



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 3897/1

File Number: 2010/006033-1

Duration of Permit: From 11 December 2010 to 11 December 2012

### PERMIT HOLDER

Western Australian Land Authority TA LandCorp

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 15 on Diagram 74883 Mason Road, Kwinana.

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 59.4 hectares of native vegetation within the area hatched yellow on attached Plan 3897/1.

### CONDITIONS

#### 1. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area shall be inspected by a *fauna specialist* in accordance with *Guidance Statement No 56* for the presence of *priority* listed fauna;
- (b) Prior to clearing, the Permit Holder shall ensure that any fauna identified by condition 1(a) shall be removed and relocated by a *fauna clearing person*, in accordance with a licence issued by the Department.

#### 2. Wind erosion management

The Permit Holder shall not clear native vegetation unless industrial development begins within three months of the clearing being undertaken.

#### 3. Records to be kept

The Permit holder must maintain the following records for activities done pursuant to this Permit in relation to fauna management pursuant to condition 1 of this Permit;

- (a) The location and type of each habitat identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (b) The species name of fauna reasonable likely to utilise, or that have been observed utilising, the habitat/habitat tree(s); and
- (c) The location and date where relocated fauna was release, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings.

#### 4. 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 3 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 23 July 2012, the Permit Holder must provide to the CEO a written report of records required under condition 3 of this Permit where these records have not already been provided under condition 4(a) of this Permit.

#### DEFINITIONS

The following meanings are given to terms used in this Permit

*Fauna clearing person* means a person who has obtained a licence from the *Department*, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

*Fauna specialist* means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

*Guidance Statement No 56* means Guidance for the Assessment of Environmental Factors : Terrestrial Fauna Surveys for Environmental Impact assessment in Western Australia. Guidance Statement No 56, Environmental Protection Authority (2004);

*Priority fauna* means those fauna species described as priority fauna classes 1, 2, 3, 4 or 5 in the *Department's Declared Threatened Other Specially Protected and Priority Fauna List for Western Australia* (as amended).



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M.G. Warnock  
A/MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

11 November 2010

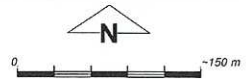


# Plan 3897/1



## LEGEND

- Road Centrelines
- Local Government Authorities
- Clearing Instruments**
- Areas Approved to Clear
- Cadastre for labelling
- Swan Coastal Plain Central  
20cm Orthomosaic - Landgate  
2009**



Scale 1:6000  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

*M Warnock* Date 11.11.10

M Warnock  
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.: 3897/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Western Australian Land Authority TA LandCorp

### 1.3. Property details

Property: LOT 15 ON DIAGRAM 74883 ( KWINANA BEACH 6167)  
Local Government Area: Town of Kwinana  
Colloquial name:

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: GRANT  
Decision Date: 11 November 2010

## 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
Shepherd (2009) describes vegetation association 3048 as Shrublands; scrub-heath on the Swan Coastal Plain.	The area under application consists of patches of dense <i>Acacia rostellifera</i> thickets with scattered <i>Xanthorrhoea preissii</i> and <i>Spyridium</i> sp over grassy weeds in a degraded condition.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Scattered native trees with only weeds in the understorey.
Shepherd (2009) describes vegetation association 3048 as Shrublands; scrub-heath on the Swan Coastal Plain.	<i>Acacia saligna</i> over grassy weeds in a completely degraded condition.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Application area consisted of mostly grassy weeds.

## 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 proposal is to clear 59.4 hectares of native vegetation on Lot 15 on Diagram 74883, Mason road, Kwinana for the purpose of industrial.

The area under application consists of regeneration in a 'degraded' to 'completely degraded' (Keighery 1994) condition (DEC 2010) with a large number of grassy weeds. There are patches of dense *Acacia rostellifera* thickets with scattered *Xanthorrhoea preissii* and *Spyridium* sp over grassy weeds (DEC 2010). *Asparagus asparagoides* (Bridal creeper) was also recorded on site which is listed as a 'Declared' weed and described as a highly invasive and aggressive weed and should be controlled (Cardno 2010).

There are 8 different priority flora species recorded within the local area. However due to the condition of vegetation flora species are unlikely to occur within the application area.

Given the above, the proposal is not likely to be at variance to this Principle.

