



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3015/2
Permit Holder:	CEMEX Australia Pty Ltd
Duration of Permit:	2 May 2009 – 2 May 2014

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 extractive industry.

2. Land on which clearing is to be done

Lot 835 on Plan 230232 (Lot No. 835 MYRUP 6450)

3. Area of Clearing

The Permit Holder must not clear more than 1.4 hectares of native vegetation within the area hatched yellow on attached Plan 3015/2.

4. 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.

5. Type of clearing authorised

The Permit Holder shall not clear native vegetation unless the purpose for which the clearing is authorised is enacted within 3 months of the clearing being undertaken.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Dieback and weed control

- (a) 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*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall not move soils in wet conditions;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Offsets

- (a) Determination of *offsets*:
 - (i) if part or all of the clearing to be done is or may be at variance with one or more of the clearing principles, then the Permit Holder must implement an *offset* in accordance with conditions 9(a) and 9(b) of this Permit with respect to that native vegetation;
 - (ii) in determining the *offset* to be implemented with respect to a particular area of native vegetation proposed to be cleared under this Permit, the Permit Holder must have regard to the *offset* principles contained in condition 9(b) of this Permit;
 - (iii) once the Permit Holder has developed an *offset proposal*, the Permit Holder must provide that *offset proposal* to the CEO for the CEO's approval prior to undertaking any clearing to which the *offset* relates, and prior to implementing the *offset*;
 - (iv) clearing may not commence until and unless the CEO has approved the *offset proposal*;
 - (v) the Permit Holder shall implement the *offset proposal* approved under condition 9(a)(iii); and
 - (vi) each *offset proposal* shall include a *direct offset*, timing for implementation of the *offset proposal* and may additionally include *contributing offsets*.
- (b) For the purpose of this condition, the *offset* principles are as follows:
 - (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
 - (ii) *contributing offsets* should complement and enhance the *direct offset*;
 - (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
 - (iv) the environmental values, habitat, species, *ecological community*, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
 - (v) a ratio greater than 1:1 should be applied to the size of the area of native vegetation that is offset to compensate for the risk that the *offset* may fail;
 - (vi) *offsets* must entail a robust and consistent assessment process;
 - (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, vegetation *condition*, habitat quality and area of native vegetation cleared;

- (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the *condition* of the natural environment;
- (ix) *offsets* must satisfy all statutory requirements;
- (x) *offsets* must be clearly defined, documented and audited;
- (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
- (xii) an *environmental specialist* must be involved in the design, assessment and monitoring of *offsets*.

10. Retain vegetative material and topsoil, ripping, revegetation and rehabilitation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that is already cleared.
- (b) Prior to undertaking works pursuant to conditions 10(c), the Permit Holder shall rip the pit floor and contour batters within the extraction site.
- (c) Within six months following completion of extraction, the Permit Holder must *revegetate* and *rehabilitate* the area cross-hatched yellow on attached Plan 3015/2 by:
 - (i) deliberately laying the vegetative material and topsoil retained under condition 10(a) on the cleared area;
 - (ii) 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
 - (iii) ensuring only *local provenance* seeds and propagating material sourced from within 20 kilometres of the area cleared are used to *revegetate* and *rehabilitate* the area.
- (d) Within twelve months of undertaking *revegetation* and *rehabilitation* in accordance with condition 10(c) of this Permit, the Permit Holder must:
 - (i) 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 10(d)(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, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 10(c)(ii) and (iii) of this Permit.

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

- (a) The Permit Holder must maintain the following records for activities done pursuant to this Permit 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 *offset* of areas pursuant to condition 9:
 - (i) the location of any area of *offsets* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *offset* activities undertaken; and
 - (iii) the size of the *offset* area (in hectares).

- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10 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;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

12. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 11 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 2 February 2014, the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

Definitions

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

condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

contributing offset/s has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

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

direct offset/s has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

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;

ecological community/ies means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999) – the scale at which ecological communities are defined will depend on the level of detail in the information source, therefore no particular scale is specified;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, 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;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, 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;

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

flora specialist means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

local provenance means native vegetation seeds and propagating material from natural sources within 10-40 kilometres 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;

offset proposal means an *offset* determined by the Permit Holder in accordance with condition 8 of this Permit;

offset/s means an offset required to be implemented under condition 8 of this Permit;

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

priority flora taxa means those plant taxa that described as priority flora classes 1, 2, 3 or 4 in the Department's *Declared Rare and Priority Flora List for Western Australia* (as amended);

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks 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 *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

term means the duration of this Permit, including as amended or renewed;

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agricultural and Related Resources Protection Act 1976*.

