

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:

CPS 2953/1

Permit Holder:

Emu Point Slipway Services

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 a boat hardstand.

2. Land on which clearing is to be done

Lot 1423 on Plan 191459 (House No. 2 SWARBRICK EMU POINT 6330)

3. Area of Clearing

The Permit Holder must not clear more than 0.4517 hectares of native vegetation within the area hatched yellow on attached Plan 2953/1.

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. 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

6. 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.

7. 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:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared:
- (b) shall not move soils in wet conditions;

- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Vegetation management

- (a) Prior to 2 March 2014, the Permit Holder shall construct a fence enclosing the area hatched yellow on attached Plan 2953/1.
- (b) Within 1 month of installing the fence the Permit Holder shall notify the CEO in writing that the fence has been completed.

9. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a fauna specialist who shall identify habitat/habitat tree(s) suitable to be utilised as habitat by fauna listed in the Wildlife Conservation (Specially Protected Fauna) Notice 2008 (2).
- (b) Prior to clearing, any habitat/habitat tree(s) identified by condition 9(a) shall be inspected by a fauna specialist for the presence of fauna listed in the Wildlife Conservation (Specially Protected Fauna) Notice 2008 (2).
- (c) Prior to clearing, the Permit Holder shall ensure that any fauna identified by condition 9(b) shall be removed and relocated by a *fauna clearing person*, in accordance with a licence issued by the Department.

PART III - RECORD KEEPING AND REPORTING

10. 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 fauna management pursuant to condition 9 of this Permit:
 - (i) the location of each habitat/habitat tree identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) the species of fauna reasonably likely to utilise, or that have been observed utilising, the habitat/habitat tree(s); and
 - (iii) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings.

11. 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 10 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 10 of this Permit where these records have not already been provided under condition 11(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;

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the Wildlife Conservation Regulations 1970 authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

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

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

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;

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

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

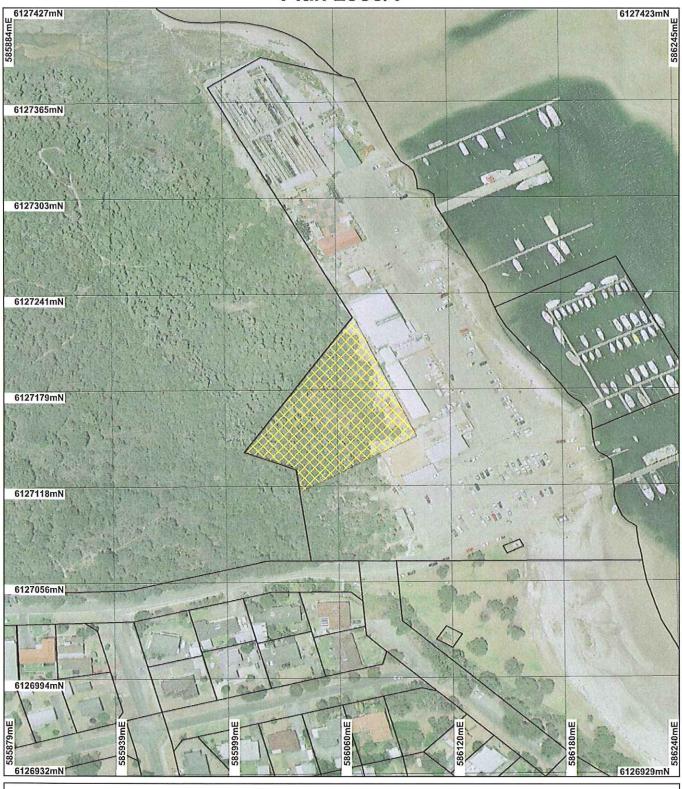
NATURE CONSERVATION DIVISION

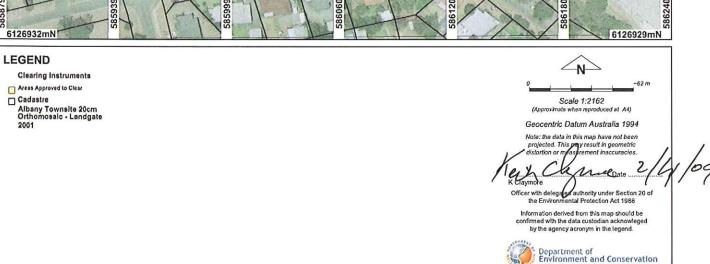
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Officer delegated under Section 20 of the Environmental Protection Act 1986

