



## 1. Application details

### 1.1. Permit application details

Permit application No.: 227/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Smargiassi Nominees

### 1.3. Property details

Property: LOT 203 ON DIAGRAM 67405 (Lot No. 203 STOCK STAKE HILL 6210)  
Local Government Area: Shire of Murray  
Colloquial name: Lot 203 Stock Rd, Stake Hill

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		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 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina Beard 998: Medium woodland; tuart  (Hopkins et al. 2001)	The area under notice is on the Swan Coastal Plain, approximately 1.5 kilometres from the Serpentine River in Stake Hill. The site is comprised of grey and yellow sand of the Spearwood system, and is predominantly comprised of an open forest of Eucalyptus and Marri and a woodland of Eucalyptus and Banksia species.  The understorey is relatively sparse and consists mainly of <i>Acacia pulchella</i> , <i>Kunzea glabrescens</i> , <i>Macrozamia riedlei</i> , and <i>Hibbertia hypericoides</i> .	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The majority of the area (5ha) to be cleared is in a very good to excellent condition. While there are indications of past logging on site, vegetation structure is intact, and weed infiltration is limited to areas immediately adjacent to disturbed areas (eg. access tracks and fence lines).

## 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 proposal area contains vegetation of a very good condition. Within a local context, it is likely that this site has a relatively higher biological diversity than other sites within the extent of this vegetation complex since much of this vegetation complex has been previously cleared for urban development.

Methodology Site inspection.

### (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**

CALM advice indicates that there are no known records in CALM's Threatened and Priority Fauna Database (CALM 2004). The areas has been noted as potential habitat for Quenda (*Isoodon obesulus fusciventer*) (P5); Western Brush Wallaby (*Macropus irma*) (P4); Western False Pipistrelle (*Falisterellus mackenziei*) (P4); Carpet Python (*Morelia spilota imbricata*) (S4). Lot 203 Stock Road is also noted as being potential feeding habitat for Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) (S1).

Site inspection on 11/11/2004 revealed that vegetation within Lot 203 Stock Road is in very good condition, despite indications of past logging activity. Likely habitat locations (old trees containing hollows and some ground cover / fallen trees) were observed on site. The presences of fauna was apparent during the site inspection, with scatchings, diggings, scats, and burrows observed.

CALM (2004) indicates that the proposed clearing will significantly fragment remaining remnant vegetation in the area and contribute to the decline in available habitat for species of significance.

**Methodology** CALM (2004).  
Site inspection.

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

**Comments Proposal may be at variance to this Principle**

A search of the CALM databases (Bennett Environmental Consulting 2004) identified 1 Declared Rare Flora (DRF), one Priority 2 Flora, two Priority 3 Flora and three priority 4 Flora, present within the local area surrounding the proposed clearing.

The flora survey carried out in March 2004 located approximately 20 examples of *Acacia benthamii*, a Priority 2 Flora, along the eastern and western boundaries of the Lot 203 Stock Road. The flora survey also indicated that two other priority flora species may exist within Lot 203 Stock Road. However a spring survey would need to be conducted to confirm this possibility.

**Methodology** Bennett Environmental Consulting (2004). It should be noted that this flora survey was not carried out within the guidelines specified by EPA Statement 51 (EPA 2004), as it was not conducted during the spring months of the year.

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.**

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

A search of available databases has indicated that there is no known Threatened Ecological or Plant Community in the area surrounding Lot 203 Stock Road.

**Methodology** GIS Databases:  
- Threatened Ecological Communities - CALM 15/07/03  
- 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**

Native vegetation in general is under-represented within the local area, and this vegetation complex is under-represented at both a bioregion and local scale.

Hopkins et al. (2001) identifies the vegetation located within Lot 203 Stock Road as Complex 1001, which is defined as 'Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina'. This vegetation complex is considered vulnerable as only 27.6% (18,907 hectares) of its original 68,475 hectare extent remains.

The proposed extractive industry is located approximately 9 kilometres from the Mandurah city centre, and as such is within an area facing increasing developmental pressure. Aerial photography of the local area, defined as a 10-kilometre radius around the site, demonstrates the amount of vegetation which has been previously removed for the purposes of development or agriculture. Preliminary assessment has found that total vegetation representation on a local scale is as low as 25% - 30%.

In a local context, the majority of land east of the Serpentine River has been cleared for agricultural use, with vegetation represented in relatively large isolated pockets. To the west of the Serpentine River, vegetation has been extensively cleared or modified as a result of expansion to urban centres and development along transport corridors. Within this 10km radius, vegetation complex 1001 had an extent of approximately 4300 hectares. This has been reduced to its current level of approximately 793 hectares; roughly 18% of the original local extent. Of this remaining vegetation, the majority is located immediately north of Lot 203 Stock Road, within a recognised Bush Forever site.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	% in reserves/CALM-managed land
IBRA Bioregion	1,529,235	657,450	43%	Status	
Shire of Murray	181,526	98,552	54.3%	Least Concern	
Local Area	~33,574	~9,300	~27%	Vulnerable	
Beard veg type - 1001	68,475	18,907	27.6%	Vulnerable	4.2%
Beard veg type - local area	4,300	793	18.4%	Vulnerable	
Hedde veg type	24,767	11,427	45%	Depleted	13.9%

\* Shepherd et al. (2001)

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

**Methodology** GIS Databases:  
- NLWRA, Current Extent of Native Vegetation - DA 30/01/01

- Pre-European Vegetation - DA 01/01
- Bushforever - MFP 07/01
- Swan Coastal Plain South - Aerial Photography - DLI 01/04

**(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 at variance to this Principle**

There are no watercourses or wetlands present within the boundaries of Lot 203 Stock Road, Stake Hill.

