



1. Application details

1.1. Permit application details

Permit application No.: 935/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Michael Edward & Judith Dianne Charlton

1.3. Property details

Property: LOT 48 ON PLAN 226304 (FEYSVILLE 6431)
PART LOT 50 ON PLAN 226299 (FEYSVILLE 6431)
Local Government Area: City Of Kalgoorlie/Boulder & Shire Of Coolgardie
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
50		Mechanical Removal	Mineral Production

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 associations: 9 - Medium woodland; coral gum (E. torquata) & Goldfields blackbutt (E. lesouefi). 221 - Succulent steppe; saltbush 468 - Medium woodland; salmon gum & Goldfields blackbutt	The vegetation of the area in which clearing is to occur consists of 38 different habitat types (Western Botanical, 2004). The area is dominated by Mixed Eucalypt woodlands with Atriplex nummularia shrub understorey on shallow alkaline loams with calcrete nodules (Western Botanical, 2004).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The area under application is for clearing of 50 ha for prospecting on a 10,700 ha lease over 5 years. Aerial photograph for the area shows the existing mining pits and tracks within the areas of native vegetation.

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 vegetation under application comprises of common vegetation associations for the area with more than 700,000 ha remaining (Shepherd et al, 2001). This is consistent with the vegetation described by Western Botanical.

Aerial photography for the area shows the area to contain a number of mining pits, track as well as areas of native vegetation.

The vegetation proposed to be cleared does not appear to have a higher diversity than the surrounding area.

Methodology Western Botanical (2004) (DoE Trim No. HD26371)
GIS datasets
Lake Lefroy 1.4m Orthomosaic - DLI 02
Pre-European Vegetation - DA 01/01

(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**
CALM has advised that the following species are known to occur within a 50km radius for the proposed clearing:
* Chuditch, Dasyurus geoffroi, Vulnerable (State) WC Act and (Federal) EPBC Act;

- * Malleefowl, *Leipoa ocellate*, Vulnerable (State) WC Act and (Federal) EPBC Act;
- * Peregrine Falcon, *Falco peregrinus*, Specially Protected (State) WC Act.
- * *Ogyris subterrestris petrina* (P1) This butterfly is known only from a small area north east of Lake Douglas. Tourism, recreation and mining activities have been implicated as major threats (DeH);
- * Crested Bellbird (southern), *Oreoica gutturalis gutturalis* (P4);
- * Shy Heathwren (western ssp), *Hylacola cauta whitlocki* (P4) (historic record);
- * White-browed Babbler (western wheatbelt), *Pomatostomus superciliosus ashbyi* (P4).

CALM also advises that:

- * The Chuditch prefers habitat that provides more cover than is likely to be found in the notified area.
- * Records of Malleefowl in the area are relatively recent therefore the proponent should actively check for the presence of Malleefowl mounds before commencing any clearing operations.
- * Bird species such as Peregrine Falcon, White-browed Babbler, Crested Bellbird (Southern) and Malleefowl may utilise the notified area but the habitat present is unlikely to be 'significant' for these species.
- * The threatened species of butterfly *Ogyris subterrestris petrina* is at risk from mining activities but as individuals have not been seen since 1993 (DeH) it is difficult to speculate on the probability of the proposed clearing affecting the habitat and thus conservation status of this taxon.

Given that the proponents intend to clear 5ha a year for ten years and will rehabilitate the area on completion of prospecting, the proposed clearing is not likely to be at variance to this Principle (CALM advice).

Methodology CALM advice (HD26053)

(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 no known Declared Rare Flora within 50 km of proposed clearing. However there are 22 known priority flora populations within this area. Two of these priority species (*Acacia websteri* and *Eremophila praecox*) occur on the same vegetation type.

CALM has advised that the following species have been recorded in the vicinity of the proposed clearing:

✓ *Acacia websteri* (P1) is described on CALM's Florabase as a shrub, 1.2-5 m high, bark fibrous. Flowers are yellow. Occurs on red sand, clay or loam. Low-lying areas, flats.

✓ *Eremophila praecox* (P1) is described as a Broom-like shrub, 1.5-3 m high. Flowers are purple, Oct-Dec. Found on red/brown sandy loam. Undulating plains.

✓ *Astartea* sp. Red Hill (P1) (K.R. Newbey 8462) is as a shrub, 0.3-1 m high. Flowers are white, pink, Aug-Sep. Occurs on stony sandy loam and rocky hillslopes.

The flora, vegetation and habitats survey for the area has identified three priority species in within the area under this application. These are *Melalueca coccinea*, *Eremophila praecox* and *Allocasuarina eriochlamys* ssp. *grossa* (Western Botanical (2004) (DoE Trim No. HD26371). *Astartea* sp. Red Hill (P1) (K.R. Newbey 8462) was not observed during this survey.