2 April 2009

Plan 2953/1





* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

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Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:

2953/1

Permit type:

Purpose Permit

1.2. Proponent details

Proponent's name:

Darren Wynne Russell Emu Point Slipway Services

1.3. Property details

Property:

LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330) LOT 1423 ON PLAN 191459 (House No. 2 SWARBRICK EMU POINT 6330)

Local Government Area: Colloquial name: City Of Albany

1.4. Application

Clearing Area (ha) 0.452

No. Trees

Method of Clearing Mechanical Removal For the purpose of: Building or Structure

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The vegetation under application consists of Beard vegetation association 51: Sedgeland; reed swamps, occasionally with heath.

Clearing Description

The vegetation under application is adjacent to several buildings and a carpark, however the vegetation appears to have remained largely unimpacted by the previous works. The vegetation is dense and only shows signs of disturbance along the eastern boundary line of the application area. There were five vegetation types mapped within the application area.

- Melaleuca cuticularis
 Low Open Forest over
 gahnia trifda/Baumea
 juncea closed Sedgeland
- 2) Melaleuca cuticuaris +/-Agonis flexuosa Low Woodland over Spyridium globulosum Tall Shrublan, Baumea juncea/Lepidosperma gladiatum Sedgeland
- Agonis fleuosa Low Woodland over Spyridium Tall Open Scrub, Baumea juncea Sedgeland
- 4) Mixed Srubland over Lepidosperma gladiatum Sedgeland
- 5) Introduced species/bare

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)

Comment

The condition and description of the vegetation under application was determined via the use of aerial imagery, GIS datasets, DEC advice and Flora survey conducted in September 2007. The Flora survey shows that the Beard vegetation mapping is somewhat similar to that found during the vegetation survey, however most of the vegetation would be defined as riparian vegetation consisting mainly of Melaleuca cuticularis Low Open woodland over Spyridium globulosum Tall Shrubland and Baumea juncea/Lepidosperma gladiatum Sedgteland.

ground

The vegetation is described as being in a very good to excellent (Keighery 1994) 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 vegetation is described as being in a very good to excellent (Keighery 1994) condition, consisting predominately of Melaleuca cuticularis low open forest over Gahnia trifda/Baumea juncea closed sedgeland (Sandiford, 2007). The area under application is zoned for Marine and Associated purposes. The vegetation under application adjoins an A class reserve vested with the Shire of Albany for the purpose of Boronia protection. The local area (10km radius) has approximately 30% remaining vegetation. The vegetation under application is part of a larger area of remnant vegetation. This remnant is important as it not only provides habitat for local fauna and flora species but it acts a buffer to Oyster harbour and the nearby foreshore flats.

The 0.4517 hectares of vegetation under application is seasonally inundated and may be important as refuge for aquatic fauna, as well as providing potential habitat for Pseudocheirus occidentalis (Western Ringtail Possum) and Isoodon obesulus (Quenda) (DEC, 2009a). There is also a large number of priority and rare flora species that occur within the local area (10km radius) some of which occur on similar conditions to that of the application area. Although a flora survey was undertaken, it was conducted during August, which is not the optimal time of year for many rare and priority listed species to be in flower and hence some may have gone unnoticed. The most likely priority species to occur is Laxmannia jamesii, as this species prefers winter wet areas (DEC, 2009c).

The flora survey also confirmed the presence of riparian vegetation (Sandiford, 2007), which when part of a buffer is important in upholding the high levels of attributes and functions that wetlands offer, especially when considering biodiversity (DEC, 2008).

