Department of
Environment and Conservation
Our environment, our future

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2048/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **PMR Quarries t/a WA Limestone Co**

1.3. Property details

Property: LOT 2 ON PLAN 38503 (Lot No. 2 OLD COAST BOUVARD 6211)
LOT 2 ON PLAN 38503 (Lot No. 2 OLD COAST BOUVARD 6211)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.83		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
Heddle Vegetation Complex: Karrakatta Complex - Central and South - Predominantly open forest of E. gomphocephala - E. marginata - E. calophylla and woodland of E. marginata - Banksia species. Beard Vegetation Association 6: Medium woodland; tuart and jarrah (Shepherd et al. 2001)	The proposal is to clear 4.83 ha for the purpose of sand and limestone extraction. The vegetation under application comprises Agonis flexuosa woodland with an occasional Eucalyptus gomphocephala over an understorey dominated by Xanthorrhoea preissii, Macrozamia riedlei and Hibbertia hypericoides. The vegetation ranges in condition from degraded in the easternmost section, to very good in the centre and the western portion of the area under application.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on 6 September 2007. A flora survey was conducted by Landform Research on 22 November 2004 and was provided in the Earthworks and Excavation Management Plan (PMR Quarries 2007). The vegetation under application ranges from degraded to very good condition. The majority of the vegetation is in a good condition.

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 applicant amended the area under application from 5.2 ha to 4.83 ha as requested by Department of Environment, Water, Heritage and the Arts (DEWHA) and undertook an additional fauna and black cockatoo survey. The DEWHA has considers the proposal as not a controlled action. These documents have been addressed under the relevant clearing principles.

The vegetation under application comprises Agonis flexuosa woodland with an occasional Eucalyptus gomphocephala in degraded to very good condition (DEC 2007). Landform Research (2008) advised that the vegetation under application is similar to FCT 25 - Southern Eucalyptus gomphocephala - Agonis flexuosa woodlands, which has been identified as a PEC with a category of Priority 3 (Landform Research 2008). Given the vegetation under application contains areas of very good (Keighery 1994) condition vegetation; the PEC FCT 25 may occur within the area under application.

The vegetation under application has potential to provide habitat for a range of fauna species, including species of conservation significance. In addition, it is part of a regionally significant ecological linkage that has a role in facilitating movement of conservation significant fauna and other fauna species through the landscape and between conservation reserves, provides replicates of fauna habitat and helps maintain genetic movement

between different areas (Officer of OEPA 2009). In addition, the area under application is considered a part of an east - west core linkage under the South West Regional Ecological Linkage project and should be retained. Removal of the core linkage has the potential to reduce the linkage capacity (EPA 2009, Molloy et al. 2009).

The vegetation under application has also been identified as Beard association 6 and Heddle complex Karrakatta - Central and South, of which there is 26.2% and 29.5% of pre-European extent remaining in the Swan Coastal Plain Bioregion (Shepherd 2007). Therefore, these vegetation associations are classed as critical assets (EPA, 2006).

Given that the vegetation under application comprises a part of significant habitat for fauna, may include a PEC, contains vegetation in a very good condition and is a part of a significant ecological linkage, it is considered that the vegetation comprises of a high level of biodiversity. If a permit is granted an offset condition and a fauna management will be required to mitigate these impacts.

Methodology

References:
-DEC (2007)
-EPA (2006)
-EPA (2009)
-Officer of OEPA (2009)
-Landform Research (2008)
-Molloy et al. (2009)
GIS Databases:
-SAC Bio datasets accessed 20/8/2009

(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

Within the local area (5km radius) there are seven recorded sightings of significant fauna species. These include the Western Ringtail Possum, Carnaby's Black Cockatoo, Forrest Red -tailed Black Cockatoo, Quenda, Brush-tailed Phascogale and the Lined Skink, all of which have the potential to utilise the vegetation under application.

