- (a) The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the clearing of native vegetation authorised under this Permit:
  - (i) the species composition, structure and density of the cleared area;
  - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (iii) the date that the area was cleared; and
  - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* of areas pursuant to condition 8:
  - (i) the location of any area *revegetated* recorded using Geocentric Datum Australia 1994
  - (ii) description of the *revegetation* activities undertaken; and
  - (iii) the size of the area *revegetated* (in hectares).

## 10. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 9 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 30 September 2013, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

## Definitions

The following meanings are given to terms used in this Permit:

*environmental specialist* means a person who is engaged by the permit holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

*revegetate, revegetated and revegetation* means the re-establishment of a cover of native vegetation in an area such that the species composition, structure and density is similar to pre-clearing vegetation types in that area, and can involve regeneration, direct seeding an/or planting.

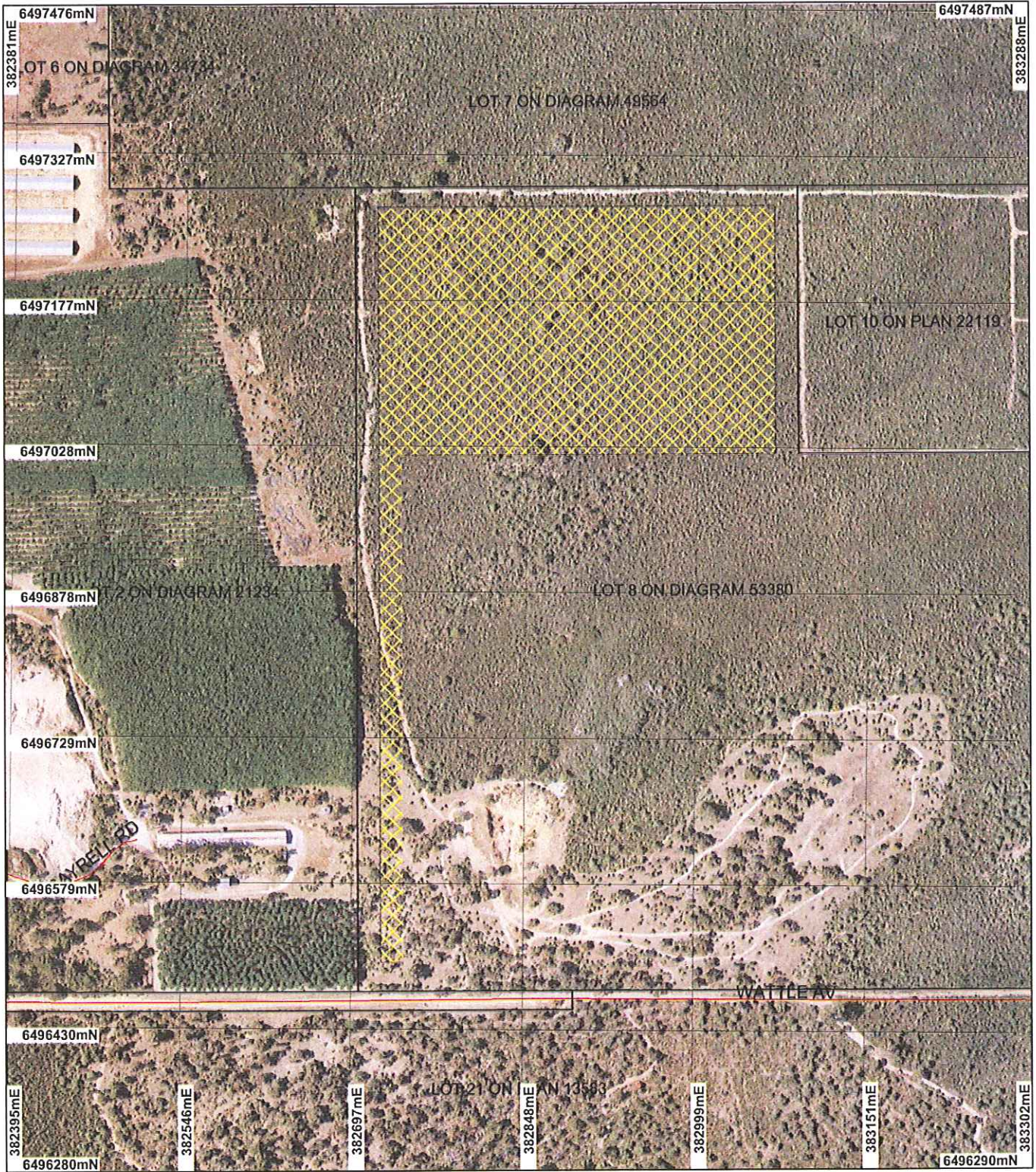


Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

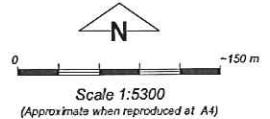
30 September 2009

# Plan 2807/1



## LEGEND

- Clearing Instruments
- Areas Approved to Clear
- Road Centrelines
- Swan Coastal Plain North  
20cm Orthomosaic - Landgate  
2006
- Cadastra for labelling



Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*Kelly Faulkner* Date 30/9/09

Kelly Faulkner  
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 2807/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Oakford Land Company (C/- RPS Koltasz Smith)

### 1.3. Property details

Property: LOT 8 ON DIAGRAM 53380 (House No. 259 WATTLE NOWERGUP 6032)  
Local Government Area:  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
9.96		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 Associations: - 1948: Low woodland; banksia on limestone (Shepherd et al. 2001). Heddle Vegetation Complex: - Cottesloe Complex Central and South: Mosaic of woodland of E. gomphocephala and open forest of E. gomphocephala-E. marginata-C. calophylla; closed heath on the Limestone outcrops (Heddle et al. 1980).	