



## 1. Application details

### 1.1. Permit application details

Permit application No.: 721/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Iluka Resources Limited

### 1.3. Property details

Property: LOT 4453 ON PLAN 254024 (Lot No. 4453 MATTHEWS CAPEL 6271)  
Local Government Area: Shire Of Capel  
Colloquial name: Yearly Road - Lot 4453 on Plan 254024

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.34		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
Beard: Unit 6 - Medium woodland; tuart and jarrah	Twenty scattered paddock trees	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation condition was established through aerial photography and the Iluka Flora and Vegetation Survey
Unit 1000 - Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; tea-tree (Melaleuca spp.)		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	
Heddlle: Southern River Complex - Open-woodland of marri- jarrah-banksia.		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	
Karrakatta Complex Central and South - Open- forest of tuart-jarrah-marri		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	

## 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 high level of disturbance at this site, extensive weed invasion and low native species density suggests that the original biodiversity has been significantly compromised. The native vegetation is not likely to be representative of the native vegetation communities of the area. The area under application consists of approximately twenty trees and virtually no understorey, therefore not considered to be of high biological diversity.
<b>Methodology</b>	Iluka Flora and Vegetation Survey 2005 GIS databases: - Busselton 50cm Orthomosaic - DLI 03

**(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 existing identified disturbances within and surrounding the area proposed for clearing, such as weed invasion and its location within a highly modified area, are likely to limit the habitat value of the vegetation. Negotiations undertaken with the applicant has resulted in an agreement to revegetate 3.2 hectares within the local area. This revegetation will assist in the mitigation of long term habitat loss for the local area.

**Methodology** GIS databases:  
- Busselton 50cm Orthomosaic - DLI 03

**(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 seventeen Declared Rare Flora populations within the local area (10km radius). The closest being *Eleocharis keigheryi*, 2.2km east of the proposed site. All occur within the same Beard vegetation, unit 1000, and Heddle vegetation, Southern River Complex.

Three Priority 1 populations occur within the local area, the closest being *Synaphea odocoileops*, 3.8km east of the proposed site. There is no vegetative link between these Priority 1 populations and the area proposed to clear.

Five Priority 2 populations occur within the local area, the closest being *Synaphea petiolaris* subsp. *simplex*, 4.1km east of the proposed site. There is no vegetative link between these Priority 2 populations and the area proposed to clear.

There are nine Priority 3 populations within the local area, the closest being *Verticordia attenuata*, 1km south east of the proposed site. All occur within the same Beard vegetation, unit 1000, and Heddle vegetation, Southern River Complex.

Fourteen Priority 4 populations occur within the local area, the closest being *Jacksonia sparsa*, 3.3km south west of the proposed site. There is no vegetative link between these Priority 4 populations and the area proposed to clear.

Two populations, where there is little or no information available on the species, are found within the local area, the closest being *Drosera marchantii* subsp. *marchantii*, 4.3km north of the proposed site. There is no vegetative link between these populations and the area proposed to clear.

Iluka Resources Limited undertook a flora and vegetation survey of the project area during February 2004 and confirmed there were no Declared Rare or Priority Flora on the proposed site or within the proposed clearing area.

Although Declared Rare Flora and some Priority species are found within the same vegetation types as the area under application, they are not likely to occur in the area proposed to be cleared due to its degraded quality, high levels of disturbance and extensive weed invasion.

Given this, the habitat is highly unlikely to be suitable for species of conservation significance.

**Methodology** Iluka Flora and Vegetation Survey 2005  
GIS databases:  
- Declared Rare and Priority Flora List - CALM 13/08/03  
- Busselton 50cm Orthomosaic - DLI 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 threatened ecological community.**

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

There are no known Threatened Ecological Communities (TEC) in the area applied to be cleared. (Iluka Flora and Vegetation Survey)

There are two Threatened Ecological Communities within the local area (10km radius), the closest being CAPEL05 which is 7.6km south west of the proposed site.

There is one Threatened Plant Community, within the local area, 6.9km south west of the proposed site.

Due to the condition of the vegetation, and high proportion of weed species in the area under application, it is unlikely the proposal is at variance to this Principle.

**Methodology** Iluka Flora and Vegetation Survey 2005  
GIS databases:

- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95

**(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 proposed site is located in the Shire of Capel within the Swan Coastal Plain Bioregion. The extent of native vegetation in these areas is 35.9% and 41.8% respectively (Shepherd et al. (2001)).

The vegetation of the area applied to clear is a component of Beard Unit 6 (Hopkins et al. 2001) of which there is 23.3% (Shepherd et al. 2001) of the pre-European extent remaining, and therefore of 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation of the area applied to clear is a component of Beard Unit 1000 (Hopkins et al. 2001) of which there is 24.6% (Shepherd et al. 2001) of the pre-European extent remaining, therefore of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation of the area applied to clear is a component of Heddle Southern River Complex (Heddle et al. 1980) of which there is 19.8% of the pre-European extent remaining and therefore of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation of the area applied to clear is a component of Heddle Karrakatta Central and South Complex (Heddle et al. 1980) of which there is 29.5% of the pre-European extent remaining and therefore of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation within the proposed area to be cleared is not considered to be representative of these vegetation types. This is due to the degraded condition of the vegetation (consisting of largely paddock trees) and highly disturbed surrounding areas.

