



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1198/1

Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: B & J Catalano Pty Ltd on behalf of C & S Catalano Pty Ltd

### 1.3. Property details

Property: LOT 520 ON DIAGRAM 98279 ( STRATHAM 6237)

Local Government Area: Shire Of Capel

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.1		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 Association 6: Medium Woodland; tuart & jarrah (Hopkins et al. 2001; Shepherd et al. 2001).	The proposal includes clearing 3.1ha of well-established regrowth for the purpose of sand extraction.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Observed during site visit: a majority of the vegetation was in very good condition, however cleared vegetation is scattered throughout several vehicle access tracks within the area (Additional DEC Site Visit 2007).
Hedde Vegetation Complex: Karrakatta Complex Central and South; predominantly open forest of E. gomphocephala - E. marginata - E. calophylla and woodland of E. marginata - Banksia species (Hedde et al. 1980).	The vegetation to be cleared is part of a larger remnant of good quality vegetation comprising a full suite of indigenous species; the vegetation present provides a good representation of the Karrakatta - Central and South vegetation type (Hedde et al. 1980).		
	The vegetation under application is low woodland of <i>Corymbia calophylla</i> , <i>E. marginata</i> and <i>Banksia attenuata</i> over scrub of <i>Kunzea glabrescens</i> over low heath dominated by <i>Hibbertia hypericoides</i> (Bennett Environmental Consulting 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 may be at variance to this Principle

The vegetation under application is in very good condition (Keighery 1994; Additional DEC Site Visit 2007) and comprises the Karrakatta - Central and South vegetation complex (Hedde et al. 1980) which is lower than the desirable 30% threshold level target identified by the EPA (2000) and the National Objectives Targets for Biodiversity Conservation 2001-2005 (AGPS 2001).

One rare fauna species and several other regionally significant fauna species occur within the local area, and the area is likely to support others (EPA 2003). There are vegetated links to nearby conservation reserves and the area falls within a regionally significant ecological linkage; thus increasing the likelihood that these species

occur within the vegetation under application.

Given the above, it is considered the vegetation under application may contain a high level of biodiversity, therefore the proposal may be at variance to this Principle.

**Methodology** Additional DEC Site Visit (2007);  
EPA (2003);  
Keighery (1994);  
GIS Databases:  
- Register of National Estate - EA 28/01/03;  
- Bunbury 1m 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 at variance to this Principle**

In limited surveys undertaken by the Environmental Protection Authority (EPA 2003), and confirmed by the Biodiversity Coordination Section, DEC (2006), the local area is known to support habitat for a population of at least one rare species of fauna, the Western Ringtail Possum *Pseudocheirus occidentalis*, the Western Brush Wallaby *Macropus irma* (P4) and is likely to also support the Chuditch *Dasyurus geoffroii* (Vulnerable), Brush-tailed Phascogale *Phascogale tapoatafa* (P3), Western False Pipistrelle *Falsistrellus mackenziei* (P4) and the Quenda *Isodon obesulus* (P5). In addition, at least 28 bird species are resident or utilise the site, including 9 bird species of regional significance, as they have declined on the Swan Coastal Plain (EPA 2003). The site may also support populations of Carnaby's Black Cockatoo *Calyptorhynchus latirostris* and Baudin's Black Cockatoo *Calyptorhynchus baudinii* (EPA 2003), both listed under the EPBC Act.

An abutting property to the east of the area under application has been assessed by the EPA at a level of Public Environmental Review in 2003 (EPA 2006), whose findings indicated the local area to be an ecological linkage under the Greater Bunbury Regional Scheme, and evidence the local area is being used by endangered fauna, including the Western Ringtail Possum, and to be of regional significance for bird fauna.

Given the likely presence of Western Ringtail Possum on the site, and the likelihood that a number of other conservation significant species use the site as habitat; as the area under application is likely to contain significant habitat for fauna indigenous to WA the proposal is at variance to this Principle.

**Methodology** Biodiversity Coordination Section, DEC (2006);  
EPA (2006);  
EPA (2003);  
GIS Databases:  
- Bunbury 1m 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**

Biodiversity Coordination Section, DEC (2007) advises two known Declared Rare Flora and several priority flora populations have been identified within the local area (10km radius); however none have been recorded within the area under application.

