Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1877/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Metropolitan Cemeteries Board
Local Government Area: City Of Swan
Colloquial name:

1.3. Property details

Property: LOT 11313 ON PLAN 217552 (Lot No. 11313 MYLES SWAN VIEW 6056)
LOT 11764 ON PLAN 217552 (Lot No. 11764 BLANCHARD SWAN VIEW 6056)
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.67		Mechanical Removal	Miscellaneous

2.1. Existing environment and information

2.1.1 Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 3: Medium forest; jarrah - marri. (SAC Bio Datasets 29/4/2008, Shepherd 2006) Heddle Vegetation Complex: Forrestfield: Vegetation ranges from open forest of E. calophylla - E. wandoo - E. marginata to open forest of E. marginata - E. calophylla - C. fraseriana - Banksia species. Fringing woodland of E. rudis in the gullies that dissect this landform. (Heddle et al. 1980) Mattiske Vegetation Complex: Forrestfield- Mosaic of open forest of Corymbia calophylla-Eucalyptus wandoo-Eucalyptus marginata subsp. elegantella and open forest of Eucalyptus marginata subsp. m. (Mattiske Consulting 1998)	There are three areas under application (total area 1.67 ha), which are located within Lot 11313 (Crown Reserve 6955), a 23.7 ha property that is vested with the Metropolitan Cemeteries Board for the land use of Cemetery. DEC has labelled the three areas: Area 1 (easternmost parcel of 1.21 ha of which 0.01 ha is mapped TEC and the remained is disused sand/gravel pit); Area 2 which is the southernmost area of 0.19 ha and mapped TEC SCP20a; and Area 3 which is the northernmost area of 0.27 ha and TEC SCP20a. The purpose of the clearing is to extend the Midland Cemetery to create new burial areas. Bennett Environmental Consulting (2002) identified five vegetation units within the areas under application: - Low woodland of Banksia menziesii and Banksia attenuata over an open low heath over a grassland/sedgeland (~1.1ha). - Woodland to low woodland of Corymbia calophylla over an open heath of Xanthorrhoea preissii over grassland/sedgeland dominated by Mesomelaena pseudostygia (~0.5ha). - Open forest of Eucalyptus marginata subsp. thalassica over a tall shrubland over a low shrubland over a grassland/sedgeland (~0.3ha). - Open Woodland of Corymbia calophylla over low open heath of over a grassland/sedgeland (~0.2) - Completely Degraded at the old sand/gravel pit (1.21 ha) with a small area of intact TEC SCP20a in the north-east corner (0.01).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was sourced from an initial site visit undertaken 20 July 2007 by Swan Region staff and EPA Service Unit and a later site inspection by Species and Communities Branch (SCB) (DEC, 2008) with data updated by DEC SCB (2009). The condition (Keighery 1994) ranged from Completely Degraded in the majority of Area 1 (ex-sand/gravel pit) to Very good to Excellent for Areas 2 and 3 and the north-eastern corner of Area 1.
As above		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The condition of the native vegetation under application was sourced from an initial site visit undertaken 20 July 2007 by Swan Region staff and EPA Service Unit and a later site inspection by Species and Communities Branch (SCB) (DEC, 2008) with data updated by DEC SCB (2009). The condition was

predominantly Completely degraded with a smaller area in degraded 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 not likely to be at variance to this Principle

There are three areas under application to clear, which comprise a north east area (Area 1) which is 1.09 ha of 'Degraded' to 'Completely degraded' (Keighery 1994) condition and is an old disused sand/gravel pit with an small area (0.09 ha) of TEC vegetation in the north-east corner; and the remaining areas (Area 2 and 3) are considered to be in 'Very good' to 'Excellent' (Keighery 1994) condition (0.55 ha) (DEC, 2008). In addition, all except for 0.01 ha, are located within Bush Forever Site 306 (Talbot Road Bushland) which is 95.2 hectares.

Bennett Environmental Consulting (2002) undertook a flora and vegetation survey of the remnant bushland at Midland Cemetery in July and October 2001. A total of 283 taxa in 184 genera and 57 vascular plant families were recorded from the Midland Cemetery bushland.

