



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>Purpose Permit number:</b> | CPS 5804/1                           |
| <b>Permit Holder:</b>         | ENMIC Pty Ltd                        |
| <b>Duration of Permit:</b>    | 21 December 2013 to 21 December 2023 |

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

### PART I – CLEARING AUTHORISED

**1. Purpose for which clearing may be done**

Clearing for the purpose of limesand extraction and associated activities.

**2. Land on which clearing is to be done**

Mining Lease 70/1302  
Caves Road reserve (PIN: 11606970), Boranup

**3. Area of Clearing**

The Permit Holder must not clear more than 1.72 hectares of native vegetation within the area cross hatched yellow on attached Plan 5804/1.

**4. Period in which clearing is authorised**

The Permit Holder shall not clear any native vegetation after 21 December 2018

**5. Application**

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

### PART II – MANAGEMENT CONDITIONS

**6. Dieback and weed control**

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- shall only move soils in *dry conditions*;
- ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

## 7. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 12 months following completion of extractive activities, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
  - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
  - (ii) ripping the pit floor and contour batters within the extraction site; and
  - (iii) laying the vegetative material and topsoil retained under condition 7(a) on the cleared area(s).
- (c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 7(b) of this Permit:
  - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 7(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 7(c)(ii) of this permit, the Permit Holder shall repeat condition 7(c)(i) and 7(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 7(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 7(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 7(c)(ii).

## PART III - RECORD KEEPING AND REPORTING

### 8. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
  - (i) the species composition, structure and density of the cleared area;
  - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (iii) the date that the area was cleared; and
  - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 7 of this Permit:
  - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
  - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
  - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
  - (v) a copy of the environmental specialist's report.



## 9. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 8 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 21 September 2023, the Permit Holder must provide to the CEO a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(a) of this Permit.

## DEFINITIONS

The following meanings are given to terms used in this Permit:

**dieback** means the effect of *Phytophthora* species on native vegetation;

**direct seeding** means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

**dry conditions** means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

**environmental specialist:** means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist;

**fill** means material used to increase the ground level, or fill a hollow;

**local provenance** means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

**mulch** means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

**planting** means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

**regenerate/ed/ion** means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing mulch;

**rehabilitate/ed/ion** means actively managing an area containing native vegetation in order to improve the ecological function of that area;

**revegetate/ed/ion** means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area; and

**weed/s** means any plant -

- (a) that is a declared pest under section 22 of the Biosecurity and Agriculture Management Act 2007; or
- (b) published in the former Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.