The vegetation under application comprises woodland of Agonis flexuosa with occasional Eucalyptus gomphocephala with parts in very good condition (DEC 2007). DEC (2009) considers the area potential feeding and nesting habitat for the conservation significant Western Ringtail Possum, as this species occurs in coastal woodlands that contain a high occurrence of peppermint trees (Agonis flexuosa). In addition, the vegetation under application includes an intact understorey dominated by Hibbertia hypericoides that has the potential to provide habitat for ground dwelling fauna such as the conservation significant Quenda and the Lined Skink.

The proponent provided a copy of the Black Cockatoo survey that took place during June 2009 (Western Wildlife 2009) as requested by DEWHA and any Tuart trees containing hollows that may be used by Black Cockatoos were removed from the area proposed to be cleared. Because of this the DEWHA doesn?t consider this proposal as a controlled action. As habitat trees for Black Cockatoos have been taken out of the applied area, it is not considered likely for the proposed clearing to impact on breeding habitat for black cockatoos.

The vegetation under application is part of a 77 hectare vegetated remnant that includes Yalgorup National Park and adjacent vegetation, and is part of a significant regional ecological link between the National Park and the Peel Harvey Estuary to the east (Officer of OEPA 2009). This linkage has a role in facilitating movement of conservation significant fauna and other fauna species through the landscape. In addition, it provides replicates of fauna habitat and helps maintain genetic movement between different areas (Officer of OEPA 2009). The area under application is also considered a part of an east - west core linkage under the South West Regional Ecological Linkage project (EPA 2009, Molloy et al 2009).

The area under application is also located within a lot that was recognised previously in 2003 by the EPA as having environmental values of regional significance, including providing a range of fauna habitats and containing karst landforms under Tuart dominated vegetation, which potentially provides subterranean fauna habitat (Department of Environmental Protection 2003).

Given the potential for the vegetation under application to provide habitat for a range of fauna species, and the fact that the vegetation forms part of a significant regional linkage and is part of the South Rest Regional Ecological Linkage, it is considered that the proposed clearing is at variance to this Principle. To mitigate this impact on fauna a staged clearing condition and fauna management condition will be placed on the Permit if one is granted.

Methodology

References:
-DEC (2007)
-DEC (2009)
- Officer of OEPA (2009)
- EPA (2009)

-Department of Environmental Protection (2003)
-Molloy et al (2009)
-Western Wildlife (2009)
GIS Databases:
-CALM Managed Lands and Waters - CALM 1/07/05
-SAC Bio datasets accessed 06/11/2009
- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007

(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

Within the local area (5km radius) there is one known population of the Declared Rare Flora (DRF), Caladenia huegelii, which was recorded approximately 2.9km northwest of the applied area.

There are also six known populations of priority listed flora in the local area including Conostylis pauciflora subsp. pauciflora (P4), Hibbertia spicata subsp. leptotheca (P3) and Lasiopetalum membranaceum (P3) that have the potential to be present within the suitable habitat on site.

Landform Research (2008) advised that no DRF or priority flora were recorded during the flora survey conducted in mid October 2008.

C. huegelii flowers in September-October and favours deep, sandy soils in mixed woodland of Jarrah and Banksia (CALM 2004), while the vegetation under application comprises Agonis flexuosa woodland with an occasional Eucalyptus gomphocephala (DEC 2007). A similar species Caladenia georgei, which rarely grows near C. huegelii, (CALM 2004) was observed during the site visit (DEC 2007) and therefore C. huegelii is not considered likely to be present within the area under application.

Conostylis spp. and Hibbertia spp. flower during July/August-October and L. membranaceum flowers in September-December (Western Australian Herbarium 1998). These species were not identified during the October flora survey (Landform Research 2008).

Given that suitable habitat for the rare C. huegelii is not present within the area under application, and given that the priority species identified in the local area were not observed during the flora survey, the vegetation under application is unlikely to be necessary for the continued existence of rare flora.

Methodology

References:
-CALM (2004)
-DEC(2007)
-Landform Research (2008)
-Western Australian Herbarium (1998-)
GIS Databases:
-SAC Bio datasets accessed 06/11/2009

(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 occurrences of Threatened Ecological Communities (TEC) in the local area (5km radius), with the closest being located 7.4km to the east of the applied area, on the opposite side of the Peel Harvey Estuary.

