



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4663/1

File Number: DEC10707

Duration of Permit: From 25 January 2013 to 25 January 2020

ADVICE NOTE:

The funds referred to in condition 3 are intended for the purchase of 10 hectares of land containing similar environmental values to that permitted to be cleared under this Permit and located on the Swan Coastal Plain.

PERMIT HOLDER

Smargiassi Nominees Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 519 on Deposited Plan 50783, Stake Hill

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 5 hectares of native vegetation within the area hatched yellow on attached Plan 4663/1.

CONDITIONS

1. Period in which clearing is authorised

- (a) The Permit Holder shall not clear any native vegetation after 25 January 2015.
- (b) Clearing may not occur before the Permit Holder has obtained planning approval for the extraction of sand from the Shire of Murray.

2. 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 only move soils in *dry conditions*; and
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared.

3. Monetary contributions to a fund maintained for the purpose of establishing or maintaining vegetation (offset)

Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall contribute documentary evidence to the CEO that funding of \$70,000 has been transferred to the Department of Environment and Conservation to purchase land for the purpose of establishing or maintaining vegetation.

4. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify *habitat tree(s)* that contain hollows suitable to be utilised as *habitat tree(s)* by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (b) Prior to clearing, any *habitat tree(s)* identified by condition 4(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate any fauna identified under condition 4(a).

5. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 6 months following completion of extractive activities, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under condition 5(a) on the cleared area.
- (c) Within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 5(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 5(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 5(c)(ii) of this Permit, the Permit Holder shall repeat condition 5(c)(i) and 5(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a written determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 5(c)(i) and (ii) of this Permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the written determination made under condition 5(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 5(c)(ii).

6. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (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 4 of this Permit:
 - (i) the location of each 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 or decimal degrees;
 - (ii) the species name 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 or decimal degrees.
- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 4 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*; and
 - (v) a copy of the environmental specialist's written determination.

7. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 6 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 4 October 2019 the Permit Holder must provide to the CEO a written report of records required under condition 6 of this Permit where these records have not already been provided under condition 7(a) of this Permit.

DEFINITIONS

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

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

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

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

environmental specialist means a person who 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;

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, measured at 1.5m above the ground, of 50cm or greater, 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;

local provenance means native vegetation seeds and propagating material from natural sources within 50 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;

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

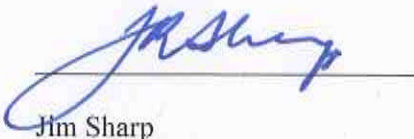
regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing mulch;

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

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

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 *Agriculture and Related Resources Protection Act 1976*; and

Wildlife Conservation (Specially Protected Fauna) Notice means those fauna taxa gazetted as rare fauna pursuant to section 14(4)(a) of the *Wildlife Conservation Act 1950* (as amended).



Jim Sharp
A/DIRECTOR GENERAL

3 January 2013

Plan 4663/1

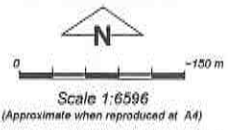


LEGEND

Clearing instruments

- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
 - Image Index
 - Recently added
 - Coverage
- Perth Metropolitan South
15cm Orthomosaic - Landgate
2011

(cont)



Geocentric Datum Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

J. Sharp Date 3.1.12
J. Sharp

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



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



1. Application details

1.1. Permit application details

Permit application No.: 4663/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Smargiassi Nominees Pty Ltd TA Collie Steel Supply

1.3. Property details

Property: LOT 519 ON PLAN 50783 (STAKE HILL 6181)
Local Government Area: Shire of Murray
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Extractive Industry