Four significant taxa and four priority taxa were recorded from within the bushland. These include: Tripterococcus paniculatus (P1); Isopogon drummondii (P3); Lambertia multiflora var. darlingensis (P3); and Synaphea acutiloba (P3).

An additional flora survey (Bennett Environmental Consulting 2008) undertaken within the three areas under application identified one population of priority flora, Isopogon drummondii (P3). In addition, the areas under application, except for the completely degraded area, are within the mapped extent of a threatened ecological community identified as being Floristic Community Type (FCT) 20c Shrublands and woodlands on the eastern side of the Swan Coastal Plain as described by Gibson et al. 1994 (DEC, 2008).

DEC officer's visited the three areas under application to assess the potential for the occurrence of the DRF orchid Thelymitra stellata. It was determined that the habitat in each of these areas was not typical habitat for this orchid and that it is therefore unlikely to occur in the areas under application to clear (DEC 2009).

Surveys undertaken within the Bush Forever site, which includes the areas under application, have identified 366 native taxa of flora, 47 species of birds, 3 species of native mammals, 13 species of reptiles and 17 species of amphibians (Government of Western Australia, 2000).

The permit has been granted for Area 1 only (disused sand/gravel pit), excluding the small area of intact TEC vegetation, which is completely degraded and does not contain TEC vegetation, priority flora, significant fauna habitat and therefore is not likely to be at variance to this Principle.

Methodology

References:
- Bennett Environmental Consulting (2002)
- Bennett Environmental Consulting (2008)
- DEC (2008)
- DEC (2009)
- Gibson et al (1994)
- Government of Western Australia (2000)

Keighery (1994)

(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

The areas under application (except for 0.01 ha) are located within Bush Forever Site 306 (Talbot Road Bushland), which is 95.2 ha in size (Government of Western Australia 2000). Surveys undertaken within the Bush Forever Site 306 have identified 47 species of birds, including eight significant bird species; 3 species of native mammals, including significant species of honey possum; 13 species of reptiles; and 17 species of amphibians, which is considered a high diversity of frogs (Government of Western Australia 2000).

A site inspection (2007) identified the vegetation under application to include Banksia, Marri and Jarrah which may contain hollows suitable for nesting. Further, a flock of Carnaby's Black-Cockatoo were observed within the areas under application. DEC Fauna Habitat Notes (2007) indicate this species moves around seasonally in flocks and feeds in areas of proteaceous scrubs and heaths, and eucalypt woodlands, as well as pine plantations and breed in mature hollow trees.

A clearing permit has been granted for Area 1 as it is in a completely degraded condition and is not considered significant habitat for Carnaby's Black-Cockatoo or any other native fauna species. Therefore the proposed clearing of Area 1 is not likely to be at variance to this Principle.

Methodology

References:

- DEC (2008)
- DEC Fauna Habitat Notes February (2007)
- Government of Western Australia (2000)
- Site Inspection (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

There are no known records of rare flora in the local area (2 km radius). The nearest recorded rare flora, Anthocercis gracilis, is located approximately 2.1km north-east of the area under application, on different soils and within different vegetation complexes to those under application.

A DEC geophyte expert visited the three areas under application to assess the potential for the occurrence of the DRF orchid Thelymitra stellata. It was determined that the habitat in each of these areas was not typical habitat for this orchid and that it is therefore unlikely to occur in the areas under application to clear (DEC 2009).

Flora surveys undertaken by Bennett Environmental Consulting (2002; 2008) did not identify the occurrence of any rare flora within the areas under application. It is therefore considered that the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
- Bennett Environmental Consulting (2002)
- Bennett Environmental Consulting (2008)
- Brown et al (1998)
- DEC (2009)

GIS Databases:
- Heddle Vegetation Complexes
- Mattiske Consulting
- Pre-European Vegetation
- SAC Bio Datasets 29/04/2008
- Soils, Statewide

(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

A threatened ecological community (TEC) is mapped across Area 2 and 3 and within a small portion of Area 1 (the three areas under application (DEC 2009)). The TEC is known as Floristic Community Type (FCT) 20c "Shrublands and woodlands on the eastern side of the Swan Coastal Plain" (Gibson et al, 1994).