Landform Research (2004) identified the landform within the applied area as being consistent with the Spearwood Dune System. Landform information obtained from Bush Forever (Government of Western Australia, 2000) identifies the Threatened Ecological Community (TEC) associated with the Spearwood Dune system as Melaleuca huegelii - Melaleuca acerosa shrub lands on Limestone ridges (26a).

The geological, regolith and geomorphological conditions of the area under application are not suitable for the TEC Type 26a to occur on site and in addition, Melaleuca huegelii and Melaleuca acerosa were not observed during the flora survey (Landform Research 2008).

In addition, the area under application comprises Agonis flexuosa woodland with occasional Eucalyptus gomphocephala (DEC 2007) and is therefore not considered likely to comprise, or be necessary for the maintenance of a TEC.

Methodology

References:
-DEC (2007)
-Landform Research (2008)
GIS Databases:

-SAC Bio datasets accessed 06/11/2009

(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 may be at variance to this Principle

The vegetation under application has been identified as being part of 'Karrakatta Complex - central and south' as defined by Heddle et al. (1980), which has 29.5% of pre-European vegetation remaining (EPA 2006).

The vegetation under application has also been identified as Beard association 6, of which there is 26.2% of pre-European extent remaining in the Swan Coastal Plain Bioregion (Shepherd 2007).

The vegetation types under application retain less than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). Therefore, the Environmental Protection Authority Position Statement 9: Environmental Offsets classes these vegetation associations as Critical Assets (EPA2006).

In addition, the area under application is considered a part of significant ecological linkage (Officer of EPA 2009, EPA 2009, Molloy et al 2009) in the local area. If a permit is granted an offset condition will be placed on the permit to mitigate this impact.

	Pre-European (ha)	Current (ha)	Remaining %
Swan Coastal Plain	1,501,456	571,758	38.1**
City of Mandurah	18,611	8,933	48.0*
Local Area (~10km radius)	10,900	7,000	~70
Heddle vegetation complex Karrakatta Complex - Central and south	49,912	14,729***	29.5
Beard vegetation association in bioregion 6	56,343	14,749 **	26.2

* (Shepherd et al. 2001)
** (Shepherd 2007)
***(Heddle et al 1980)

Methodology

References:
-EPA (2000)
-EPA (2006)
-Officer of OEPA (2009)
-EPA (2009)
-Heddle et al. (1980)
-Molloy et al. (2009)
-Shepherd et al. (2001)
-Shepherd (2007)
GIS Databases:
-Heddle Vegetation Complexes
-Pre-European Vegetation

(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

The area under application is located approximately 630m to the west of the Peel Inlet, which is a Conservation Category Wetland (CCW). The nearest watercourse is a major tributary occurring 5.9 km east of the area under application.

Given the distance to the nearest watercourse or wetland, and that no wetland dependent vegetation was observed during the DEC site visit (DEC 2007), the vegetation under application is not considered likely to be growing in association with a watercourse or wetland.

Methodology

References:
-DEC (2007)
GIS Databases:
-Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC

-Hydrography, linear (hierarchy) - DOW

(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 majority of the area under application contains soils identified as Spearwood S1b phase, which are deep siliceous yellow brown sands or pale sands that generally have a very high risk of wind erosion, and occasionally have a high risk of water erosion and phosphorus export (Department of Agriculture 2005).

Landform Research (2004) stated that due to the permeable and porous nature of the limestone on site, the area has no surface drainage, and it is therefore not considered likely that the proposed clearing would result in water erosion.

Given the sandy soils present on site, it is considered that there is the potential for the proposed clearing to result in wind erosion, and without appropriate ground cover, windbreaks or adequate dust suppression on exposed surfaces the proposal may cause appreciable land degradation. The proposal therefore may be at variance to this Principle.

Methodology

References:
-Landform Research (2004)
-Department of Agriculture (2005)
GIS Databases:
-Acid Sulfate Soil Risk Map, Swan Coastal Plain
-Salinity Risk LM 25m

(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 area under application is located approximately 370m to the east of Yalgorup National Park and 660m to the west of the Peel Inlet water body, which is a RAMSAR listed Conservation Category Wetland.