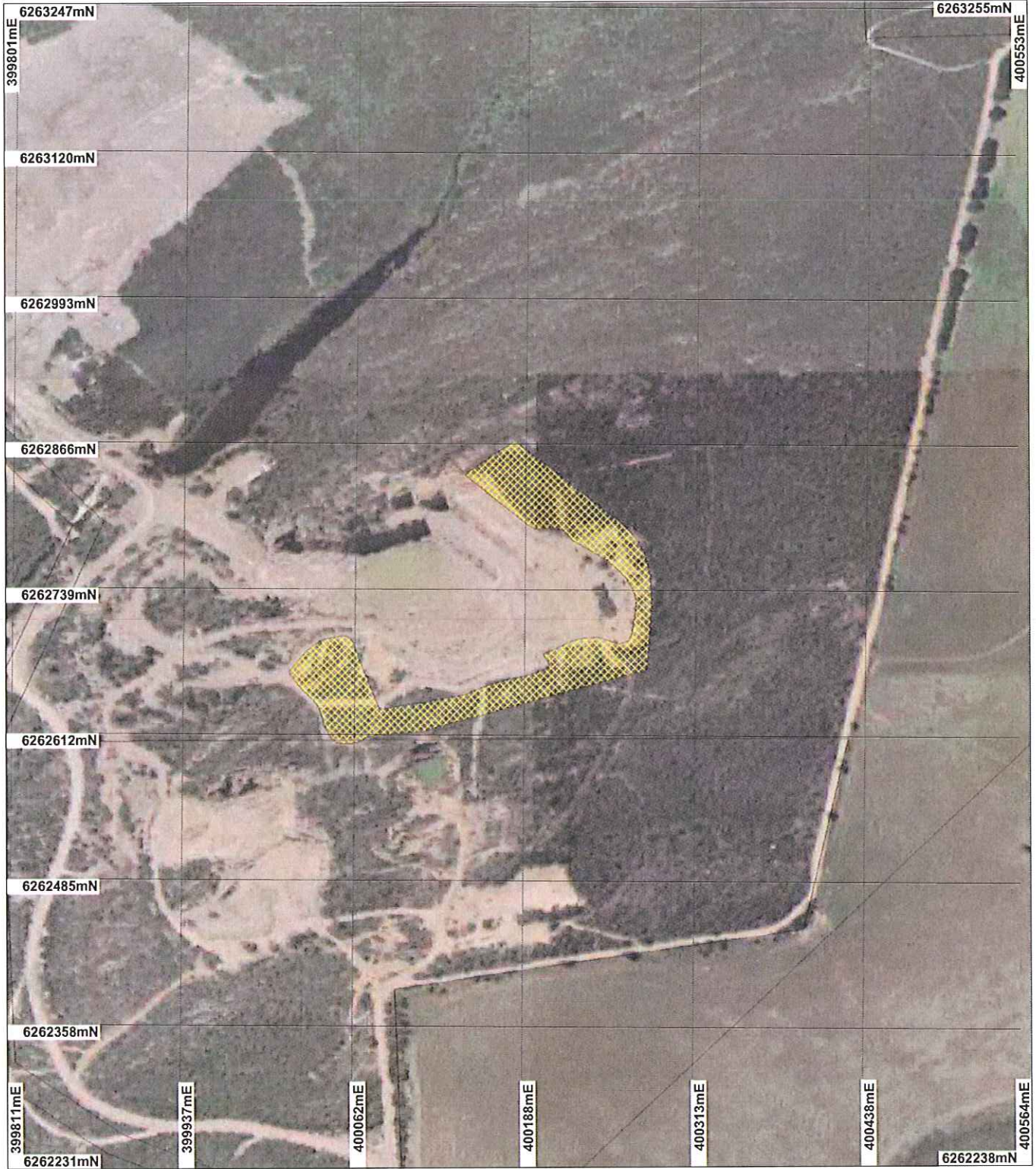


Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

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

14 May 2009

Plan 3015/2



LEGEND

- Clearing Instruments
- Cadastral
- Esperance 1.4m Orthomosaic - Landgate 2002



Scale 1:4464

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

Keith Claymore 14/5/09
 K. Claymore

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

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



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3015/2
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: CEMEX Australia Pty Limited