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 3 January 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association: 1001 - Medium very sparse woodland; jarrah, with low woodland; Banksia & Casuarina. (Shepherd et al, 2001).	Smargiassi Nominees Pty Ltd is proposing to clear 5 hectares of native vegetation for the purpose of sand extraction.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of the vegetation under application was determined via a site inspection conducted by Department of Environment and Conservation officers on 27 July 2009 (DEC, 2009a) and on 8 December 2011 (DEC, 2011).
Hedde Complex: Yoongarillup Complex - Woodland to tall woodland of <i>E. gomphocephala</i> with <i>Agonis flexuosa</i> in the second storey. Less consistently an open forest of <i>E. gomphocephala</i> - <i>E. marginata</i> - <i>E. calophylla</i> . (Hedde et al 1980).	The vegetation under application comprises mixed Eucalyptus and Banksia woodland, over <i>Allocasuarina fraseriana</i> , <i>Xylomelum occidentale</i> , <i>Kunzea glabrescens</i> , <i>Macrozamia riedlei</i> , <i>Xanthorrhoea preissii</i> , <i>Hibbertia hypericoides</i> , <i>Acacia pulchella</i> , <i>Stirlingia latifolia</i> and <i>Dasyogon bromeliifolius</i> .		

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

This application proposes to clear 5 hectares of native vegetation within Lot 519 on Deposited Plan 50783, Stake Hill, for the purpose of sand extraction.

The vegetation under application is described as Eucalyptus and Banksia woodland over shrubland predominately in an excellent (Keighery, 1994) condition (DEC, 2009a).

A flora and vegetation survey conducted by Bennett in 2004 identified a total of 97 flora taxa, including 89 native species and 8 weed species. No rare flora species were recorded within the applied area. One Priority 2 species was recorded within Lot 519. Bennett (2004) advised that a Priority 4 species may also occur on site. This 2004 survey was conducted outside of the optimal identification times for rare flora species; *Drakaea* sp. and *Caladenia* sp.

A spring flora survey conducted by Natural Area Management and Services in 2009 recorded a Priority 2 *Acacia* sp. within the proposed clearing area and others were found within 50 meters of the application area (Natural Area Management and Services, 2009a).

In January 2010, Natural Area Consulting was commissioned by Smargiassi Nominees Pty Ltd to undertake a targeted search for three species; *Drakaea* sp. (rare), *Caladenia* sp. (rare) and *Acacia* sp. (P2). This survey

(conducted in September 2010) identified 12 specimens of the rare *Drakaea* sp. within the study area but not within the proposed clearing site. The Priority 2 *Acacia* sp. was also identified within the study area, though the *Caladenia* sp. was not (Natural Area Consulting, 2011).

In September 2010, Department of Environment and Conservation Officers conducted a targeted search for the rare *Drakaea* sp.. This search identified 34 individuals of this species (DEC, 2010). All of these records were observed in the north east corner of Lot 519.

Numerous flora surveys have now been carried out over Lot 519 and none of which have recorded priority or rare flora within the application area.

The dense understorey present within the application area may provide habitat for a number of ground dwelling fauna such as Quenda and Chuditch. In December 2011, Lot 519 was inspected by Department of Environment and Conservation Officers for evidence of Carnaby's cockatoo (DEC, 2011). Foraging evidence (chewed *Banksia attenuata* cones) was observed within the western third of the property. The western side of the property is more open and therefore more accessible for foraging cockatoos. The canopy cover on the eastern side of the property is closed and therefore not significant habitat. Since this site inspection the applicant has amended the application so that the clearing area lies within an area of denser canopy cover. Although, the current area under application is not within suitable foraging habitat for Carnaby's cockatoo the area is still likely to contain hollow bearing trees which may provide breeding habitat.

The local area (10km radius) is highly cleared with approximately 20 per cent native vegetation remaining. The vegetation under application is part of a 1b ecological linkage as identified by the South West Regional Ecological Linkages project, endorsed by the Environmental Protection Authority (Molloy et al. 2009, EPA 2009). The creation of Kwinana Freeway, which runs along the eastern boundary of the property, has dissected this ecological link. The large extraction pit which lies to the north of the application area has also contributed to the decline in the integrity of this link. Considering this it is unlikely that the proposed clearing will have a detrimental effect on the values of this link.

Given the excellent (Keighery, 1994) condition of the vegetation under application and the potential for it to provide significant habitat for fauna, the area under application is likely to contain a high level of biodiversity. Therefore, the proposed clearing is at variance to this principle.