Two Conservation Category Wetlands areas exist within a relatively short distance from the proposed clearing. These areas are Paganoni Swamp and the Serpentine River, being approximately 420 metres and 1000 metres respectively. This distance is considered to be an adequate buffer as outlined in WRC Position Statement: Wetlands (06/06/01).

**Methodology** GIS Database:  
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DOE 21/10/04

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

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

The proposed clearing of the 5 hectare area within Lot 203 is not likely to cause appreciable on site and off site land degradation (DAWA 2004). Due to porosity of the land, surface runoff may not be a significant problem (Lundstrom 2002).

**Methodology** DAWA (2004).  
Lundstrom (2002).

**(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**

CALM (2004) indicate that the proposed clearing is approximately 600 m of a Bush Forever Recommended Site #395 (Paganoni Swamp and Adjacent Bushland, Karnup), which extends to the north into Bush Forever Site #379 (Anstey Swamp, Karnup) and to the east into Bush Forever Site #394 (Lake Amarillo, Serpentine River and Adjacent Bushland, Karnup). Bush Forever Sites #395 and 379 are part of the Rockingham Lakes Regional Park. 1.4 km E of the proposed clearing is a CALM managed Class A Unnamed Reserve 44986.

Due to the separation between Lot 203 Stock Road and the conservation areas, and with adequate management and protection of the Priority Flora discovered within Lot 203 Stock Road, it is unlikely the proposed clearing would impact significantly on the environmental values of the nearby conservation areas.

**Methodology** CALM (2004).  
GIS Databases:  
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DOE 2004  
- Bushforever - MFP 07/01  
- Aerial Photography - Swan Coast Plain South – DLI 04

**(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 at variance to this Principle**

The clearing of native vegetation from the site will result in a local rise in the groundwater table due to increased direct infiltration of rainwater. However, plans for the development of the extractive industry outline a commitment to providing a 2 metre vertical separation between the extractive works and the water table. Thus it is unlikely that the removal of native vegetation would result in a negative impact to the groundwater table.

**Methodology** Site inspection.

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

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

Lot 203 Stock Road is located approximately 1.5 kilometres from the Serpentine River, at an elevation between 10 - 15 metres. It is considered that the removal of vegetation from site would have no impact on peak flood height or duration.

**Methodology** GIS Database – Topographic Contours, Statewide – DOLA 12/09/02

## Planning instrument or other matter.

**Comments** The area is zoned urban under the Peel Region Scheme.

**Methodology** Peel Region Scheme

## 4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Extractive Industry	Mechanical Removal	5	<b>Approve</b>	The Department recognises that this application is at variance to Principle (b) and (e) and may be at variance with Principle (c). However, in view of the urban zoning of the land, and its management and rehabilitation through an extractive industry licence, it is recommended that the proposal be approved.

If the proposal is approved, Local Government planning mechanisms should cover the issues of revegetation and dieback control. For this reason, revegetation should be added to the Permit as advice only. It is recommended that the following conditions and advice be applied to the Permit.

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### Conditions

1. The Permit Holder shall not clear unless valid planning approval is issued by the Shire of Murray

2. The Permit Holder shall not clear within 50 metres of declared rare flora or priority flora as identified in the flora survey conducted by Bennett Environmental Consulting Pty Ltd dated 4 April 2004.

3. The Permit Holder shall construct a fence enclosing declared rare flora or priority flora as identified in the flora survey conducted by Bennett Environmental Consulting Pty Ltd dated 4 April 2004.

### Advice

1. The Permit Holder should revegetate all areas cleared on Lot 203 Stock Road, Stake Hill. The revegetation should be established and maintained to an average planting density of 1500 plants per hectare. The species shall consist of overstorey, midstorey and understorey species that are native to the area. Seed shall be sourced from within a 3 kilometre radius of the property

The Permit Holder should stockpile top soil from all areas cleared on Lot 203 Stock Road, Stake Hill. The Permit Holder should spread the top soil over the areas under going revegetation.

## 5. References

- Bennett Environmental Consulting (2004). Vegetation and Flora of Lot 203 Stock Road, Stake Hill. Report prepared for Mr N. Smargiassi. DoE TRIM ref CRN205980
- CALM (2004) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref HD19077.
- DAWA (2004) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref 2004O/877
- 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) 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.
- EPA (2004) Guidance for the Assessment of Environmental Factors - terrestrial flora and vegetation surveys for Environmental Impact Assessment in Western Australia. Report by the EPA under the Environmental Protection Act 1986. No 51 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.
- 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.
- JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of

Australia, Canberra.

Keighery, BJ (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Lundstrom, MJ (2002). Extractive Industries Licence Application. Lot 203, Cockburn Sound Location 16, Stock Road, Stake Hill, Shire of Murray.

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.