**Methodology** References  
- Keighery (1994)  
- DEC (2010)  
- Cardno (2010)  
GIS Databases  
- SAC Bio Datasets - accessed August 2010



**(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**

There were twenty significant fauna species recorded in the local area (~10km radius) of the area under application.

The area under application is in a 'degraded' to 'completely degraded' (Keighery 1994) condition. Although, given the relatively large size of the application area (59.4ha), it is considered that the Quenda (*Isoodon obesulus fusciventer*) may utilise the application area for habitat. There are 45 records of Quenda (*Isoodon obesulus fusciventer*) found within the 10km radius of the application area, the closest is 1.7km northeast of the applied area.

The site inspection observed a numerous amount of rabbit holes and diggings as well as a fox den within the application area (DEC 2010). It is believed this site is utilised by fauna in the local area, but it is unlikely to be significant habitat, therefore this principle is not likely to be at variance.

As there is no adjoining native vegetation to this property a condition to manage the remaining fauna on site will minimise impact to native fauna.

**Methodology** References  
-DEC (2010)  
-Keighery (1994)  
GIS Databases  
-SAC Bio Datasets - accessed August 2010

**(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 four rare flora species recorded in the local area (10 km radius) including, *Caladenia huegelii*, *Diuris micrantha*, *Drakaea elastica*, and *Verticordia plumosa* var. *ananeotes*. All of these species occur within different beard vegetation complexes and in different soils as the area under application. Therefore it is unlikely that these species would be found within the application area as their preferred habitats are not similar to the application area.

In addition, a flora survey undertaken by Cardno Pty Ltd in June 2010 did not identify any rare or priority flora within the application area (Cardno 2010). However, June is an unsuitable time to undertake a flora survey as it is outside the flowering times of the above rare flora. However due to the 'degraded' to 'completely degraded' (Keighery 1994) condition of the vegetation, and its history of waste dumping, this proposal is not likely to be at variance to this Principle.

**Methodology** References  
-Cardno (2010)  
-Keighery (1994)  
GIS Databases  
-SAC Bio Datasets - accessed August 2010

**(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**

No records of threatened ecological communities (TEC) were recorded within the immediate proximity of the area under application.

The closest TEC recorded was SCP26a - Limestone ridges which was located 3.1km to the north east of the application area. However there were no limestone ridges within the application area, so it is unlikely this community could be supported. There are also 12 occurrences of the TEC SCP19- Woodlands over sedgeland, these were located 3km south of the applied area. The vegetation observed during the site visit is not indicative of these floristic community types as the majority of the vegetation is weed species with scattered *Acacia* sp.

Given the degraded (Keighery 1994) condition of the application area, and the history of dumping of waste, it is unlikely that the application area comprises or maintains a Threatened Ecological Community. Therefore this principle is not likely to be at variance.

**Methodology** References  
-Keighery (1994)

**(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 described as Beard vegetation association 3048 of which there is 31.62% of pre-European extent remaining within the Swan Coastal Plains bioregion (Shepherd 2009).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level. Within constrained areas (i.e. areas of urban development in cities and major towns) on the Swan Coastal Plain the target for representation of the pre-clearing extent of a particular native vegetation complex is 10 % (Commonwealth of Australia 2001).

The remaining percentage of vegetation is above the minimum of 30%, and there is still a large percentage of vegetation remaining in the local area (40%). Also, a large percentage of vegetation is within conservation reserves vested with DEC (25.4%). Therefore, due to the 'degraded' to 'completely degraded' (Keighery 1994) condition of the vegetation in the application area and its history of waste dumping, it is unlikely that the vegetation is significant as a remnant of native vegetation.

Given the above, the proposal is not likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (%)	Remaining (ha)
IBRA Bioregions*			
Swan Coastal Plains	1 501 209.19	587 889.09	39.16
Shire*			
Town of Kwinana	11 998.49	4 705	39.22
Beard Vegetation Association*			
3048	10 415.79	3 293.30	31.62
(3048 Only present within the Swan Coastal Plain Bioregion)			
Hedde Vegetation Association			
Quindalup Complex	38 238	18000	47.1

The local area (10km radius) has less than 40% remaining vegetation.