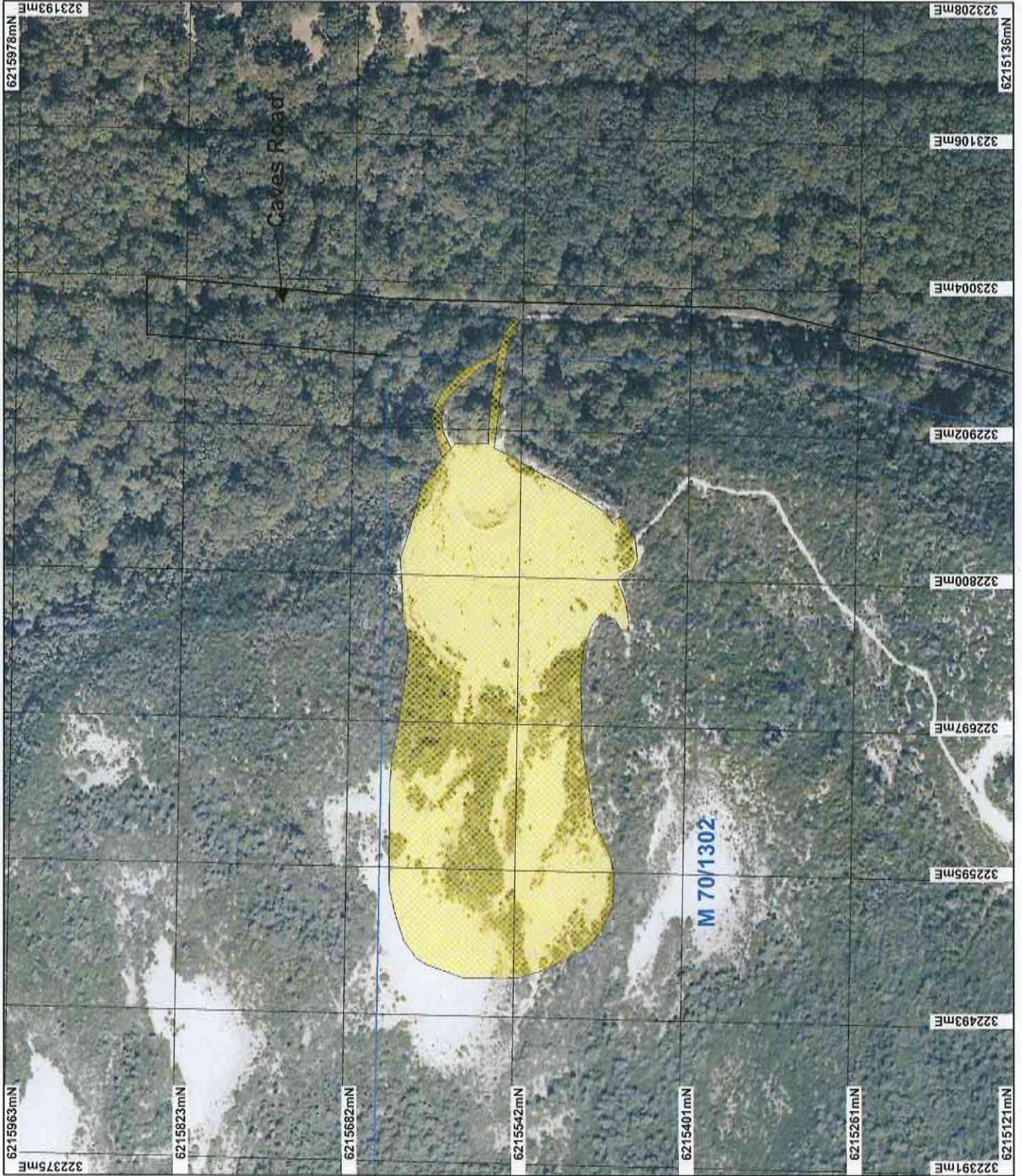
M Warnock  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

21 November 2013



# PLAN 5804/1



## LEGEND

- Cadastre
- Mining Tenements
- Clearing Instruments
- Areas Approved to Clear
- Leeuwin 50cm Orthomosaic - Landgate 2004



0 100 m

Scale 1:4000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data on this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*M. Warnock* Date 21/11/13

M. WARNOCK

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be compared with the data collection acknowledged by the agency acronym in the legend.



Government of Western Australia  
Department of Environment Regulation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 5804/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Enmic Pty Ltd

### 1.3. Property details

Property: M70/1302 and Caves Road reserve  
Local Government Area: Shire of August Margaret River  
Colloquial name: Mining Lease 70/1302

### 1.4. Application

|                    |           |                    |                     |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 1.72               |           | Mechanical Removal | Mineral Production  |

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 21 November 2013

## 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 have been mapped for the whole of Western Australia. Three Beard associations are located within the application area (Shepherd et al, 2001): | The clearing of 1.72 hectares of native vegetation within Mining Lease 70/1302 and Caves Road reserve, Boranup is for the purpose of limesand extraction. | Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) | Enmic Pty Ltd proposes to clear up to 1.72 hectares of native vegetation within a total boundary of approximately 6 hectares for the purpose of limesand extraction and associated activities. The proposal is located approximately 16 kilometres north-west of Augusta, in the Shire of Augusta-Margaret River. |
| 1: Tall forest; karri (Eucalyptus diversicolor)   |   | To   |   |
| 129: Bare areas; rock outcrops.   |   | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)                                | Vegetation condition was assessed by Landform Research (2013).  |
| 1108: Shrublands; Acacia decipiens  |   |  | The application to clearing native vegetation will allow for the continuation of a non-active limesand extraction pit (Landform Research, 2013).  |

Landform Research (2013) conducted a flora and vegetation survey over the application area and generally described the vegetation as Limesand Dune Shrubland; developed on limesand dunes typified by *Acacia littorea*, *Acacia cyclops*, *Hibbertia cuneiformis*, *Leucopogon parviflorus*, *Spyridium globulosum* and *Olearia axillaris*.

The application area also takes in a small portion of Marri Karri mixed forest (Landform Research, 2013).