1.3. Property details

Property: LOT 835 ON PLAN 230232 (Lot No. 835 MYRUP MYRUP 6450)
 LOT 835 ON PLAN 230232 (Lot No. 835 MYRUP MYRUP 6450)

Local Government Area: Shire Of Esperance

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.4		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 Associations: 931 - Medium woodland; yate, 6048 - Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region.	The proposal is for the clearing of 1.4ha of native vegetation for extractive industry. Sections of the vegetation show disturbance and weed invasion, but generally the vegetation is in good to excellent (Keighery 1994) condition.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The vegetation condition was determined from Mattiske (2008) TRIM ref DOC77249.

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 application is to clear 1.4ha of native vegetation for the purpose of extractive industry. The vegetation ranges from disturbed to excellent (Keighery 1994) condition, and fringes an existing extraction pit. The application area contains vegetation of Beard Vegetation Association 6048 which retains only 15.34% of its pre-European extent, and vegetation association 931 which retains over 50%. The site is surrounded by a large intact remnant of vegetation.

Seventeen priority flora species have been recorded within the local (10km radius) area. However, two flora and vegetation surveys and a targeted flora survey (searching for range of extension *Eucayptus macrandra*) have been conducted throughout the proposed clearing area and surrounding vegetation (Mattiske 2008a, Mattiske 2008b, Mattiske 2008c), and one priority species (*Astoloma microphyllum*, P3) was found outside the clearing area.

The proposed clearing increases the risk of disturbance such as weeds and *Phytophthora* (dieback) spreading into surrounding native vegetation. Therefore, in order to manage this risk weed and dieback conditions will be placed on the permit.

The vegetation under application appears to be contributing to an ecological linkage which runs from the Esperance Lakes Reserve (system 3) south of the application to remnants of native vegetation, including a wetland, north of the application area. Whilst the proposal lies in one of the widest sections of this corridor, the proposed clearing may contribute to fragmentation of the landscape and impact on this biological linkage. The clearing as proposed may therefore be at variance to this principle.

Methodology Mattiske Consulting Pty Ltd (2008a)
 Mattiske Consulting Pty Ltd (2008b)
 Mattiske Consulting Pty Ltd (2008c)

GIS database:

- CALM Managed Lands and Waters - CALM 01/06/05
- SAC Biodatasets - accessed 12 March 09
- Declared Rare and Priority Flora List - CALM 13/08/03
- Pre European Vegetation - DA 01/01
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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

Two rare and 3 priority fauna species have been recorded within the local (10km radius) area. Of these, the application area is may be utilised by *Calyptorhynchus latirostris* (Carnaby's Black-Cockatoo, endangered), which was recorded 3.8km south. The proposed clearing area is, however, surrounded by vegetation of better condition and is not likely to be significant habitat for this species.

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

Methodology GIS database:

- CALM Managed Lands and Waters - CALM 01/06/05
- SAC Biodatasets - accessed 12 March 2009
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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

No rare flora species have been recorded within the local (10km radius) area. Additionally, two flora surveys were conducted throughout the application area and surrounding bushland and no rare flora species were identified (Mattiske Consulting 2008a, Mattiske Consulting 2008b).

Therefore, the vegetation under application is not likely to be necessary for the continued existence of populations of rare flora and as such the clearing is not likely to be at variance to this principle.

**Methodology Mattiske Consulting Pty Ltd 2008a
Mattiske Consulting Pty Ltd 2008b**

GIS database:

- Declared Rare and Priority Flora List - CALM 13/08/03
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 12 March 09
- Soils, Statewide DA 11/99

(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 threatened or priority ecological communities recorded within a 10km radius of the application area. Additionally, flora and vegetation surveys found two vegetation communities which have some species in common with priority ecological communities, but these were located on different substrates (Umwelt 2009). The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology Umwelt (Australia) Pty Ltd (2009)

GIS Database:

- SAC Biodatasets - accessed 12 March 2009
- Pre European Vegetation - DA 01/01
- Soils, Statewide DA 11/99

(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 application lies within the Shire of Esperance and the Esperance Plains IBRA Bioregion, which retain 72.18% and 51.74% of their pre-European vegetation respectively (Shepherd 2007). Orthomosaic imagery suggests the local (10km radius) area is approximately 30% vegetated with native vegetation. The vegetation under application ranges from degraded to excellent (Keighery 1994) condition.