FCT 20c is listed as 'Critically Endangered' in Western Australia and 'Endangered' under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (DEC 2008) and is one of only two confirmed occurrences of this community type on the Swan Coastal Plain (Bennett Environmental Consulting 2002; DEC 2008).

The three areas under application total 1.67 ha, of which 0.58 ha is TEC SCP 20c, generally in Very Good to Excellent (Keighery 1994) condition. Only 112 ha of SCP 20c are known to remain, comprising Talbot Road area with 66 ha and Bushmead with 46 ha. The Bushmead occurrence is not as intact as Talbot Road and has reduced species diversity. The clearing as proposed would impact on 0.5% of the total remaining area of TEC and 0.8% of the TEC SCP20a in Good or better condition.

The permit is for Area 1, which is a disused sand/gravel pit, of 1.09ha and is totally degraded (Keighery 1994) condition and therefore would have no impact on the remaining area of TEC SCP20a.

Methodology

References:
- Bennett Environmental Consulting (2002)
- DEC (2008)
- Gibson et al. (1994)

GIS Database:
- SAC Bio Datasets 28/04/2008

(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 likely to be at variance to this Principle

The vegetation under application is identified as Heddle Forrestfield Complex, which is recognised as having current representation levels of 17.5% within the System 6 region and Swan Coastal Plain portion of the

System 1 Region (EPA 2006) and 9.0% within the Swan Coastal Plain portion of the Perth Metropolitan Region, which is the Bush Forever study area (Government of Western Australia 2000). In addition, this vegetation community is identified as having only 0.3% (EPA 2006) representation within secure tenure; with 5% of Forrestfield Complex proposed for protection within the Bush Forever study area (Government of Western Australia 2000).

The Environmental Protection Authority (EPA) supports the retention of remnant native vegetation to a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). One of the vegetation complexes (Heddle Forrestfield Complex) in the areas under application is below the recommended minimum of 30% representation.

While the EPA (2006) recognises that this representation level may be modified to a minimum 10% level within the constrained areas of the Swan Coastal Plain, the current representation of the Forrestfield Complex (9.0%) within the Bush Forever study area still does not meet this reduced criterion. Furthermore, Bush Forever has identified the vegetation under application as being regionally significant vegetation on the Swan Coastal Plain within the Perth Metropolitan Region (Government of Western Australia 2000).

The applied area is also part of a significant remnant, Bush Forever site 306 Talbot Road Reserve, which is listed on the Register of National Estate for its natural values.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregions*				
Swan Coastal Plain^	1,501,456	571,758	38.1	N/A
Shire*				
City of Swan**	104,220	46,043	44.2	N/A
Local Area (2 km radius)	1,256	~370	~29	N/A
Mattiske Vegetation Complex**				
Forrestfield	37,106	11,371	30.6	N/A
Heddle				
Forrestfield Complex***	20,052	3,518	17.5	0.3
Forrestfield Complex****	11,328	1,020	9.0	N/A
Beard Vegetation Association*				
3	2,661,514	1,863,982	70.0	80.3
Beard Vegetation Association with Bioregion*				
3	17,364	3,154	18.2	11.0

* (Shepherd 2006)
** (Del Marco et al. 2004)
*** (EPA 2006) - System 6 region and Swan Coastal Plain portion of the System 1 Region
**** (Government of Western Australia 2000) - Swan Coastal Plain portion of the Perth Metropolitan Region
***** (Mattiske Consulting 1980)

The permit for Area 1 is for completely degraded vegetation, which does not meet the definition of any plant community type and therefore the clearing is not likely to be at variance to this Principle.

