



1. Application details

1.1. Permit application details

Permit application No.: 927/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Starcevich Nominees PTY LTD

1.3. Property details

Property: LOT 39 ON PLAN 138984 (GRASS PATCH 6446)

Local Government Area: Shire Of Esperance

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70		Burning	Cropping

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 519: Shrublands; mallee scrub, Eucalyptus eremophila. (Hopkins et al., 2001; Shepherd et al., 2001)	The vegetation is mallee woodland with scrub understorey and little groundcover over most of the area. There are some samphire flats in the eastern portion of the site. The remnant exists within a highly cleared and fragmented landscape. (DEC Site Visit TRIM Ref AD251)	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The area had been chained over 20 years ago and grazed by sheep up to approximately 7 years ago which evidently has impacted the density and structure of the vegetation. However, the vegetation is well established with almost no weed invasion. (DEC Site Visit TRIM Ref AD251)

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 at variance to this Principle**
The natural diversity of the vegetation covered by this application is high with respect to species and ecosystem when compared to the local area (DEC Site Visit). Within a 5km radius of the site there are only three other remnants of vegetation with areas over 30ha. Annual crops cover the majority of the remaining area.

Due to the high level of clearing in the local area (10km radius) it is considered that removal of the vegetation covered in this application would further reduce the extent of viable and intact vegetation, prevent the movement of flora and fauna in the landscape and severely impact on the remaining biodiversity values in the local area.

The amended application, while for a smaller area, would leave this remnant fragmented and the loss of 46ha of vegetation would still have a significant impact on biodiversity in the local area.

Methodology Site Visit (DEC TRIM ref AD251)
Submission from proponents (TRIM ref AI975)
GIS Database:
-Scadden 1.4m Orthomosaic - DLI 04

(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**
Removal of remnant vegetation in fragmented landscapes has been shown to severely affect the dispersal and

persistence of fauna, especially smaller or less mobile species (Lindenmayer et al., 1999). The amended area under application is significant habitat in its own right as it is a significant size (46ha) especially for this highly cleared area.

In addition, the vegetation under application is significant as it is an important stepping stone for fauna between remaining vegetation.

A submission from a conservation organisation stated that this site is in a highly fragmented landscape, suggesting it is critical for providing a significant area of habitat and as a 'stepping stone' for enabling faunal and pollen/seed movement through the landscape.

There are vegetated shelterbelts on some of the properties in the local area, however there are few significant remnants remaining in the surrounding area (DoE site visit).

The amended application for a reduced area would leave 46ha of the 88ha remnant intact. Clearing of this area would still impact upon habitat for fauna as the local area is so highly cleared and the remnant would be fragmented. As such, the amended application remains at variance to this Principle.

Methodology Site visit (DoE TRIM ref AD251), Lindenmayer et al. (1999), conservation organisation submission (TRIM ref HD26186), submission from proponents (TRIM ref AI975)
GIS Database:
-Scadden 1.4m Orthomosaic - DLI 04

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

Comments Proposal may be at variance to this Principle

Advice received from DEC Biodiversity Coordination Section (09/10/2006) states that the amended clearing proposal for 46ha has been examined, and the following has been concluded:

There are three populations of Declared Rare taxon (*Eucalyptus merrickiae*), that have been recorded within 10km of the proposed clearing. DEC's flora base describes this species as 'Mallee, 2-4(-6), high, bark rough, flaky. Fl. pink, cream, white, Aug-Nov. Sandy clay, grey sand. Near salt lakes.' There is a distinct possibility that this declared rare species may occur on the land that is proposed to be cleared.

A number of Priority Flora taxa have also been recorded within 10km of the proposed clearing; P2 *Grevillea plurijuga* subsp. *superba*, P3 *Acacia improcera*, P3 *Pityrodia chrysocalyx*, P3 *Eucalyptus ovularis*, P4 *Adenanthos ileticus*, P4 *Grevillea aneura* and P4 *Eucalyptus dolichorhyncha*.

Based on the precautionary principle, an appropriately timed flora survey is recommended to be conducted by a qualified flora specialist to ascertain whether the area contains these, and or other flora species of conservation significance.

Methodology FloraBase (2005).
DEC Site Visit (TRIM ref AD251).
DAWA (2005).
Submission from proponents (TRIM ref AI975).
Biodiversity Coordination Section (09/10/2006).
GIS Database:
-Declared Rare and Priority Flora List - CALM 01/07/05

(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 records of Threatened Ecological Communities (TECs) within the local area. The closest TEC is found 53km south of the proposed area. The proposed clearing is unlikely to impact this TEC, due to the distance between the TEC and the proposed clearing.