Whilst part of the vegetation under application is of Beard Vegetation Associations 931 of which over 50% of the pre-European extent remains, the eastern half of the application area is contains vegetation association 6048, of which only 15.34% remains within the Esperance Plains IBRA Bioregion. This vegetation association is therefore below the threshold level (30%) for maintaining biological diversity (EPA 2000) and remnants are considered to be a critical asset.

The proposed clearing is therefore at variance to this principle. Offset conditions will be imposed on the permit in order to mitigate the impact of clearing on this vegetation association.

Methodology EPA (2000)
Keighery (1994)
Shepherd (2007)

GIS Databases:

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 12 March 2009
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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**

Coramup Creek (minor perennial) runs 184m north west, and an area subject to inundation occurs 440m south east of the application area. The vegetation applied for clearing is not considered to be growing in association with either of these wetlands and as such the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:

- ANCA wetlands - Environment Australia 26/3/99
- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06
- Ramsar wetlands - DEC 03
- South Coast Significant Wetlands - WRC 10/06/2003

(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 soil salinity and erosion risks within the application area are low (Umwelt 2009). Additionally, the small size of the proposed clearing and the condition of the surrounding vegetation reduces the likelihood of land degradation resulting. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology Umwelt (Australia) Pty Ltd (2009)

GIS database:

- Average Annual Rainfall Isohyets - WRC 29/09/98
- Annual Evaporation Contours (Isopleths) - WRC 29/09/98
- Hydrogeology, statewide - DOW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02
- Hydrogeology, Statewide 05 Feb 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**

The closest conservation area to the application site is the Esperance Lakes System 3 reserve, and Mullet Lake Reserve (an Environmentally Sensitive Area), located 3.5km south. The proposed area to be cleared comprises 0.003% of the catchment of the Lake Warden System Ramsar Site catchment (Umwelt 2009), and the proposed clearing is not expected to impact on environmental values within the system.

The remnant of vegetation within which the application area lies, appears to be part of an ecological linkage between the System 3 reserve to the south and remnants of vegetation, including a lake, in the north. The proposed clearing is, however, within one of the widest sections of this corridor and therefore the likely impact is reduced.

The clearing as proposed is therefore not likely to have a significant impact on local conservation areas and as such is not likely to be at variance to this principle.

Methodology Umwelt (Australia) Pty Ltd (2009)

GIS Databases:

- CALM Managed Lands and Waters - CALM 01/06/05
- Hydrography, linear - DOW 13/7/06
- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02
- System 1 to 5 and 7 to 12 areas - DEC 11/7/06

(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**

Given the small (1.4ha) size of the application area, the proposed clearing is not expected to have a significant impact on water runoff or water entering the groundwater table. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology GIS database:

- Evapotranspiration Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02

(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 size of the application area (1.4ha), and that vegetation in good (Keighery 1994) or better condition surrounds the extraction site, the proposed is not likely to cause or exacerbate the incidence or intensity of flooding. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology Keighery (1994)

GIS database:

- Evaporation Isopleths - WRC 29/09/98
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DoW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No submissions were received regarding this application.

Extractive industry licences currently exist for the site under application, however these are due for renewal mid-2009.

Methodology

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s510 of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principle (e), may be at variance to Principle a), and is not likely to be at variance to the remaining clearing Principles.

5. References

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

- Mattiske Consulting Pty Ltd (2008a). Report for December 2007 flora survey: Flora and Vegetation Survey of the Esperance Quarry Expansion Area. TRIM ref DOC77249.
- Mattiske Consulting Pty Ltd (2008b). Report from October 2008 flora survey: Flora and Vegetation Survey of the Esperance Quarry Development Area. TRIM ref DOC77249.
- Mattiske Consulting Pty Ltd (2008c). Flora Search for Eucalumplus macrandra in and around the CEMEX Esperance Quarry. TRIM ref DOC77249.
- Shepherd, D.P. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Umwelt (Australia) Pty Ltd (2009). Esperance Quarry Assessment of Proposed Clearing. TRIM ref DOC77249.

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)