The proponent has advised that the application area is predominantly bare sand, with scattered vegetation. Aerial photography shows that the vegetation is limited to isolated pockets 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 application area falls within the Warren (WAR01) subregion of the Warren Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The region is characterised by loamy soils supporting Karri forest, laterites supporting Jarrah-Marri forest, leached sandy soils in depressions and plains supporting low Jarrah woodlands and paperbark/sedge swamps, and Holocene marine dunes with *Agonis flexuosa* and *Banksia* woodlands and heaths (CALM, 2002)

Landform Research (2013) conducted a desktop survey of the surrounding areas for rare or priority flora. Only one priority flora species; *Stylidium squamellosum* (P2) was recorded within 10 kilometres of the application area (Landform Research, 2013). A search of NatureMap identified an additional 16 priority flora species and the rare species *Lambertia orbifolia* subsp. *Scott River Plains* occurring within 10 kilometres of the application area (DPaW, 2007 -).

A flora and vegetation survey has been undertaken over the application area by Landform Research (2013). The survey identified a total of 28 species from 19 families representing 24 genera (Landform Research, 2013). The vegetation within the application area was found to occur in isolated pockets within a sand dune environment (Landform Research, 2013). A small portion of the application area was identified as Marri Karri mixed forest, which was found at the base of the sand dune (Landform Research, 2013)

The flora and vegetation survey did not record any rare or priority flora species occurring within the application area (Landform Research, 2013).

According to available databases there are no Threatened or Priority Ecological Communities within the application area. There were also none recorded by Landform Research (2013) during the flora and vegetation survey.

A fauna survey has not been undertaken over the application area. NatureMap identifies 212 fauna species, consisting of 9 amphibian, 92 bird, 30 fish, 35 invertebrate, 30 mammal and 16 reptile species occurring within 10 kilometres of the application area (DPaW, 2007 -). This represents a high level of faunal diversity in the area. Given the application area mainly consists of a sparse sand dune, it is not considered likely that this level of diversity is contained within the application area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

##### Methodology

##### References:

- CALM (2002)
- DPaW (2007 -)
- Landform Research (2013)
- GIS Database:
  - IBRA WA (regions - subregions)

#### (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**

A fauna assessment has not been undertaken over the site.

A number of conservation significant fauna species have been recorded within 10 kilometres of the application area, including the following species all listed as 'rare or likely to become extinct' under the *Wildlife Conservation Act 1950* (DPaW, 2007 -):

- Cape Leeuwin Freshwater Snail (*Austroassiminea lethra*)
- Woylie (*Bettongia penicillata* subsp. *ogilbyi*)
- Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *naso*)
- Baudin's Cockatoo (*Calyptorhynchus baudinii*)
- Carnaby's Cockatoo (*Calyptorhynchus latirostris*)
- Chuditch (*Dasyurus geoffroii*)
- Indian Yellow-nosed Albatross (*Diomedea chlororhynchus* subsp. *carteri*)
- Western Mud Minnow (*Galaxiella munda*)
- White-bellied Frog (*Geocrinia alba*)
- Balston's Pygmy Perch (*Nannatherina balstoni*)
- Black-flanked Rock-wallaby Black-footed Rock-wallaby (*Petrogale lateralis* subsp. *lateralis*)
- Brush-tailed Phascogale (SW subsp) Wambenger (*Phascogale tapoatafa* subsp. (*WAM M434*))
- Southern Brush-tailed Phascogale Wambenger (*Phascogale tapoatafa* subsp. *tapoatafa*)
- Gilbert's Potoroo (*Potorous gilbertii*)
- Western Ringtail Possum (*Pseudocheirus occidentalis*)
- Shark Bay Mouse (*Pseudomys fieldi*)

- Heath Mouse Dayang (*Pseudomys shortridgei*)
- Hutton's Shearwater (*Puffinus huttoni*)
- Quokka (*Setonix brachyurus*)
- Shy Albatross (*Thalassarche cauta*)
- Atlantic Yellow-nosed Albatross (*Thalassarche chlororhynchos*)

Of these species, the mostly likely to potentially occur within the application area are the Brush-tailed Phascogale, Chuditch and Woylie. These species occupy a wide range of habitats however have shown a preference for sclerophyll forests and woodlands (Department of the Environment, 2013a; 2013b; DEC, 2012). A very small proportion of the application area intersects with Eucalypt forest. The proposed clearing in this area will be for upgrading an existing access track, therefore the clearing of this vegetation type will be minimal (Landform Research, 2013). The proposed clearing is not likely to significantly impact these species.

The application area consists mainly of low shrubland associated with a sand dune (Landform Research, 2013). Aerial imagery shows that there are large bare areas in between pockets of native vegetation. The small scale of clearing of this type of vegetation is unlikely to impact on the overall habitat of conservation significant species within the area, especially given there are areas of extensive native vegetation directly to the north, south and east of the application area.