Methodology GIS Database:
-Threatened Ecological Communities - CALM 12/04/05

(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 seriously at variance to this Principle

The National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is the target.

The Environmental Protection Authority's (EPA 2000) Position Statement No. 2 - Environmental Protection of

Native Vegetation in Western Australia identifies a 30% threshold level for vegetation types, beyond which species extinction is believed to occur at an exponential rate. Any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported. The Shire of Esperance retains only 27.4% of the Pre-European vegetation extent, classing it as vulnerable.

The proposal is also located within the Agricultural Zone as defined within the EPA Position Statement No.2, where there is a presumption against any further clearing of native vegetation for agricultural purposes.

	Pre-European status**	Current area (ha)	Remaining extent (ha)	Conservation	% in reserves %*
IBRA Bioregion - - Mallee		7,404,398***	4,081,089		55.1
	Least Concern				
Shire of Esperance	4,256,774	1,609,610	27.4	Vulnerable	
Beard Veg Type 519	2,221,704	1,346,958	60.6	Least Concern	18.9

* (Shepherd et al. 2001).

** (Department of Natural Resources and Environment 2002)

The area under application is part of a 2300ha farming property. The property has less than 6% remaining of native vegetation, much of which is in the form of trees in shelterbelts which are relatively sparse and fragmented. If this proposal was granted the farm would retain less than 4% of native vegetation.

The Shire of Esperance submission estimated that the Grass Patch / Salmon Gums area only retains 17% of its original native vegetation cover with 30% of this vegetation fragmented across farmlands.

Based on 2004 aerial photography, within a 10km radius of the area under application, less than 5% of the area is covered by native vegetation. Most of this is fragmented with few substantial remnants. As part of the proponent's submission, the area under application has been reduced to 46ha. The proponent calculates that 1963ha of remnant vegetation exist within a 10km radius of their property. This figure suggests that approximately 7% of the local area is covered by vegetation (2% greater than the calculations made as part of the initial assessment).

The application is considered to be seriously at variance to this Principle as the area of vegetation is part of a significant remnant in a highly cleared landscape.

Methodology Hopkins et al. (2001).
Shepherd et al. (2001).
Department of Natural Resources and Environment (2002).
JANIS (1997).
AGPS (2001).
EPA Position Statement No.2 (2000).
Shire of Esperance submission (TRIM ref A1879).
Submission from proponents (TRIM ref A1975).
GIS Database:
-Scadden 1.4m Orthomosaic - DLI 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 waterbodies found within the area under application or associated with it. Drainage from the property is poorly defined and external by sheet flow during high rainfall events (DAWA, 2005). No native vegetation associated with or dependent upon waterbodies is proposed to be cleared under this application.

Methodology DAWA (2005).
GIS Database:
- Hydrography, Linear - DOE 01/02/04

(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

Half of the area applied to be cleared is protected in perpetuity by an Agreement to Reserve (ATR) under the Soil and Land Conservation Act 1945. The landowner has requested that the ATR be varied and the Commissioner has indicated that he would be prepared to vary the ATR (DAWA, 2005).

The following advice was provided by the Department of Agriculture Western Australia (DAWA) through the Commissioner for Soil and Land Conservation (DAWA, 2005):

- The proposed area has a low Phosphorus export risk due to the clayey subsoils, gentle slopes and low rainfall of the area under application.
- It is expected that the proposed clearing has a low risk of exacerbating or causing wind and water erosion or waterlogging.
- Due to the landscape position, clearing of native vegetation is unlikely to contribute to on-site salinity or the final extent of salt affected land off-site.

However it should be noted that DAWA (2005) estimates that most potential salinity within the soil zone for the area under application will not develop until after 2075. DAWA does not consider this to be an issue but it does suggest long term risk. The Shire of Esperance supported this view when they outlined in their submission that the Grass Patch - Salmon Gums area is considered to have long-term high salinity hazard rating.

During a site visit by DEC Officers it was noted that Kopi soils, which are light and dusty and highly erodible, were present in the southwest corner of the original application area. A submission submitted by the proponents as a response to the Departments intention to refuse this application, addressed some of the land degradation concerns. As part of their amended application the proponents have removed the areas in which kopi soils exist. However a new submission from DAWA (2006) states that the Department does not see any reason to vary their previous advice (2005), which concludes that although appreciable land degradation is unlikely to occur in the short-term, long-term land degradation is likely.