This being considered, the proposed clearing is at variance to this principle.

Methodology

DEC (2008)

DEC (2009a)

DEC (2009c)

Keighery (1994)

Sandiford (2007)

GIS DataSets:

- Albany Townsite 20cm Orthomosaic Landgate 2001 (9/10/07)
- CALM Managed Lands and Waters CALM 01/06/05
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- SAC Biodatasets accessed 15 Feb 09

(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 may be at variance to this Principle

The vegetation under application is described as being in a very good to excellent (Keighery 1994) condition, consisting of mainly of Melaleuca cuticularis low open forest over Gahnia trifda/Baumea juncea closed sedgeland (Sandiford, 2007).

The vegetation under application (0.4517 ha) is part of a larger remnant that stretches to the north and west. To the east of the application area a car park and developed area exists, which has been designated for the purpose of marine and associated purposes.

Within the local area (10km radius) several fauna species occur. Of primary concern is the presence of the rare fauna species Psuedocheirus occidentalis (Western Ringtail Possum) as this species is highly likely to frequent the application area. Common species such as Rattus fuscipes (Western Bush Rat), Crimea subinsignifera (Western Froglet) and several bird species were recorded within the application area, this shows that the local ecosystem is in a healthy state (Leighton, 2007). It is likely that the priority 5 species Isoodon obesulus (Quenda) will occur within the application area, and may be significant habitat for aquatic fauna (DEC, 2009a).

The application area is often inundated and is described as being a healthy functioning riparian ecosystem, with enough native vegetation to support a wide range of native mammals (Leighton, 2007).

It is considered that the proposed clearing may be at variance to this principle. To reduce the impacts on fauna species, fauna conditions for the Western ring-tailed possum will be placed on the permit.

Methodology

DEC (2009a) Keighery (1994)

Leighton (2007) Sandiford (2007)

GIS DataSets:

- CALM Managed Lands and Waters CALM 01/06/05
- SAC Biodatasets accessed 13 Feb 09

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposal may be at variance to this Principle

There are a large number of rare and priority flora within the local area (10km radius). Forty six priority listed flora species including 4 priority one species, 10 priority two species, 30 priority three species and 12 priority four species. Of these the closest recorded species to the application area was Andersonia depressa (P4) recorded 400 metres south, Andersonia setifolia (P3) recorded 1.1km south east, Melaleuca diosmifolia recorded 1.4 km north, Chorizema reticulatum recorded 1.5km south east, and Laxmannia jamesii was recorded 1.5km north of the application area. Forty nine plant species were recorded within the application area, 25 of these were native (Sandiford, 2007).

Eleven rare flora species were recorded within the local area (10km radius). Of these the closet recorded species was Drakaea micrantha, which was recorded 2.6km north west of the application area.

The soils are described as being low-lying wet plains with swamps and lakes, some estuarine areas: chief soils are leached sands, some of which have thin peaty surface horizons. Associated are a variety of peat and other soils in the swamps and depressions; some other leached sands may also occur (Nothcote et al. 1960 - 1968). The area is also seasonally inundated.

These soils maybe compatible with rare flora species such as Caladenia harringtoniae, Chordifex abortivus, Drakaea micrantha and Microtis globula (Brown et al. 1998) which have all been recorded within the local area. The flora survey conducted in August may not have identified these spring ephemeral species (DEC, 2009b). Therefore the proposed clearing may be at variance to this principle.

Methodology

Brown et al (1998)

DEC (2009b) Sandiford (2007) GIS DataSets:

- SAC Biodatasets accessed 15 Feb 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 Ecological Communities (TECs) within the application area. The closest TEC was recorded 2.7km north west and is unlikely to be impacted by the proposed clearing.