Therefore, the proposed clearing is not likely to be at variance to this principle.

**Methodology** DPaW (2007 -)  
DEC (2012)  
Department of the Environment (2013a)  
Department of the Environment (2013b)  
Landform Research (2013)

**(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**  
According to available databases, there are no records of rare flora species within the application area. A search of NatureMap identified no rare flora species within 10 kilometres of the application area (DPaW, 2007 - ).

There were no rare flora species identified during the flora survey (Landform Research, 2013).

Based on the above, the proposed clearing is not likely to be a variance to this Principle.

**Methodology** References:  
DPaW (2007 -)  
Landform Research (2013)  
  
GIS Database:  
- Threatened and Priority Flora

**(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**  
According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area. The nearest known TEC is approximately three kilometres north of the application area.

Based on the above the proposed clearing is not likely to be at variance to this Principle.

**Methodology** GIS Database:  
- Threatened Ecological Sites Buffered

**(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 application area is located within the Warren Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Approximately 80 per cent of pre-European vegetation remains within the Warren bioregion.

The vegetation within the application area has been broadly mapped as the following Beard vegetation associations:

- 1: Tall forest; karri (*Eucalyptus diversicolor*)



129: Bare areas; rock outcrops.

1108: Shrublands; *Acacia decipiens*

According to the Government of Western Australia (2013), 79 per cent of vegetation association 1, 92 per cent of vegetation association 1108 and 96 per cent of vegetation association 129 remain within the Warren bioregion (see table below).

|   | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in IUCN Class I-IV Reserves |
|---|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Warren                   | 833,985.56              | 664,435.91           | ~80          | Least Concern         | 47.10                                      |
| Beard vegetation associations - State     |                         |                      |              |                       |  |
| 1   | 72,410                  | 57,068               | ~79          | Least Concern         | 37.15                                      |
| 129                                       | 95,286                  | 82,032               | ~86          | Least Concern         | 43.65                                      |
| 1108                                      | 9,060                   | 8,072                | ~89          | Least Concern         | 64.80                                      |
| Beard vegetation associations - Bioregion |                         |                      |              |                       |  |
| 1   | 69,118                  | 54,547               | ~79          | Least Concern         | 36.23                                      |
| 129                                       | 12,605                  | 12,047               | ~96          | Least Concern         | 87.08                                      |
| 1108                                      | 8,769                   | 8,060                | ~92          | Least Concern         | 66.56                                      |

\* Government of Western Australia (2011)

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

Vegetation within the application area has been described as sparse shrubland associated with a sand dune (Landform Research, 2013). Aerial photography indicates that there are areas of extensive vegetation located to the north, south and east of the application area.

The vegetation within the application area is not considered to be a significant remnant of native vegetation in an area that has been extensively cleared.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology** Department of Natural Resources and Environment (2002)  
Government of Western Australia (2013)  
Landform Research (2013)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)

**(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**

A flora and vegetation survey of the application area conducted by Landform Research (2013) did not identify any vegetation growing in association with a watercourse or wetland.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology** Landform Research (2013)



**(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**

The soils within the application area are broadly mapped as JK10 and A10 (GIS Database). Northcote (1960-1968) describes these soil types as follows:

JK10: Undulating low slopes of coastal dunes with aeolianite outcrops, caves, and sink holes: chief soils are brown sands (Uc4.2).

A10: Coastal dunes: chief soils are calcareous sands (Uc1.11) on the strongly undulating slopes of the dunes.

Due to the sparse nature of the vegetation, sandy soils and coastal winds experienced in the area (BoM, 2013), it is likely that wind erosion is already naturally occurring at the site. Clearing pockets of vegetation from the sand dune will expose more area to the wind. This may cause a slight increase in the occurrence of wind erosion.

Based on the above, the proposed clearing may be at variance to this Principle.

**Methodology**

References:  
BoM (2013)  
Northcote (1960 - 1968)  
GIS Database:  
- Soils (Statewide)

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

The application area is not located within any conservation area (GIS Database). The nearest conservation area is Leeuwin-Naturaliste National Park which lies directly north of the application area.