**Methodology**

- References  
 -Keighery (1994)  
 -Shepherd (2009)  
 -Havel (2002)  
 -EPA (2009)  
 -Commonwealth of Australia (2001)  
 GIS Databases  
 -Pre-European Vegetation  
 -Matiske Vegetation Complexes  
 -NLWRA, Current Extent of Native Vegetation  
 -Interim Biogeographic Regionalisation of Australia

**(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 within the area proposed for clearing, however there are two waterways in close proximity. Therefore the proposed clearing is not likely to be at variance to this principle.

**Methodology**

- GIS Databases  
 -Hydrography linear,  
 -Topography, statewide



**(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**

Mapped soil type A13 is described as Coastal dune formations backed by the low-lying deposits of inlets and estuaries: chief soils are calcareous sands on the dunes. Associated are various acid peat soils in the swale behind the coastal dunes (Northcote et al 1960-68).

These soils have a high risk of wind erosion and phosphorus export and low risk of surface water runoff. Appropriate ground cover, windbreaks or adequate dust suppression on exposed surfaces is required to prevent wind erosion.

Given the relatively large area (59.4ha) and the sandy soils of the area under application the proposed clearing may be at variance to this Principle.

A wind erosion management condition would manage and mitigate the impacts of the proposed clearing.

**Methodology References**

-Northcote et al (1960-68)  
GIS Databases  
-Soils, statewide

**(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 closest conservation area is Conservation Park R37426, also a System 6 Reserve (M92), which is located 4.2km north of the area under application. Leda Nature Reserve (R33581), is located 5.3km south east and a system 6 reserve (M103) is located 6km south of the application area.

There are 16 different Bush Forever sites with the local area. The closest one to the applied area are the Bush Forever sites 346 (Beeliar Regional Park), and 349 (Leda and Reserve 33581) which are located ~ 3.7km north and 1.5 km southeast of the area under application, respectively.

The vegetation under application is only connected to the two Bush Forever sites through impacted and narrow vegetation linkages that occur on privately owned property and industrial sites. The vegetation under application is in a 'degraded' to 'completely degraded' (Keighery 1994) condition; therefore the applied area is unlikely used by local fauna populations moving between these Bush Forever sites and reserves. Therefore, the proposed clearing is not likely to be at variance to this Principle.

**Methodology GIS Databases  
-DEC Tenure**

**(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**

There are no watercourses or wetlands within the area proposed for clearing. Given the sandy nature of the soil within the application area (Northcote et al 1960-68) and the scale of the proposed clearing, it is not considered likely for the proposed clearing to be at variance to this Principle.

**Methodology References  
-Northcote et al (1960-68)  
GIS Databases  
-Soils, statewide  
-Hydrography linear**

**(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 soils identified on site are described as siliceous sands which have a low risk of water logging due to their poor water holding capacity (Northcote *et al* 160-68).

Given that there is a low risk of water logging associated with the identified soil type on-site and the high permeability of these sandy soils, it is not considered likely that the proposal would cause or increase flooding.

**Methodology References  
-Northcote et al (1960-68)  
GIS Databases**

- Soils, statewide
- Hydrography linear

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

### Comments

The proposal is to clear 59.4 hectares of native vegetation on Lot 15 on Diagram 74883, Mason road, Kwinana for the purpose of an industrial site. The area under application has been previously assessed by the Office of the Environmental Protection Authority (OEPA) and was approved by the Minister, however did not go ahead before the statutory limit expired.

Application area falls within the groundwater 'Cockburn' area covered by the Rights in Water and Irrigation Act 1914.

### Methodology

The Town Planning Scheme Zone is General Industry and Metropolitan Regional Scheme is Industrial  
GIS Databases

- Environmental impact assessments
- RIWI Act, Groundwater areas
- SAC Bio Datasets - accessed August 2010
- Town Planning Scheme Zones

## 4. References

- Cardno (2010) Lot 15 Mason Road, Flora and Vegetation Survey. Prepared for LandCorp. Project Number V10026. (DEC Ref. A324369)
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2010) Site Inspection Report for Clearing Permit Application CPS 3897/1, Lot 15 on Diagram 74883, Kwinana. Site Inspection undertaken 2/09/2010. Department of Environment and Conservation, western Australia. (DEC Ref. A330656)
- Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.
- 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.
- 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.
- Shepherd, D.P. (2009) 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.

## 5. 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)