The area under application is part of a 77 hectare intact vegetated remnant that provides an ecological corridor facilitating fauna movement between the Peel Inlet and Yalgorup National Park (Officer of OEPA 2009). This linkage has a role in facilitating movement of conservation significant fauna and other fauna species through the landscape and between conservation reserves. In addition, it provides replicates of fauna habitat and helps maintain genetic movement between different areas (Officer of OEPA 2009).

The proposed clearing of 4.83 hectares would decrease the width of this ecological linkage and it is considered likely to reduce the effectiveness of the linkage. In addition, the area under application is considered a part of an east - west core linkage under the South West Regional Ecological Linkage project and should be retained as when removed there may be a potential to impair the linkage capacity (EPA 2009, Molloy et al. 2009).

Given this, it is considered likely that the proposed clearing may have a direct impact on the environmental values of these reserves, including fauna and flora movement and biodiversity. Therefore, the proposed clearing may be at variance to this Principle.

Methodology

References:
-DEC (2007)
-Officer of OEPA (2009)
-EPA (2009)
-Molloy et al. (2009)
GIS Databases:
-DEC Tenure
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
-RAMSAR, Wetlands
- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007

(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 Public Drinking Water Source Area and there is a low to nil risk of salinity. Wetlands in the area include the Peel Inlet, which is a Conservation Category Wetland (CCW) located 630m to the east. The nearest watercourse is a major tributary occurring 5.9 km east of the area under application.

Given the low risk of salinity on site the proposed clearing is therefore not considered likely to cause deterioration in the quality of groundwater through salinity.

The Spearwood sands identified on site occasionally have a high risk of water erosion (Department of Agriculture 2005), however Landform Research (2004) advise that due to the permeable and porous nature of the limestone on site, the area has no surface drainage. Therefore, given this and the distances to the nearest wetland or watercourse, it is not considered likely that the proposed clearing would result in water erosion causing deterioration in surface water quality.

Methodology References
-Landform Research (2004)
-Department of Agriculture(2005)
GIS Databases:
-Geomorphic Wetlands (Management Categories), Swan Coastal Plain
-Hydrography, linear (hierarchy)

(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 area under application is located approximately 630m west of a Conservation Category Wetland (CCW). The nearest watercourse is a major tributary occurring 5.9 km east of the area under application. The sandy soils identified on site have high infiltration rates and a low risk of waterlogging (Department of Agriculture 2005).

Due to the distance to the nearest watercourse or wetland, and the location of the site on a sandy rise, is not considered likely that the proposed clearing would cause or exacerbate the incidence of flooding.

Methodology References:
-Department of Agriculture (2005)
GIS Databases:
-Hydrography, linear (hierarchy)
-Geomorphic Wetlands (Management Categories), Swan Coastal Plain

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

Comments

The applicant amended the area under application from 5.2 ha to 4.83 ha in response to DEC's letter dated 12 November 2009 and provided a copy of fauna survey and approval from Department of Environment, Water, Heritage and the Arts (DEWHA). These documents have been addressed under the relevant clearing principles.

The DEWHA requested for a fauna and black cockatoo survey to be carried out prior to a decision being made. This was done and the area under application was amended to remove any habitat trees identified during the fauna survey. The DEWHA therefore has declared that the proposed quarry is not a controlled action and does not require further assessment and approval under the EPBC Act.

Development Approval and an Extractive Industry Licence for the area under application are outstanding.

The land under application is not within the State Planning Policy 2.4: Basic Raw Materials Priority Resource Locations, Key Extraction areas or Extraction areas. However, the northern adjoining property is mapped as an existing Extraction Area.

The land is zoned 'Urban Development' under the City of Mandurah Town Planning Scheme No. 3. An Outline Development Plan has been approved in 1998 over the applied area to facilitate the subdivision of the land.

The EPA provided a report and recommendation on the Peel Regional Scheme over the applied area in 2000 and recognised the applied area as part of a site of significance and recommended that assessment of the potential impacts on remnant vegetation associated with the proposed urban development be deferred until the subdivision stage to allow the EPA the opportunity to assess the detailed design. This is to ensure that significant vegetation is adequately protected within the subdivision design (EPA 2000a).