To address the impacts identified above the applicant proposes to contribute funds to the purchase of 10 hectares of similar habitat on the Swan Coastal Plain to offset the loss of the 5 hectares proposed to be cleared under this application.

Methodology

References:

- Bennett (2004)
- DEC (2009a)
- DEC (2010)
- DEC (2011)
- EPA (2009)
- Keighery (1994)
- Molloy et al. (2009)
- Natural Area Consulting (2011)
- Natural Area Management and Services (2009a)

GIS Databases:

- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007
- SAC BIO datasets - accessed Jan 2012

(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

Eleven different fauna species of conservation significance have been identified within the local area (10km radius) (DEC, 2007-).

The area under application is located within the distribution range of the Carnaby's cockatoo (*Calyptorhynchus latirostris*) (Threatened, Wildlife Conservation Act 1950 and Endangered, Environmental Protection and Biodiversity Conservation (EPBC) Act 1999). These birds inhabit remnant Eucalyptus and *Banksia* woodlands and coastal scrub foraging on the seeds and nectar from the flowers of Eucalypts, *Banksia*, *Grevillea* and *Hakea* species (Burbidge, 2004).

In December 2011, Lot 519 was inspected by Department of Environment and Conservation Officers for evidence of Carnaby's cockatoo (DEC, 2011). Foraging evidence (chewed *Banksia attenuata* cones) of Carnaby's cockatoo was observed within the western third of the property. The western side of the property is more open and therefore more accessible for foraging cockatoos. The canopy cover on the eastern side of the property is closed and therefore not significant habitat. Since this site inspection the applicant has amended the application so that the clearing area lies within an area of denser canopy cover. Although, the current area

under application is not within suitable foraging habitat for Carnaby's cockatoo the area is still likely to contain hollow bearing trees which may provide breeding habitat.

The vegetation under application is in excellent (Keighery, 1994) condition with an intact understorey. Areas comprising a dense leaf litter understorey and woody debris may provide suitable habitat for ground dwelling fauna such as the Quenda, snakes and lizards.

The Brush-tailed phascogale (*Phascogale tapoatafa tapoatafa*) and Chudich (*Dasyurus geoffroi*) (Threatened (Wildlife Conservation Act 1950 and Vulnerable, EPBC Act 1999) have recently been recorded within Paganoni Reserve (Bush Forever site 395), which is located approximately 600 metres north of the application area. The area under application is located within the same vegetation type as Paganoni Reserve and therefore these species may also inhabit the area under application.

The local area (10km radius) is highly cleared with approximately 20 per cent vegetation remaining. The vegetation under application is part of a 1b ecological linkage as identified by the South West Regional Ecological Linkages project, endorsed by the Environmental Protection Authority (Molloy et al. 2009, EPA 2009). The creation of Kwinana Freeway, which runs along the eastern boundary of the property, has dissected this ecological linkage. The large extraction pit which lies to the north of the application area has also contributed to the decline in the integrity of this linkage. Considering this it is unlikely that the proposed clearing will have a detrimental effect on the values of this linkage.

Given the above the proposed clearing may be at variance to this principle.

Fauna management practices will ensure that no native fauna is harmed during the clearing process.

Methodology

References:

- Burbidge (2004)
- DEC (2007-)
- DEC (2011)
- EPA (2009)
- Molloy et al. (2009)

GIS Databases:

- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007
- SAC BIO datasets - accessed November 2011

(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 (10km radius) two species of rare flora have been identified; *Drakaea* sp. and *Diuris* sp.

Drakaea sp. was the closest recorded species, located approximately 150 metres east of area under application. This particular population of the rare *Drakaea* sp. is situated near the eastern boundary of Lot 519 and was discovered in 2006 during survey work associated with the Kwinana Freeway extension.

This *Drakaea* sp. is generally found in *Banksia* woodland, particularly under thickets of *Kunzea glabrescens* located near winter-wet areas, but has also occasionally been found near the tops of sandy rises (DEC, 2008). The nearby population of *Drakaea* sp. is located within the same vegetation complex and soil type as the area under application.

A flora survey undertaken on 31 March 2004 did not identify any rare flora within the area under application (Bennett, 2004). However, this survey was conducted outside the optimal times for this *Drakaea* sp.