Methodology

References:
- Commonwealth of Australia (2001)
- Del Marco et al. (2004)
- EPA (2006)
- Government of Western Australia (2000)
- Heddle et al. (1980)
- Mattiske Consulting (1998)
- Shepherd (2006)

GIS Databases:
- Register of the National Estate 2002
- Pre-European Vegetation
- Interim Biogeographic Regionalisation of Australia
- Heddle Vegetation Complexes

- NLWRA, Current Extent of Native Vegetation
- SAC Bio Datasets 28/04/2008

(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 no watercourses mapped within the areas under application. The nearest watercourse is a minor non-perennial watercourse flowing from east to west within the adjacent property, located approximately 400m north of the areas under application.

There are no wetlands mapped within the areas under application. The nearest wetland, being a multiple use wetland, is located approximately 800m west of the areas under application. A site inspection (2007) of the areas under application did not identify any wetland dependant vegetation.

Given the distance to the nearest wetland or watercourse from the areas under application, it is considered the clearing as proposed is not likely to be at variance to this Principle.

Methodology

Reference:
- Site Inspection (2007)

GIS Databases:
- Hydrography, linear
- Geomorphic wetlands (Mgt Categories)- Swan Coastal Plain

(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 landscape of the areas under application and surrounds can be described as being primarily gently sloping bench or terrace (the Ridge Hill Shelf) (Northcote et al. 1960). The chief soils are hard acidic yellow soils containing ironstone gravels. Associated are brown sands often containing ironstone gravels at depth and forming a western fringe to the bench (Northcote et al. 1960).

There is a small area where the chief soils are sandy acidic yellow mottled soils, some of which contain ironstone gravel (Northcote et al. 1960).

DAFWA (2007) advised that there are no land degradation issues that would arise. Therefore, the clearing as proposed is not likely to be at variance to this Principle.

Methodology

References:
- DAFWA (2007)
- Northcote et al. (1960)

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 is not likely to be at variance to this Principle

The areas under application are located within Bush Forever Site 306 (Talbot Road Bushland). This site (total area of 95.2 ha) contains significant bushland within the eastern side of the Swan Coastal Plain and is part of a regionally significant fragmented bushland/wetland linkage (Government of Western Australia 2000).

The proposed clearing will have a direct impact on the conservation values of Bush Forever Site 306 with 1.66 ha of the 1.67 ha under application occurring within the Bush Forever site. Further, aerial mapping of the local area shows vegetated connectivity, which is likely to provide an ecological linkage from the areas under application to the surrounding conservation area.

In addition, the areas under application (~0.7 ha of the 1.67 ha under application) are located within an area listed on the Register of the National Estate - Talbot Road Natural Area. This area, registered for natural values, extends over ~100ha and is recognised as having one of the few remaining areas of bushland encompassing the soils, plant communities and flora of the Ridge Hill Shelf and is highly significant for its diversity (Australian Heritage Council, 2007).

There are four conservation reserves within 5km radius of the area under application.

Given that the application areas are of high conservation significance listed on the Register of the National Estate and directly impact the conservation values of Bush Forever Site 306, the application is considered at variance to this principle. However, the permit issued for Area 1, which is completely degraded and fits within the context of the already existing cemetery, would have no significant impacts on the conservation attributes

listed above. As such the clearing of Area 1 is not likely to be at variance to this Principle.

Methodology

References:
- Australian Heritage Council (2007)
- Government of Western Australia (2000)

GIS databases:
- DEC Managed Lands and Waters
- Bushforever
- Register of National Estate
- Perth Metropolitan Area Central 20cm Orthomosaic - Landgate07
- System 6 Conservation Reserves

(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

There are no watercourses mapped within the areas under application; the nearest watercourse is a minor non-perennial watercourse flowing from east to west within the adjacent property, located approximately 400m north of the areas under application. Further, there are no wetlands mapped within the areas under application with the nearest wetland, being a multiple use wetland, located approximately 800m west of the areas under application.

The areas under application are not located in a Public Drinking Water Source Area or surface water catchment area and are considered to have a low salinity risk.

Given the distance to the nearest watercourse and the low salinity risk, the clearing as proposed is not considered likely to cause deterioration in the quality of surface and ground water.

Methodology

GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Public Drinking Water Source Areas (PDWSAs)
- Salinity Risk LM 25m - DOLA 00

(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

There are no watercourses nor wetlands mapped within the areas under application. As such, the clearing as proposed is considered not likely to cause or increase the incidence or intensity of localised flooding.