The vegetation types containing the observed priority flora have been described as:

Rocky *Acacia* Shrublands on outcropping gabbro, granite or schist.

Rocky *Acacia* - Mallee Shrublands on sands over gabbro, granite or schist; and

Calcrete Platform Shrublands with *Casuarina pauper*.

The proponent has advised that clearing will not be carried out on these vegetation types as they are not likely to be prospective.

Conditions to ensure that these communities which contain significant flora are protected have been imposed as a condition of the clearing permit.

Methodology CALM advice (HD26053)
Western Botanical (2004) (DoE Trim No. HD26371).
GIS Datasets
Declared Rare and Priority Flora List - CALM 1/7/05

(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 known TEC's within 50 km of the proposed clearing. No Threatened Ecological Communities were recorded in the Flora, Vegetation and Habitats of the Sotuh Kal Miens, Pty Ltd Holdings and Surrounding

Area survey.
Methodology Western Botanical (2004) (DoE Trim No. HD26371)
GIS Database: Threatened Ecological Communities - CALM 12/4/05

(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 not at variance to this Principle**

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European Settlement (Department of Natural Resources and Environment, 2002; EPA, 2000). Vegetation complexes in this application are well above the recommended minimum of 30% representation. The vegetation at the site consists of Beard Vegetation Associations:

9 - Medium woodland; coral gum (*E. torquata*) and goldfields blackbutt (*E. lesouesii*);

221 - Succulent steppe; saltbush; and

468- Medium woodland; salmon gum & Goldfields blackbutt (Hopkins et al. 2001);

of which Hopkins et al (2001) states there is 99.7%, 94.8% and 100% (respectively) of the pre-European extent remaining (Shepherd et al. 2001). This vegetation type is therefore of least concern for biodiversity conservation (Department of Natural Resources and Environment 2002).

Methodology Shepherd et al. (2001) Hopkins et al. (2001)
Department of Natural Resources and Environment (2002) EPA (2000)
GIS database: -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**

There are some minor, non-perennial watercourses within the area proposed to be cleared. Given the area to be cleared is for 50 ha over 10 years for prospecting and the land is to be revegetated, the possible impacts on these watercourses is likely to be minimal.

Methodology GIS Databases:
Hydrology, linear - DOE 1/2/04;
RAMSAR, Wetlands - CALM 21/10/02

(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**

The mean annual rainfall in the area is 300 mm and the mean annual evaporation rates is about 2600mm. There is little surface flow during a normal rainfall season, therefore land degradation through erosion would be negligible. The area under application is for prospecting and hence the clearing will not be concentrated in the one area. This will also reduce the risk of land degradation on and off-site.

Methodology GIS Databases:
Topographic Contours, Statewide - DOLA 12/09/02
Lakes 250K-GA
Evaporation Isopleths - BOM 09/98

(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**

There are 6 CALM managed lands within 30km radius of the proposed clearing. The closest, Kambalda Nature Reserves is adjacent to the proposed clearing in the south west.

As the proposal is to clearing 50 ha over 10,700 ha area it is unlikely that the clearing will adversely impact on this Nature Reserve.

Methodology GIS Database:
CALM Managed Lands 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 proposal is not likely to affect surface water quality as there are no permanent watercourses within the proposed clearing area and the groundwater is highly saline. The mean annual rainfall is 300mm and the mean

annual evaporation is about 2600mm as such run off is likely to be minimal. The low rainfall and high evaporation rate also infers low recharge rates.

Methodology GIS Database:
Groundwater Salinity, Statewide - 22/02/00
Rainfall, Mean Annual - BOM 30/09/01
Evaporation Isopleths - BOM 09/98

(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**
Given the scattered nature of clearing, the little surface flow due to low rainfall and high evaporation rates, and the distance to the nearest lake or watercourse, the clearing as proposed is unlikely to be at variance with this principle.

Methodology GIS Databases:-
Rivers 250K - GA
Lakes 250K - GA

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

Comments No submissions were received and there are no other relevant approvals or planning instruments that affect this proposal.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mineral Production	Mechanical Removal	50	Grant	The clearing principles have been addressed and it is considered that the clearing as proposed is not likely to be at variance to any of them. Given the small are to be cleared each year, the assessing officer recommends that the clearing permit be granted with restrictions on vegetation types that contain priority flora, revegetation and reporting conditions.

5. References

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

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.

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, 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.

Western Botanical (February 2004) Flora, vegetation and habitats of the South Kal Mines, Pty Ltd Holdings and Surrounding Area WA. TRIM ref HD26371

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)