A site visit undertaken by DEC on 27 July 2009 targeted habitat within Lot 519 considered suitable for this rare flora species. A population of this species was identified on the eastern side of the property, however the purpose of the site visit was not to conduct a full flora survey (DEC, 2009b).

Natural Area Management and Services conducted a spring flora survey of Lot 519 on 26 and 27 October 2009 and did not identify the *Drakaea* sp. or any other rare flora species within the property (Natural Area Management and Services, 2009a). This report is not consistent with flora reporting and surveying detailed by the Environmental Protection Authority's Guidance Statement No 51. In particular the report failed to provide the methodology used to survey the targeted flora species. The proponent supplied additional information on the report (Natural Area Management and Services, 2009b), providing a description of the vegetation habitat found on site.

In January 2010, Natural Area Consulting (2011) was commissioned by Smargiassi Nominees Pty Ltd to undertake a targeted search for three species. This survey identified 12 specimens of *Drakaea* sp. within the study area but not within the proposed clearing site. No other rare flora was observed.

In September 2010, DEC Conservation Officers surveyed Lot 519 for the presence of *Drakaea* sp. Personnel

from Natural Area Consulting were also surveying for plants at the same time. This survey identified 34 individuals of this species (DEC, 2010).

Given the area under application has been surveyed a number of times and rare flora has not been identified within it, it is considered unlikely that the application area supports rare flora. Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology References:
- Bennett (2004)
- DEC (2009b)
- DEC (2010)
- Natural Area Consulting (2011)
- Natural Area Management and Services (2009a)
- Natural Area Management and Services (2009b)

GIS Databases:
- Heddle Vegetation Complexes
- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2011
- Soils, Statewide
- SAC BIO datasets - accessed Jan 2012

(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 four occurrences of threatened ecological communities (TEC) within a 5km radius of the area under application. These TECs are identified as Floristic Community Type: FCT19 - Sedgeland in Holocene dune swales of the southern Swan Coastal Plain and FCT24 - Northern Spearwood shrublands and woodlands. The closest, FCT24 is located approximately 2.3km north west of the applied area. These TECs are found within a different vegetation complex and soil type to that found on site.

During the flora and vegetation survey (Bennett, 2004) the vegetation under application was inferred as FCT21a - Central Banksia attenuata - Eucalyptus marginata woodlands, which is not identified as either a TEC or priority ecological community (PEC).

Given the distance to the closest TEC and that a flora survey conducted over the applied area did not identify the vegetation under application as a TEC (Bennett, 2004), it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of a TEC.

The proposed clearing is not likely to be at variance to this species.

Methodology References:
- Bennett (2004)

GIS Databases:
- Pre European Vegetation
- SAC BIO datasets - accessed Jan 2012

(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 area under application is located within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 39 per cent of its Pre European vegetation extent remaining (Government of Western Australia, 2011).

The vegetation under application is mapped as Beard vegetation association 1001 of which there is approximately 25 per cent of its pre-European extent remaining within the Swan Coastal Plain bioregion (Government of Western Australia, 2011).

Heddle et al. (1980) defines the vegetation under application as Yoongarillup Complex of which there is approximately 45 per cent of pre-European extent remaining.

The area under application is located within the Shire of Murray, within which there is approximately 55 per cent of pre-European extent remaining.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The local area (10km radius) is highly cleared with approximately 20 per cent vegetation remaining.

The area under application contains a high level of biodiversity, may contain significant habitat for conservation significant fauna and therefore is a significant remnant. Given the local area retains 20 per cent vegetation the area under application is a significant remnant in an area which has been extensively cleared.

Therefore the proposed clearing is at variance to this principle.

In response to the above assessment the applicant has purchased 10 hectares of similar habitat on the Swan Coastal Plain to offset the loss of the 5 hectares proposed to be cleared under this application. The area purchased as an offset will be managed in perpetuity by DEC.