A botanical survey of Lot 520 (Bennett Environmental Consulting 2006) recorded a total of 53 vascular plant families, 120 genera and 153 taxa from the site. Of those species identified, only one Priority flora species was recorded on the property (*Eucalyptus rudis* subsp. *cratyantha* (P4), and was identified within a different vegetation complex to the area under application.

The Environmental Protection Authority (EPA) assessed a neighbouring property to the area under application in 2005, and although the findings indicated the presence of the declared rare *Caladenia huegellii* (Grand Spider Orchid) occurring on the property, rare flora was not mentioned as a significant issue in the report and recommendations (EPA 2005). This is also confirmed by the absence of this species in the flora survey undertaken in late September 2006 (Bennett Environmental Consulting 2006).

Given the above, it is considered unlikely the area under application is necessary for the continued existence of rare flora.

**Methodology** Biodiversity Coordination Section, DEC (2006);  
Bennett Environmental Consulting (2006);  
EPA (2005);  
GIS Databases:  
- Declared Rare and Priority Flora list - CALM 01/07/05  
- Bunbury 1m 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**

The vegetation under application is inferred to be Floristic Community Type 21a (Bennett Environmental Consulting 2006), which is not listed as a Threatened Ecological Community (TEC).

The closest known TEC occurrence is approximately 8.2km north of the notified area and occurs within the same soil and vegetation type as the area under application, however no TECs were recorded from the site during the botanical survey in 2006 (Bennett Environmental Consulting 2006).

**Methodology** Bennett Environmental Consulting (2006);  
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 at variance to this Principle**

The vegetation under application is a component of the Beard Vegetation Association 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 under application is also within the Capel Shire of which there is 35.9% of pre-European extent remaining.

The vegetation at the site is located within the South-west Botanical Province in the Drummond Subdistrict and the Spearwood System (Bennett Environmental Consulting 2006). The vegetation under application is a component of Hedde Vegetation Complex Karrakatta - Central and South (Hedde et al. 1980) of which there is 52% of the pre-European extent remaining in the Greater Bunbury Region (GBR) and 30% remaining in the southern Swan Coastal Plain (SCP), as recorded by the EPA (2002).

**Methodology** Bennett Environmental Consulting (2006);  
EPA (2002);  
Shepherd et al. (2001);  
Hopkins et al. (2001);  
Department of Natural Resources and Environment (2002);  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Hedde Vegetation complexes - DEP 21/06/98  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

**(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 may be at variance to this Principle**

The proposed clearing will occur 300m to the east of a conservation category wetland and at a 20m elevation. As there is an old Pine Forest and a largely cleared area between the proposed clearing area and the wetland, it is unlikely that the vegetation proposed to be cleared is providing a buffer to the wetland.

The activity of sand extraction requires use of a bore on site which may impact on the water tables of the wetland. A contact from the application advised that the maximum usage from the bore is approximately 1500-2000 litres per day.

The proposed clearing is located approx 500m to the east and 35 metres uphill of a Conservation category wetland, which is described as being a Sumpland. The Sumpland adjoins another wetland area classified as Multiple Use. This multiple use wetland lies between the conservation category wetland and the proposed clearing. Adjoining the multiple use wetland is an older pine forest that covers approximately 3.6ha and lies between the wetlands and the proposed clearing.

The soils throughout the property are known to be transmissive soils and the proposed clearing will result in a steeper elevation of the land than is currently there. Additionally the clearing activities require the daily use of 1500 - 2000 litres of water which is extracted from an unlicensed bore found in the eastern end of the property.

The Wetlands Position Statement recommends a buffer of 2km for protection of groundwater quality for Conservation category wetlands. Due to this the proposed clearing maybe at variance to this principle.

**Methodology** Site Visit Report  
GIS Databases:  
- Topographic Contours, Statewide - DOLA 12/09/02

**(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**

A report from DAFWA (2007) addressing land degradation issues for this property has outlined possible water and wind erosion susceptibility arising from the proposed clearing.

The report states that if the land remains in an unvegetated state a possible 23kg per m<sup>2</sup> of soil will erode per year. Additionally it states that due to the soil types and disturbance at the site there is a high risk of wind erosion.

The two issues highlighted by DAFWA can be assisted with management practices, such as ongoing re-vegetation and covering unvegetated surface soil. It is recommended that any permit place conditions in relation to these management practices.