The proposal is to clear up to 9.96ha on a 54ha property, for limestone extraction. The property is located within an area zoned Rural under the Metropolitan Region Scheme. The vegetation under application can be described as being in excellent condition and depending on the location in the landscape vegetation units vary from: Open Eucalypt/Banksia Woodland, Open Banksia woodland, or Closed Heath of D. sessilis, all of which comprise a dense shrub layer. Generally the shrub layer is consistent across these areas being dense and diverse dominated by Xanthorrhoea, Calothamnus, Hibbertia and Acacia. Melaleuca spp. are common components of the shrub layer in areas associated with limestone outcropping.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The vegetation and clearing description is based on information obtained during the site inspection (2007).

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

#### Comments

The vegetation area under application is excellent condition and described as Open Eucalypt/Banksia Woodland, Open Banksia woodland, and Closed Heath of D. sessilis (Site Inspection, 2007). All comprise a dense diverse shrub layer generally dominated by Xanthorrhoea sp., Calothamnus sp., Hibbertia sp. and Acacia sp.. This dense understorey is considered to comprise suitable habitat for ground dwelling fauna.

The area under application supports the Priority Flora, Jacksonia sericea (P4) and is considered to have a high level of species diversity.

Given the area under application is known to support Priority Flora, suitable habitat for ground dwelling fauna and vegetation comprising a high level of species diversity in excellent condition, the area under application is considered to comprise a high level of biodiversity is considered to be at variance to this Principle.

**Methodology** References:  
- Keighery, 2007  
- Site Inspection (2007)

GIS databases:  
- SAC Bio datasets (13/11/2007)  
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

**(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**

There are six species of conservation significant fauna have been recorded within the local area (~5km radius) with a large flock of greater than 50 Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) were observed feeding on vegetation within Lot 8 Wattle Ave during a site inspection (Site inspection, 2008). DEC Fauna Habitat Notes (2007) indicate Carnaby's move around seasonally in flocks and feed in areas of proteaceous scrubs and heaths and eucalypt woodlands.

The vegetation under application comprises Banksia woodland and Closed Heath dominated by *Dryandra sessilis* (Site Inspection, 2007). It is considered likely the area under application would be utilised by Carnaby's as a food source. A Birds Australia report on the Conservation of Carnaby's Black Cockatoo on the Swan Coastal Plain (2006) predicts the current land-clearing for further urban development and the planned removal of the pine plantations over the next 20 years is likely to have a significant impact on Carnaby's Cockatoo populations.