Given the above information, the proposal may be at variance to this Principle.

Methodology DAWA (2005).
Site Visit (DEC TRIM ref AD251).
Shire of Esperance Submission (TRIM ref AI879).
Submission from Proponents (TRIM ref AI975).

(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

Three DEC managed conservation areas are located within a 10km radius of the proposed clearing-

- Red Lake Townsite Nature Reserve 6km west - 76ha
- Ridley North Nature Reserve 10km south - 393ha
- Ridley South Nature Reserve 8.4km south east - 1105ha

In this highly cleared landscape, any remaining significant remnants of native vegetation, such as the area under application, contribute to ecological linkages between conservation areas.

The proponents amended their application, which reduced the area by 46ha. The amended application would still result in the reduction and fragmentation of a significant remnant of vegetation in a highly cleared landscape, and as such is at variance to this Principle.

Methodology Submission from proponents (TRIM ref AI975).
GIS Database:
- CALM Managed Land and Waters - CALM 1/07/05

(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 under application is not within a proclaimed, gazetted or declared water area or catchment.

DAWA advice states that the Scadden Land System, in which the proposed site is located, is a level to very gently undulating plain usually with internal drainage to swamps. External flow from the property would occur only during high intensity rainfall events by sheet flow. There are no waterbodies in the area under application, and flows off site would be small due to the low rainfall of between 325 and 350mm per annum in the area.

Therefore the proposal is not likely to be at variance to this Principle.

Methodology DAWA (2005).
GIS Databases:
-Hydrography, linear - DOE 1/2/04.
-Public Drinking Water Source areas (PDWSA's) - DOE 09/08/05.

(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 at variance to this Principle

Due to the low rainfall in the area of 325-350mm per annum and a low slope of less than 1.5%, the proposed clearing has no to very low risk of flooding (DAWA 2005).

Methodology DAWA (2005)

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

Comments

There is a Native Title Claim over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

The proposal is not at variance with any planning instruments and no further licences or approvals are required.

The Shire of Esperance Council has no formal objections to this proposal but the Shire provided a number of comments that have been incorporated within this assessment. Additionally they suggested that any approved clearing take place between the months of May and September, after the first rains, to minimise wind erosion.

A Submission from a conservation organisation outlined their expectations of the assessment process and highlighted a number points including the highly fragmented nature of the landscape, its role as a 'stepping stone' for enabling faunal movement, as well as pollen/seed (reserves) transfer around the landscape.

Methodology Conservation organisation submission (TRIM ref HD26186).
Shire of Esperance submission (TRIM ref A1879).

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Cropping	Burning	70	Refuse	<p>The Principles have been assessed and the clearing as proposed -</p> <p>May be at variance to Principle (c) Is at variance to Principles (a) (b) (h) Is seriously at variance to Principle (e)</p> <p>(a) The removal of a large amount of remnant vegetation in Very Good Condition is likely to have adverse environmental impacts on the biodiversity of the Esperance region.</p> <p>(b) The removal of a large amount of remnant vegetation in an extensively cleared area will significantly reduce the dispersal capacity of fauna in local nature reserves.</p> <p>(c) It is likely that there may be Declared Rare and Priority Flora occurring within the area under application.</p> <p>(e) The Shire of Esperance records less than 30% native vegetation remaining and will be affected by this clearing. The proposal is located within the Agricultural Zone, of which the EPA Position Statement No.2 is against any further clearing for agricultural purposes.</p> <p>(g) The proposal may have long-term salinity risk issues.</p> <p>(h) The vegetation under application provides a valuable role as an ecological 'stepping stone' for DEC managed nature reserves.</p> <p>Therefore, the assessing officer recommends that the permit be refused.</p>

5. References

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

DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref AD251.

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 (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular

- reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.
- FloraBase (2005) Descriptions by the Western Australian Herbarium, CALM. Text used with permission (<http://florabase.calm.wa.gov.au/help/copyright>). Accessed on Tuesday, 24 January 2006.
- 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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Lindenmayer, D.B., Cunningham, R.B., Pope, M.L. (1999) A large-scale 'experiment' to examine the effects of landscape context and habitat fragmentation on mammals. *Biological Conservation* 88. 387-403.
- 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)