The Department of Environmental Protection (DEP) provided comment in 2003 on the proposed subdivision of Lot 644 into Lot 1 and 2 Old Coast Road which stated 'the remnant vegetation on the subject land has significant biodiversity and fauna habitat values' and 'the subject property and its immediate surrounds have several values that are of regional environmental significance, including vegetation, flora, karst landforms and fauna' (DEP 2003)

The proposed quarry has been referred to the EPA in 2008. The EPA assessed the proposal and gave a determination of "Not Assessed - Public Advice Given and Management under Part V (Clearing)". Advice and recommendation were given on clearing of native vegetation, water-quality and impact on nearby residents (EPA 2008).

The City of Mandurah understands the owners of the lots are currently revising the plan with the intention to develop the area of the proposed quarry and the existing quarry on the northern adjoining lot for residential lots.

The Outline Development Plan shows that Public Open Space occurs within the proposed quarry location.

Methodology References:
-EPA (2000a)
- EPA (2008)
-DEP (2003)
-PMR Quarries (2007)
GIS Databases
-Town Planning Scheme Zones

4. Assessor's comments

Comment
The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principle (a) and (b) and may be at variance to Principle (e) and (g).

5. References

EPA (2008) Public Advice on limestone and sand quarry - Lot 2 Old Coast Road Dawesville. TRIM ref DOC66426

CALM (2004) Grand Spider Orchid (Caladenia huegelii) Fact sheet.

City of Wanneroo (2007) Direct Interest Submission. TRIM. Ref DOC69852

Clearing Assessment Unit's biodiversity advice for land clearing application CPS 405/1. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC7045

DEC (2009) Fauna advice received for CPS 2048/1 - Lot 2 Old Coast Road, Dawesville. TRIM Ref DOC94733

DEC Site Visit 2007, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC34147.

DEP (2003) Letter to Western Australian Planning Commission on Proposed subdivision Murray LOC 644 Dawesville, Department of Environmental Protection. TRIM Ref DOC111262

Department of Agriculture (2005) AgMaps Land Manager CD-rom for the Shires of Serpentine-Jarrahdale, Kwinana, Rockingham, Mandurah, Murray, Boddington, Waroona and Harvey. Department of Agriculture, Western Australia. ISSN: 1448-235X.

Department of Environmental Protection (2003) Comments on the Proposed Subdivision Murray Loc 644 Dawesville - 121135, Western Australia. TRIM Ref. DOC34457

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, Western Australia.

EPA (2000a) Report and Recommendations of the Environmental Protection Authority to the Western Australian Planning Commission - Peel Region Scheme. TRIM ref DOC 111262

EPA (2006) Environmental Protection Authority Position Statement No. 9: Environmental Offsets, Environmental Protection Authority, Perth.
EPA (2009) Environmental Protection Bulletin No. 8: South West Regional Ecological Linkages, Environmental Protection Authority, Western Australia

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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

Landform Research (2004) Vegetation survey Lot 2 Old Coast Road, Dawesville-Bouvard. In PMR Quarries Pty Ltd (2007) Earthworks and Excavation Management Plan. DEC TRIM ref. DOC33587.

Landform Research (2008) Updated Vegetation Study Lot 2 Old Coast Road, Dawesville.

Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) South West Regional Ecological Linkages technical report, Western Australian Local Government Association and Department of Environment and Conservation, Perth.

Officer of OEPA (2009) Terrestrial Ecosystem Branch, Office of Environmental Protection Authority. Environmental assessment on Lot 2 Old Coast Road, Dawesville. Trim Ref DOC105061.

PMR Quarries Pty Ltd (2007) Earthworks and Excavation Management Plan, Lots 2, 13 & 22 Old Coast Road, Dawesville. DEC TRIM ref. DOC33587.

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.

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 Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.calm.wa.gov.au/ Accessed on day, 19 September 2007.

Western Wildlife (2009) Quarry extension on Part Lot 2 Old Coast Road Bouvard: Targeted Fauna Assessment. TRIM ref DOC109726

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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)