Both the Quenda and Brush Wallaby prefer dense understorey (DEC Fauna Habitat Notes, 2007) as seen in the vegetation under application. The vegetation under application consists of a diverse dense understorey in excellent condition (Site Inspection, 2007) and is therefore considered likely to comprise suitable feeding habitat for Carnaby's and significant habitat for ground dwelling fauna in the local area.

**Methodology** References:  
- DEC Fauna Habitat Notes (2007)  
- Shah, B. (2006)  
- Site Inspection (2007)  
- Site Inspection (2008)

GIS Databases:  
- DEC SAC Bio datasets (13/11/2007)  
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

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

**Comments**

There are 10 records of 1 rare flora species and 8 records of 6 Priority Flora species within the local area. The closest known record of rare flora is *Eucalyptus argutifolia*, known to occur ~450 metres north east of the area under application.

A flora survey conducted by Regeneration Technology (2006) during September and October 2006 did not identify the rare flora species, *Eucalyptus argutifolia*, within the area under application. Several groves of mallees were observed within the applied area, these mallees were identified as *E. petrensis* and *E. foecunda* and not *E. argutifolia* (Regeneration Technology Pty Ltd, 2006).

Given that no rare flora was observed during the flora survey, it is considered the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
- Keighery (2007)  
- Regeneration Technology Pty Ltd (2006)  
- Site Inspection (2007)

GIS Databases:  
- SAC Bio datasets (13/11/2007)  
- Hedde Vegetation Complexes - DEP 21/06/95

- Pre-European Vegetation - DA 01/01
- Soils, Statewide - DA 11/99
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

**(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**

There is 1 occurrence of a Threatened Ecological Community (TEC) mapped on Lot 8 Wattle Avenue. This TEC is known as Floristic Community Type (FCT) 26a, 'Melaleuca huegelii-Melaleuca systema shrublands on limestone ridges' (Gibson et al. 1994), and considered Endangered in Western Australia (DEC, 2004). A further 17 occurrences of FCT 26a are identified within the local area.

The main portion of the area under application is located approximately ~200 metres north of this TEC and portion of the area under application that forms the access track is ~150 metres west of the TEC. This is considered to provide an appropriate buffer between the proposed clearing and the mapped TEC.

Given the area under application provide an adequate buffer to the mapped TEC the proposal not considered to be at variance with this Principle.

**Methodology**

Reference:

- DEC (2001)
- DEC (2004)
- Gibson et al. (1994)
- Site Inspection Report (2007)

GIS Databases:

- DEC SAC Bio Datasets, 06/12/2007

**(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**

The Heddle vegetation complex identified in the area under application is the Cottesloe Complex-Central and South which has a pre-European representation level of 41% remaining (Heddle et al 1980). Beard Vegetation Associations 1948 are identified within the applied area, which have a current representation level of 21.4% (Shepherd, 2006; Shepherd et al., 2001). In addition, there is ~53.9% of native vegetation remaining in the local area.

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Commonwealth of Australia, 2001).

Beard Vegetation Association 1948 has a remaining extent of 21.4%. Although this vegetation association has less than the recommended 30% minimum of Pre-European extent remaining, the applied area is considered to be within a constrained area. The EPA (2006) recognises the Perth Metropolitan Region as a 'constrained area', providing for the reduction of vegetation complexes to a minimum of 10% of the Pre-European extent.

Given the extent of vegetation remaining in the local area (~53.9%) and the current representation levels of the Heddle complex and Beard vegetation associations, it is not considered likely that the vegetation under application is significant as a remnant in an area that has been extensively cleared.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregions*				
Swan Coastal Plain^	1,501,456	571,758	38.1	32.7
LGA**				
City of Wanneroo	68,070	34,057	50.0	N/A
Vegetation in the Local Area (~5km radius)	~9,180	~4,950	~53.9	
Heddle Vegetation Complex***				
Cottesloe Complex-Central and South	44,995	18,474	41.0	21.0

Beard Vegetation Type 1948****	81,022	17,315	21.4	15.6
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\* (Shepherd 2006)  
 \*\* (Del Marco et al. 2004)  
 \*\*\* (EPA 2006)  
 \*\*\*\* (Shepherd et al 2001)  
 ^ Area within Intensive Land Use Zone