Methodology

GIS DataSets:

- Albany Townsite 20cm Orthomosaic Landgate 2001 (9/10/07)
- SAC Biodatasets accessed 13 Feb 09
- Soils, Statewide DA 11/99

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 remnant, of which the application area is apart, is in very good to excellent (Keighery 1994) condition (DEC, 2009). The vegetation under application is mapped as Beard vegetation association 51 sedgeland; reed swamps, occasionally with heath. This Beard association is well represented within the local Shire and bioregion, with remaining pre-European levels of vegetation above the recommended 30% threshold within the aforementioned categories (Shepherd et al. 2007; Commonwealth, 2001). However during a flora survey there were two main vegetation types recorded within the application area. Agonis flexuosa and Melaleuca cuticularis low open forest. Both vegetation types are well represented within the local Shire and south west region and are described as being riparian vegetation (Sandiford, 2007).

The local area (10km radius) is approximately 30% vegetated. The application area is part of a larger remnant that extends to the north and west within a highly cleared landscape. Due to the application areas contribution to this remnant in a highly cleared area, the proposed clearing may be at variance to this principle.

Methodology

Commonwealth (2001)

DEC (2009)
EPA (2000)
Keighery (1994)
Shepherd et al. (2007)
GIS DataSets:
- SacBioDataSets - accessed 15 Feb 2009

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment

Comments

Proposal is at variance to this Principle

associated with a watercourse or wetland.

The vegetation within the application area consists of riparian wetland vegetation (Leighton, 2007; Sandiford, 2007). The application area is part of a larger remnant that extends to the north and west. The vegetation remnant, of which the application area is apart, is in very good to excellent (Keighery 1994) condition and acts as a buffer to a minor non-perennial watercourse and the adjacent Oyster Harbour (within the foreshore flats), a wetland of national importance (ANCA, 1996).

There is a minor non-perennial watercourse located 350 metres north west of the application area. This is unlikely to be impacted by the proposed clearing as there is sufficient vegetation remaining between the application area and the watercourse.

While the application area is directly adjacent to a carpark and has been subjected to past disturbances, due to the area consisting of of riparian wetland vegetation and the application area being within a buffered area to an ANCA listed wetland, the proposed clearing is considered to be at variance to this principle.

Methodology

ANCA (1996)

Keighery (1994)

Leighton (2007)

Sandiford (2007)

GIS DataSets:

- ANCA wetlands Environment Australia 26/3/99
- CALM Managed Lands and Waters CALM 01/06/05
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- Hydrography linear DOW 13/7/06
- Hydrography linear (hierarchy) DoW 13/7/06
- 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 application area is adjacent to Oyster Harbour, which has a high to moderate risk of acid sulfate soils occurring. The soils of the application area are described as low-lying wet plains with swamps and lakes, some are leached sands, some which have thin peaty surface horizons. Associated are a variety of peat and other soils in the swamp depressions; some other leached sands and diatomaceous earths occur (Northcote et al. 1960 - 1968). The profile of the soils that are to be disturbed during the proposed clearing are not likely to contain acid sulfate soils.

Groundwater salinity is between 500 - 1000 mg/L and the application area lies just above sea level, with an elevation of 0 - 5 metres. The application area is subject to inundation and was partly inundated during a fauna survey (Leighton, 2007). The proposed clearing of 0.4517 hectares of native vegetation is considered unlikely to alter inundation regimes in the local area.

Methodology

Leighton (2007)

Northcote (1960 -1968)

GIS DataSets:

- Average Annual Rainfall Isohyets WRC 29/09/98
- Annual Evaporation Contours (Isopleths) WRC 29/09/98
- Hydrogeology, statewide DOW 13/07/06
- SacBioDataSets accessed 15 Feb 09
- Soils, Statewide DA 11/99
- Topographic contours statewide DOLA and ARMY 12/09/02

(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 adjacent to an A class reserve and a ANCA wetland. Green Island Nature Reserve is located 1.2km north east, however this island is in the middle of Oyster harbour and is unlikely to be impacted by the proposed clearing.

While the application area is relatively small, conservation areas and reserves function more effectively in the presence of bordering vegetation. The continued removal of native vegetation within an environmentally sensitive area will incrementally reduce the existing buffering capacity that the current vegetation offers the adjacent conservation reserve and may lead to increased weed invasion and altered inundation regimes. Weed and dieback conditions will be imposed on the permit and fencing will be a requirement to ensure the adjacent reserve is adequately protected.