**Methodology** DAFWA (2007);  
GIS databases:  
- Acid Sulfate Soil Risk Map, SCP - DoE 01/02/04  
- Salinity Risk LM 25m - DOLA 00.  
- Groundwater Salinity, Statewide - 22/02/00

**(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 at variance to this Principle**

Two Conservation Reserves are located within the local area (10km radius):

- the System 6 area C71 (Dalyellup Reserves) located less than 800m north of the proposed clearing; and
- the DEC-managed Tuart Forest National Park/ Ludlow-Wonnerup Area (Register of National Estate) located approximately 5km South-west.

The area under application forms part of the larger Dalyellup/Gelorum/Crooked Brook ecological linkage identified in the EPA's report on the Greater Bunbury Regional Scheme (EPA 2003), which incorporates the abovementioned C71 reserve.

Given the above, the clearing is considered to be at variance to this Principle.

**Methodology** EPA (2003);  
GIS Databases:  
- Bunbury 1m Orthomosaic - DLI 03;  
- CALM Managed lands and waters - CALM 01/07/05;  
- Register of National Estate - EA 28/01/03;  
- System 6 Conservation Reserves - 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 waters down slope from the proposed clearing are ESA listed Sumpland (seasonally inundated). The Wetlands Position Statement recommends a 2000m buffer for activities that may affect surface ground water - the removal of sand will lower the contours of the land, with transmissive soils there will be some effect.

The proposed clearing lies within the Five Mile Brook Catchment. The salinity levels in this area are listed as being between 1000-3000 TDS, with an average annual rainfall of 850mm to 900mm and the soils do not have a high salt store. This indicates that salinity in local groundwater areas is not considered to be a high risk.

The proposed clearing is on soils that are at risk to nutrient loss, however eutrophication is unlikely due to the clearing activities.

**Methodology** Water and Rivers Commission (2001);  
GIS Databases:  
- Topographic Contours, Statewide - DOLA 12/09/02  
- Geomorphic Wetlands (Classification), Swan Coast Plain  
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/05/05  
- Rainfall, Mean Annual - BOM 30/09/01

**(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**

DAFWA (2007) advises the proposed clearing may contribute slightly to waterlogging around the sumpland, however the pine forest is thought to be an adequate buffer for the increase in through flow.

Therefore, the proposal is unlikely to be at variance to this Principle.

**Methodology** DAFWA (2007);

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

**Comments**

The property is zoned Rural under the Shire of Capel TPS.

An extension of the existing Extractive Industries Licence (EIL) for Lot 520 has been applied for to the Shire of Capel by the applicant.

The application lies within a RIWI Act groundwater approved Plan area.

**Methodology** GIS Databases:

- Town Planning Scheme Zones - MFP 8/98

**4. Assessor's comments**

Purpose	Method	Applied area (ha)/ trees	Comment
Extractive Industry	Mechanical Removal	3.1	<p>The assessing officer advises that assessable criteria have been addressed the proposal is at variance to Principles (a), (b) and (e); and may be at variance to Principles (f), (g), (h) and (i).</p> <p>The vegetation under application is a regionally significant corridor of remnant vegetation that has a high level of biodiversity; provides potential habitat for indigenous fauna; and comprises a vegetation complex below the 30% target for biodiversity conservation.</p> <p>The assessing officer identifies two options for the CEO's consideration:</p> <ol style="list-style-type: none"><li>1. Refuse a clearing permit, having regard to Principles identified as being 'at variance', thus environmentally unacceptable; or</li><li>2. Consider granting a clearing permit, requiring a more detailed assessment of the offsets put forward by the applicant to address the environmental concerns raised by the assessment.</li></ol>

**5. References**

Additional DEC Site Visit (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC18732

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

Bennett Environmental Consulting Pty Ltd (2006). Flora and Vegetation of LOT 520 Stratham, Western Australia. TRIM Ref: DOC11372

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.

DEC (2006) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR), received DATE. Biodiversity Coordination Section, Department of Environment and Conservation, Western Australia.

DEC Site Visit (2006). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC11860

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 (2003). Southern Extension of Sandpit, Lot 2 Calinup Road, Gelorup, Shire of Capel - report and recommendations of the Environmental Protection Authority, Perth. TRIM Ref: DOC18730

EPA (2006). Report to the Minister for the Environment - Appeal against report and recommendations of the Environmental Protection Authority in relation to: Extension of sand pit Lot 2 Calinup Rd, Gelorup, Shire of Capel. TRIM Ref: DOC18728

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.

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.

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)