**Methodology** References:  
 - Commonwealth of Australia (2001)  
 - DEC (2001)  
 - DEC (2004)  
 - Del Marco et al. (2004)  
 - EPA (2006)  
 - Shepherd (2006)  
 - Shepherd et al. (2001)

GIS databases:  
 - Clearing Instruments  
 - Heddle Vegetation Complexes - DEP 21/06/95  
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00  
 - Pre-European Vegetation - DA 01/01  
 - Remnant Vegetation, Metropolitan Area - DA 12/00  
 - SAC Bio datasets 06/12/2007

**(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**

There are no watercourses or wetlands associated with the area under application (Site Inspection, 2007). There are 3 lakes within the local area. Neerabup Lake (~1km west), Lake Pinjar (~3km east) and Nowergup Lake (~3.5km north west).

Given that the vegetation applied to be cleared is representative of an upland community associated with limestone ridges, the site inspection (2007) and flora survey (2007) did not identify any wetland dependant vegetation and the distance to the nearest watercourse or wetland, the vegetation under application is not considered likely to be associated with a watercourse or wetland

**Methodology** References:  
 - Site Inspection Report (2007)  
 - Regeneration Technology Pty Ltd (2006)

GIS databases:  
 - EPP, Lakes - DEP 1/12/92  
 - Hydrography, linear - DOE 1/2/04  
 - 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**

The area under application is associated with an undulating dune landscape underlain by limestone which is frequently exposed. Chief soils are siliceous sands (Northcote et al. 1968). Generally, these soils have a high risk of wind erosion and a low risk of water erosion due to the high infiltration rates associated with sands and limestone.

The area under application has a low risk of salinity. The salinity risk increases in the south western corner of the area under application which is a low lying area in the landscape.

The proposed clearing has a high risk of wind erosion given the sandy soils on site, and without appropriate ground cover, windbreaks or adequate dust suppression on exposed surfaces the proposal may cause appreciable land degradation.

It has been noted however that the Limestone Excavation and Rehabilitation Plan (2007) details measures that will be taken by Oakford Land Company to stabilise the soils and reduce the risk of wind erosion including: fence wind breaks, spray mulching and mulch. The clearing as proposed may be considered likely to cause appreciable land degradation.



**Methodology** References:  
- Northcote et al. (1968)  
- Landform Research (2007)

GIS databases:  
- Acid Sulfate Soil Risk Map, Swan Coastal Plain } DEC  
- Groundwater Contours, Minimum - DOW  
- Salinity Risk LM 25m - DOLA 00  
- Soils, Statewide - DA 11/99

**(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**

There are 2 DEC managed conservation areas, Gngangara-Moore River State Forest (~1.5km east) and Neerabup National Park (~3.3km), and 23 Bush Forever Sites (including Bush Forever site 293, 550m from the area under application) within the local area.

Bush Forever Site 293 known as 'Shire View Hill and adjacent bushland' occurs in the south east corner of Lot 8, Wattle Ave and is located 550m from the area under application. Bush Forever site 293 and the vegetation under application are part of a regionally significant contiguous bushland/wetland linkage providing a north/south and east/west ecological linkage (Government of Western Australia, 2000) however the clearing as proposed is not within the buffer of 50m to the Bush Forever site 293.

Given the distance to the Bush Forever Sites in the local area, the clearing as proposed is not likely to be at variance to this Principle.

**Methodology** Reference:  
- Hill et al. (1996)

GIS databases:  
- EPP, Areas - DEP 06/95  
- EPP, Wetlands 2004 (DRAFT) - DOE 21/7/04  
- EPP, Lakes - DEP 1/12/92  
- Groundwater Contours, Historic Maximum } DOW  
- Hydrography, linear - DOE 1/2/04  
- Hydrography, linear (hierarchy) - DOW  
- Public Drinking Water Source Areas (PDWSAs) } DOW  
- Topographic Contours, Statewide - DOLA 12/09/02

**(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**

The area under application is situated between two proclaimed groundwater areas, Gngangara Underground Water Pollution Control Area (a Priority 1 Public Drinking Water Source Area (PDWSA)) and Perth Coastal Underground Water Pollution Control Area (Priority 3 PDWSA). Groundwater generally flows north east to south west and depth varies from ~20-50m within the applied area. Given the depth to groundwater and distance to the nearest PDWSA the proposed clearing is not considered likely to cause deterioration in the quality of groundwater.