To address the impacts identified above the applicant proposes to contribute funds to the purchase of 10 hectares of similar habitat on the Swan Coastal Plain to offset the loss of the 5 hectares proposed to be cleared under this application.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Swan Coastal Plain^	1,501,209	587,889	39	33
Shire of Murray*	170,577	93,361	55	
Hedde Vegetation complex**				
Yoongarilup Complex	24,767	11,140	45.0	13.9
Beard Vegetation complex*				
1001	57,410	14,112	25	6

* (Government of Western Australia, 2011)

** (Hedde et al. 1980)

Methodology

References:

- Commonwealth of Australia (2001)
- Government of Western Australia (2011)
- Hedde et al. (1980)
- Molloy et al. (2009)

GIS Databases:

- Pre-European Vegetation
- Hedde Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia

(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 wetlands or watercourses mapped within the area under application. However, there are numerous wetlands located within a 10km radius of the application area. The closest wetland is a Conservation Category Wetland (CCW)(Pagononi Swamp) which is located approximately 480m west of the applied area. In addition, the nearest Environmental Protection Policy (EPP) Lake is located approximately 450m west of the area under application.

The nearest watercourse is the Serpentine River which is located approximately 1km north-east of the area under application.

Given the distance to the nearest wetland and watercourse the vegetation under application is not likely to be growing in, or in association with, an environment associated with a watercourse or wetland.

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

Methodology

GIS Databases:

- EPP, Lakes
- Geomorphic Wetlands (Classification), Swan Coastal Plain

- Hydrography, linear (hierarchy)

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal may be at variance to this Principle

The soils within the area under application have been mapped as soil type JK9 which are described as brown sands with associated siliceous sands on the deeper dunes (Northcote et al, 1960-68). These soils have a nil to low risk of salinity and a low risk of water logging due to the high infiltration rates associated with sands.

The main land degradation risk associated with the removal of vegetation on the identified soil type is wind erosion.

The high wind erosion potential is due to the sandy nature of the soil and without appropriate vegetation cover, windbreaks or adequate dust suppression on exposed surfaces the proposal may result in land degradation.

Given that the proposed clearing has a high risk of wind erosion, the proposal may be at variance to this Principle.

Methodology References:

- Northcote et al. (1960-68)

GIS Databases:

- SAC BIO datasets - accessed Jan 2012

(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

There are six areas reserved for conservation purposes within a 10km radius of the area under application. The closest conservation area is Bush Forever site 395 (Pagononi Swamp and Adjacent Bushland, Karnup) which is located approximately 600 metres north of the applied area.

In addition, Bush Forever site 379 (Anstey Swamp, Karnup) and Bush Forever site 394 (Lake Amarillo, Serpentine River and Adjacent Bushland, Karnup) are respectively located approximately 3km north and 1.3km north-east of the area under application. An Un-named A Class Reserve (id. 44986) is situated approximately 900m to the east of the applied area. Furthermore, Bush Forever sites 395 and 379 form part of the Rockingham Lakes Regional Park which is located approximately 600m north of the applied area.

Although Bush Forever site 375 is within 600 meters of the area under application there is a large sand extraction pit between this reserve and the application area. The existing sand extraction pit will buffer the reserve from any impacts the proposed clearing may have e.g. weed invasion.

The vegetation under application is part of a 1b ecological linkage as identified by the South West Regional Ecological Linkages project, endorsed by the Environmental Protection Authority (Molloy et al. 2009, EPA 2009). The creation of Kwinana Freeway, which runs along the eastern boundary of the property, has dissected this ecological linkage. The large extraction pit which lies to the north of the application area has also contributed to the decline in the integrity of this linkage. Considering this it is unlikely that the proposed clearing will have a detrimental effect on the values of this linkage and therefore not likely to effect the environmental values on the adjacent Bush Forever Site by limiting flora and fauna distribution.

The clearing as proposed is not likely to be at variance to this principle.

Methodology References:

EPA (2009)

Molloy et al. (2009)

GIS Databases:

- Bushforever

- DEC Tenure

- Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007

- Register of National Estate

(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 closest wetland is a Conservation Category Wetland which is located approximately 480m west of the area under application and the Serpentine River which is located approximately 1km north-east of the applied area.

The area under application is situated within the Peel Harvey Catchment Area, but is not located within a Public Drinking Water Source Area (PDWSA).