Methodology

GIS DataSets:

- Albany 1.4m Orthomosaic DLI March 03
- CALM Managed Lands and Waters CALM 01/06/05
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing may impact on the local hydrology in an area already subject to inundation. The vegetation under application is part of the foreshore flats of Oyster Harbour and is also adjacent to Oyster Harbour itself, which has a high to moderate risk of acid sulfate soils occurring. The soils of the application area are described as low-lying wet plains with swamps and lakes, some are leached sands, some which have thin peaty surface horizons. Associated are a variety of peat and other soils in the swamp depressions; some other leached sands and diatomaceous earths occur (Northcote et al. 1960 - 1968). The profile of the soils that are to be disturbed during the proposed clearing are likely to contain acid sulfate soils.

Groundwater salinity is between 500 - 1000 mg/L and the application area lies just above sea level, with an elevation of 0 - 5 metres. There is a minor non-perennial watercourse located 350 metres north east of the application area. This is unlikely to be impacted by the proposed clearing as there is sufficient vegetation remaining between the application area and the watercourse. Due to the size of the proposed clearing and given that the area to be cleared is adjacent to a carpark, it is considered unlikely that surface water will deteriorate as a result of the proposed clearing.

Groundwater salinity is between 500 - 1000 mg/L and the application area lies just above sea level, with an elevation of 0 - 5 metres. There is a minor non-perennial watercourse located 350 metres north east of the application area. This is unlikely to be impacted by the proposed clearing as there is sufficient vegetation remaining between the application area and the watercourse. Due to the size of the proposed clearing and given that the area to be cleared is adjacent to a carpark, it is considered unlikely that surface water will deteriorate as a result of the proposed clearing.

Methodology

- 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
- SAC Biodatasets accessed 15 Feb 09
- 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

The proposed clearing of 0.4517 hectares of native vegetation in an area of elevation between 0 - 5 metres is unlikely to exacerbate the risk of flooding occurring. The application area is subject to seasonal inundation (Sandiford, 2007). Flooding issues within this area are more likely to be as a result of storm events and other coastal process due to the application areas proximity to Oyster Harbour in combination with its low relief.

Methodology

Sandiford (2007)

GIS Datasets:

- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- Topographic Contours, Statewide DOLA 12/09/02

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

Comments

The application area is designated for "Marine and Associated Purposes" which is consistent with the proposed

age 5

clearing purpose.

The proponent has a lease from the City of Albany (Trim Ref: DOC79511).

Methodology

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matter in accordance with s510 of the Environmental Protection Act 1986.

The assessment has found that:

- Principles (a) & (f) are at variance
- Principles(b), (c), 9g), (h) & (i) may be at variance
- Principles (d), (e) & (j) are not likely to be at variance

5. References

- ANCA (1996) A Directory of Important Wetlands in Australia. Second Edition. Australian Nature Conservation Agency, Canberra
- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- DEC (2008) Memo re Standard Wetlands Advice for Native Vegetation Conservation Branch. Dated 17/07/2008. Species and Communities Branch, Department of Environment and Conservation, Western Australia.
- DEC (2009a) South Coast Regional Advice. Department of Environment and Conservation Trim Ref DOC77245.
- DEC (2009b) Advice. Department of Environment and Conservation Trim Ref DOC78584
- DEC (2009c)Laxmannia jamesii species profile accessed via http://florabase.dec.wa.gov.au/browse/profile/1302 on the 20/02/09
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Leighton (2007) Fauna survey report for teh smaller selected site located directly behind the Emu Point Slipway Services Lease Area in the "A" class reserve no: 6862 vested with the City of Albany (Trim Ref: DOC77387).
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Sandiford (2007) Vegetation and flora survey of portions of reserves 42964 & 6862, Emu Point, Albany (Trim Ref: DOC77388).
- 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.

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)