The flora and vegetation survey identified two weed species present in the application area, however there was no detail provided on their prevalence (Landform Research, 2013). Soil disturbing activities have the potential to spread weeds or introduce new weeds onto the site by machinery. Conservation values of the adjacent reserve may be adversely impacted by the spread of weed species from the subject lot. Potential impacts to the conservation values of Leeuwin-Naturaliste National Park as a result of the proposed clearing may be minimised by the implementation of weed and dieback management practices.

Based on the above, the proposed clearing may be at variance to this principle.

**Methodology**

GIS Database:  
- DEC Tenure

**(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 application area is not located within a Public Drinking Water Source Area.

The application area is located on a large elevated dune system (Landform Research, 2013). There are no watercourses, wetlands or significant hydrological features within the application area (GIS Database).

A notable feature of the Warren region is the limestone system of caves with associated endemic fauna (CALM, 2002). Clearing above these caves may alter the local hydrology which in turn can affect the subterranean environment (EPA, 2003). According to Landform Research (2013), there are no caves beneath the application area. The nearest cave is further north towards Boranup Road (Landform Research, 2013). Given the small scale of clearing, the proposed clearing is not likely to cause deterioration in the quality of groundwater.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

References:  
CALM (2002)  
EPA (2003)  
Landform Research (2013)  
GIS Database:  
- Public Drinking Water Source Areas (PDWSAs)



**(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**

The climate of the Karridale area is characterised by moderate dry summers and cool wet winters, with an average 1203.9 millimetres of rain received annually (BoM, 2013). The area under application is located on a coastal dune characterised by calcareous and brown sands on a steeply undulating sand dune (Northcote, 1960 - 1968). During rainfall events, water is likely to move through the soil profile rather than flow along the surface or collect and flood.

The clearing of 1.72 hectares of native vegetation within an application area of approximately six hectares is not likely to increase the incidence or severity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
BoM (2013)  
Northcote (1960 - 1968)

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

**Comments**

There are three Native Title Claims (WC1996/041, WC2006/004, WC2003/007) over the area under application. WC1996/041 and WC2006/004 have been registered with the National Native Title Tribunal on behalf of the claimant group and WC 2003/007 has been filed at the Federal Court of Australia. However, the mining tenure has been granted in accordance with the future act regime of the Native Title Act 1993 and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the Native Title Act 1993.

There are no Aboriginal Sites of Significance located within the application area. It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no sites of Aboriginal significance are damaged through the clearing process.

The area under application falls within the Blackwood groundwater area which is a proclaimed area under the Rights in Water and Irrigation Act 1950. Any groundwater abstraction in this proclaimed area is subject to licensing by the Department of Water. The applicant has advised that no bore need to be constructed for this project (Landform Research, 2013) and therefore a Licence to Take is not likely to be required for this project.

The applicant has advised that a Department of Environment Regulation Licence under Part V of the Environmental Protection Act 1986 will not be required for this project as a screening plant will not be operated on site (Landform Research, 2013).

The application was advertised on 7 October 2013 by the Department of Environment Regulation inviting submissions from the public. One submission was received in relation to the proposed clearing raising no objections.

Main Roads has no objection to the construction of a sealed driveway access onto Caves Road (Main Roads WA, 2013).

The Shire of Augusta Margaret River supports the proposed extraction of limesand from this reserve in accordance with the active mining tenement held by Enmic (Shire of Augusta Margaret River, 2013).

**Methodology** References:  
Landform Research (2013)  
Shire of Augusta Margaret River  
Main Roads WA (2013)

GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims - Registered with the NNTT  
- Native Title Claims - Filed at the Federal Court of Australia



#### 4. References

- BoM (2013) Climate statistics for Australian locations: Karridale. Bureau of Meteorology. URL [http://www.bom.gov.au/climate/averages/tables/cw\\_009560.shtml](http://www.bom.gov.au/climate/averages/tables/cw_009560.shtml)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- DPaW (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed October 2013.
- DEC (2012) Fauna Profiles: Brush-tailed Phascogale, Department of Environment and Conservation, Western Australia.
- Department of Environment (2013a) Species Profile and Threats Database: *Dasyurus geoffroii* - Chuditch, Western Quoll, [http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl-taxon\\_id=330](http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl-taxon_id=330)
- Department of Environment (2013b) Species Profile and Threats Database: *Bettongia penicillata ogilbyi* - Woylie, [http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl-taxon\\_id=66844](http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl-taxon_id=66844)
- 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) Environmental Assessment Guideline for Consideration of subterranean fauna in environmental impact assessment in Western Australia. Environmental Protection Authority. Western Australia.
- Government of Western Australia. (2013). 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
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