There are 3 lakes within the local area. Neerabup Lake (~1km west), Lake Pinjar (~3.5km east) and Nowergup Lake (~3.5km north west) of the applied area. It is considered any development within 50m the boundary of a wetland can critically influence the wetland and any development within 200m of the wetland boundary would have a secondary influence on the wetland (Hill et al. 1996). Given that the vegetation under application is outside the 200m zone of influence (Hill et al. 1996), the proposed clearing is not considered likely to impact the surface water quality of the Lakes.

Given the depth to groundwater and distance to closest wetland, the vegetation under application is not considered likely to cause deterioration in surface water or groundwater.

**Methodology** Reference:  
- Hill et al. (1996)

GIS databases:  
- EPP, Areas - DEP 06/95  
- EPP, Wetlands 2004 (DRAFT) - DOE 21/7/04  
- EPP, Lakes - DEP 1/12/92

- Groundwater Contours, Historic Maximum } DOW
- Hydrography, linear - DOE 1/2/04
- Hydrography, linear (hierarchy) - DOW
- Public Drinking Water Source Areas (PDWSAs) } DOW
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The closest wetland is Neerabup Lake, ~1km west of the applied area. The closest watercourse is a minor tributary of Lake Pinjar ~5km from the area under application on the eastern side of the Lake.

Given the distance to the nearest water body and high infiltration rates associated with sandy soils over limestone, the clearing as proposed is considered unlikely to cause or exacerbate the incidence of flooding.

**Methodology**

- GIS databases:
- Hydrography, linear - DOE 1/2/04
  - Hydrography, linear (hierarchy) - DOW
  - Soils, Statewide - DA 11/99

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

**Comments**

DEC have issued a Vegetation Conservation Notice (VCN) on a portion of Lot 8 Wattle Ave however the area covered by this application does not include the vegetation subject to the VCN.

Lot 8 Wattle Ave is zoned Rural under the Town Planning Scheme and Metropolitan Regional Scheme and is zoned Rural Resource under the City of Wanneroo District Planning Scheme No. 2 (City of Wanneroo, 2008). Lot 8 Wattle Ave is also located within the State Planning Policy 2.4 - Basic Raw Materials which identifies the land as a priority resource area.

The Western Australian Planning Commission and City of Wanneroo have granted the relevant land use approvals including an extractive industries licence for Lot 8 Wattle Ave.

Oakford Land Company anticipates 5,000kL of groundwater is required for dust suppression associated with the limestone extraction works on site (Landform Research, 2007). The Department of Water have advised a groundwater extraction licence is required and to date, an application has not yet been received.

The area under application is located within an area identified as an Aboriginal Site of Significance (Interim Registered), being Neerabup Lake and Orchestra Shell Cave. It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

**Methodology**

- References:
- Bush Forever (2007)
  - City of Wanneroo (2007)
  - Gibson et al. (1994)
  - Zuvella (2008)
- GIS databases:
- Aboriginal Sites of Significance - DIA
  - Metropolitan Regional Scheme - DPI 07/10/05
  - Native Title Claims - DLI
  - Town Planning Scheme Zones - MFP 8/98

**4. Assessor's comments**

**Comment**

The assessable criteria have been addressed and the clearing as proposed is at variance to Principles (a) and may be at variance to principles (b) and (g)

## 5. References

- Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- Del Marco, A., Miles, C., Taylor, R., Clarke, K. and Savage, K. (2004) Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region - Edition 1. Western Australian Local Government Association, West Perth.
- EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.
- Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.
- 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.
- Hill, A.L., Semenuik, C. A, Semenuik, V. Del Marco, A. (1996) Wetlands of the Swan Coastal Plain. Volume 2b, Wetland mapping, classification and evaluation. Wetland Atlas. WRC and DEP. Perth WA.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, 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.
- 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)