Given the high infiltration rates of the sandy soils identified within the area under application, and the distance to the nearest wetland and watercourse, it is not likely that the proposed clearing would cause water erosion resulting in deterioration in surface water quality.

The area under application has a nil to low risk of salinity. Given the low salinity risk, it is not likely that the proposed clearing would cause salinity resulting in the deterioration in the quality of underground water.

Given the above, it is not likely that the proposed clearing would cause deterioration in the quality of surface or underground water.

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

Methodology GIS Databases:
- EPP, Lakes
- Geomorphic Wetlands (Classification), Swan Coastal Plain
- Hydrographic Catchments - Catchments - DOW
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposal is not likely to be at variance to this Principle

The area under application is located approximately 480 metres east of a Conservation Category Wetland and approximately 1km south-west of the Serpentine River, at an elevation of 10-20 metres.

Given the distance to the nearest wetland and watercourse and the high infiltration of the sandy soils on site, it is not likely that the proposed removal of vegetation would impact on peak flood height or duration.

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

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

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

Comments

Mr Smargiassi submitted a Notice of Intention to Clear land (NOIC) for Lot 203 Stock Road, Stake Hill (now known as Lot 519 on Diagram 67405) on 14/10/2002 (CRN185833). It was advised that land clearing was unlikely to cause appreciable land degradation on site or off site.

In December 2004, Smargiassi Nominees Pty Ltd was granted a permit (CPS 227/1) to clear a similar area to which is currently under application. The cover letter accompanying this permit provided the following advice:

- Additional approvals from the Local Authority should be obtained prior to commencing clearing
- Priority flora identified outside the area that will be cleared should be fenced and protected
- Revegetation of the site should consist of species that are native to the local area to a condition similar to the condition of the vegetation before clearing occurred.

This permit expired before any clearing had taken place.

In February 2009, Smargiassi Nominees Pty Ltd reapplied for a clearing permit (CPS 3014/1) over the same area. This permit was refused based on a number of environmental and planning issues. One of the major environmental issues identified was the possibility for rare flora occurring within the application area. The applicant conducted a Priority Flora Survey (Natural Area Management and Services, 2009a) however DEC deemed that this assessment was inadequate.

The current application (CPS 4663/1) was submitted to DEC on 10 October 2011.

This application was amended during assessment to avoid areas which were identified as suitable foraging habitat for Carnaby's Cockatoo.

Lot 519 is zoned 'rural' under the Town Planning Scheme and is zoned as 'urban' under the Peel Region Scheme. The Shire of Murray is looking to align their town planning scheme zoning with the Peel Region Scheme. If Lot 519 is rezoned as urban, extractive industry will be an incompatible land use.

The area under application is located within the South West Coastal Groundwater Area which is an area

proclaimed under the Rights in Water and Irrigation Act 1914. The Department of Water (DoW, 2011) has advised that the abstraction of water from the superficial aquifer is subject to licensing. DoW has noted that the Leederville aquifer in this location is currently over allocated and therefore the groundwater is not available from this resource. Groundwater is currently available in the superficial aquifer, however potential impacts with regard to salinity as a result of the abstraction will be required to be addressed in an application for a licence under the Rights in Water and Irrigation Act 1914 (DoW, 2011). The applicant has advised that groundwater abstraction is not required.

The Shire of Murray has received an application for an Extractive Industry Licence from Smargiassi Nominees.

A submission has been received in relation to this application. This submission provides advice that this application is opposed on the grounds that the proposed clearing is located within an already highly cleared landscape and is in close proximity to vegetation of regional significance and rare flora (Submission, 2011). The concerns raised in this submission have been addressed in the above report.

To address the environmental impacts identified in this assessment, DEC has approved the applicant's offset package which comprises contributing funds towards the purchase of 10 hectares of similar habitat on the Swan Coastal Plain to offset the loss of the 5 hectares proposed to be cleared under this application.

Methodology References:
- DoW (2011)
- Natural Area Management and Services (2009a)
- Submission (2011)

GIS Databases:
- Town Planning Scheme Zones

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5. 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)