Negotiations undertaken with the applicant have resulted in the applicant agreeing to replant 3.2 hectares of native vegetation on the applicants property between the Bussell Highway and Gynudup Brook, 1.5km west of the proposed clearing.

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

Havel (2002)

Heddle et al. (1980)

Hopkins et al. (2001)

Shepherd et al. (2001)

GIS databases:

- Heddle Vegetation Complexes - DEP 21/06/95
- Interim Biogeographic Regionalisation of Australia - EM 18/10/00
- Local Government Authorities - DLI 8/07/04
- 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 Gynudup Brook, minor perennial watercourse, is located 1.4km west of the area proposed to clear.

The Capel River is located 3.8km south of the area proposed to clear.

There are thirty three EPP Lakes in the local area (10km radius), the closest being 2.4km south east of the proposed site.

There is a Multiple Use Wetland within the property boundary of the area proposed to be cleared.

The proposed clearing is within an area subject to inundation. It is unlikely the proposed clearing will further inundation issues on this property due to the land and vegetation already being in a degraded condition.

There is no vegetation linking the area proposed to clear with any of these watercourses or wetlands, therefore making it unlikely that the proposed clearing would impact on the nearby watercourses and wetlands.

**Methodology GIS databases:**

- EPP Lakes - DEP 28/07/03
- Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DoE 15/9/04
- Hydrography Linear - DoE 1/2/04

**(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**

Department of Agriculture provided land degradation advice that stated 'the vegetation applied to clear appears to be very sparse, and the impacts would be minimal'.

There is a low risk of salinity within the proposed site.

There is a class 2 risk (low risk) of Acid Sulphate Soils within the area under application.

**Methodology** DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref HD24719.

GIS databases:

- Acid Sulfate Soil Risk Map, SCP - DoE 01/02/04
- Salinity Risk LM 25m - DOLA 00.

**(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**

Tuart Forest National Park is located 3.5km north west of the proposed clearing. The area proposed to clear and the Tuart Forest National Park are within the same vegetation type Beard unit 6.

An un-named Conservation Area is located 3.6km south of the proposed site. The area proposed to clear and this Conservation Area are within the same vegetation type Beard unit 1000

The Ludlow-Wonnerup Area is located 3.6km west of the proposed clearing. The area proposed to clear and the Ludlow-Wonnerup Area are within the same vegetation type Beard unit 6.

A System 6 Conservation Reserve is located 8.2km north of the proposed site.

A System 1 Conservation Reserve is located 3.5km north west of the proposed site.

There is no ecological linkage between the area under application and any of the above conservation areas. The vegetation under application does not contribute to or provide a buffer for any of the above conservation areas.

Due to the sparse vegetation on the proposed property and the minimal amount of trees proposed to be cleared it is unlikely that it would impact on surrounding conservation areas.

**Methodology** GIS database:

- CALM Managed Lands and Waters - CALM 1/06/04
- Register of National Estate - EA 28/01/03
- System 6 Conservation Reserves - DEP 06/95
- System 1-5 and 7-12 Areas - DEP 06/95

**(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 proposed to clear is within the Busselton Coast, Capel River Catchment Area.

The proposed area is not within a Public Drinking Water Source Area.

The proposed site is located on the Busselton-Capel RIWI Act Groudwater Area, and in the Capel River and Tributaries RIWI Act Area.

Given the relatively small size and low amount of clearing proposed, the quality of the groundwater in this area is not likely to deteriorate as a result of the proposed clearing.

**Methodology** GIS databases:

- Hydrographic Catchments, Catchments - DoE 3/4/03
- Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
- RIWI Act, Groundwater Areas - WRC 13/06/00
- RIWI Act, Areas - WRC 05/04/02

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
Due to the small scale of the proposed clearing, flooding impacts are unlikely to occur.

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

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

**Comments**  
The proposed property is zoned Special Use.  
  
No comments were received from the Shire of Capel.

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

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	1.34	Grant	The proposed clearing is not likely to be at variance to any Principles and the applicant has agreed to replant 3.2 hectares with native endemic species. It is therefore recommended to grant the proposed clearing with revegetation being a condition of the permit.

**5. References**

DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref HD24719.

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.

Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.

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.

Iluka Resources Limited, Technical Report Iluka-TR-T12029, Flora and Vegetation of the North Capel Bulk Storage Sheds Project Area, Rachael Pratt, 2005, TRIM ref IN22328

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.

**6. Glossary**

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)