Methodology

GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There are three Aboriginal Sites of Significance listed within the areas under application, the applicant will be advised of their obligations under the Aboriginal Heritage Act 1972.

Lot 11313 on Plan 217552 or Crown Reserve 6955 is vested with the Metropolitan Cemeteries Board for the land use of Cemetery.

In response to correspondence from the Department sent on 25 October 2007, the MCB (Bennett Environmental, 2008) recommended that the original area under application of 9.1 ha be amended down to 3.99 ha (3.19 ha within Lot 11313 and 0.8 ha within Lot 11764) based on the following issues:

- the condition of the vegetation under application was identified as being predominantly 'completely degraded' to 'good' condition with areas of 'very good' to 'excellent' condition;
- Floristic Community Type 20c (Shrublands and woodlands on the eastern side of the Swan Coastal Plain) was identified within the areas under application;
- no declared rare flora was found during field surveys although priority flora Isopogon drummondii (Priority 3) was recorded; and
- the areas under application comprise 3.71 ha within Bush Forever and 0.28 ha outside of Bush Forever.

MCB has advised that Board has relinquished 15.4 ha of cemetery land for conservation and have reduced the area under application by 5.6 ha (TRIM Doc 58863).

DEC has subsequently negotiated with MCB to further reduce the applied clearing area down to 1.67 ha, which includes 1.09 ha of 'degraded' to 'completely degraded' area (DEC 2008).

Methodology

References:

- Bennett Environmental Consulting (2002)
- Bennett Environmental Consulting (2008)
- Department of Environment and Conservation (2008)
- Department of Planning and Infrastructure (2009)
- Department of Planning and Infrastructure (2007a)
- Department of Planning and Infrastructure (2007b)

GIS databases:

- Aboriginal Sites of Significance
- Cadastre
- RIWI Act, Groundwater Areas
- RIWI Act, Surface Water Areas

4. Assessor's recommendations

Comment / recommendation

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 not likely to be at variance to any of the clearing Principles.

5. References

Australian Heritage Council (2007) Australian Heritage Database. Australian Heritage Council. http://www.ahc.gov.au/ (Accessed 14/09/2007).

Bennett Environmental Consulting (2002) Flora and Vegetation of Midland Cemetery, prepared for the Ministry of Planning; Bennett Environmental Consulting Pty Ltd, Western Australia.

Bennett Environmental Consulting (2008) Proposed Development of Midland Cemetery; Bennett Environmental Consulting Pty Ltd, Western Australia. TRIM Ref DOC51321

Brown A., Thomson-Dans C. and Marchant N., (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

Bush Forever Office (DPI) (2009) Final advice to NVCB (DEC) on reduced area (1.67 ha) within Bush Forever site 309 (Midland Cemetery) TRIM DOC86444.

DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref ED2033

DEC (2008) Advice on vegetation condition and threatened ecological communities for Midland Cemetery; DEC Species and Communities Branch. TRIM Ref DOC55028

DEC (2009) Advice regarding the potential for DRF orchid Thelymitra stellata to occur within the applied areas TRIM DOC 79012.

Del Marco, A., Miles, C., Taylor, R., Clarke, K. and Savage, K. (2004) Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region - Edition 1. Western Australian Local Government Association, West Perth.

Department of Conservation and Land Management (2000). Interim Recovery Plan 2000-2003 for the Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands (Swan Coastal Plain Community type 3c). Interim Recovery Plan No. 60. Department of Conservation and Land Management, Perth.

Department of Planning and Infrastructure (2007a) Direct Interest Submission, Strategic Biodiversity Planning, Department of Planning and Infrastructure, Western Australia. TRIM Ref DOC29047

Department of Planning and Infrastructure (2007b) Additional information, Strategic Biodiversity Planning, Department of Planning and Infrastructure, Western Australia. TRIM Ref ED2023

EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.

Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.

Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

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.

Shepherd, D.P. (2006). 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.

Site Inspection (2007) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref DOC32258