GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 5029/1
File Number: DEC8136
Duration of Permit: From 19 April 2013 to 19 April 2015

PERMIT HOLDER
Koppers Wood Products Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE
Lot 520 on Plan 301384, Picton East

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 1.35 hectares of native vegetation within the area cross hatched yellow on attached Plan 5029/1a.

CONDITIONS

1. **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*;
   (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.

2. **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 trees* that have potential to be utilised by Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Forest Red-tailed black cockatoo (*Calyptorhynchus banksii naso*).
   (b) Prior to clearing, any *habitat tree(s)* identified by condition 2(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 2(a).
   (c) Where fauna are identified in relation to condition 2(b) of this Permit, the Permit Holder shall ensure that no taking of identified fauna occurs unless approved by the CEO.

3. **Western Ringtail Possum Management Plan**
   (a) The Permit Holder must prepare a Western Ringtail Possum Management Plan.
   (b) The Western Ringtail Possum Management Plan must be approved by the CEO prior to commencing clearing.
   (c) Prior to clearing the Permit Holder must implement the approved Western Ringtail Possum Management Plan.

4. Offsets

The Permit Holder must implement and adhere to the offset commitments as outlined in Strategen's letter dated 8 February 2013, 'Modification to the previous proposal – Koppers Wood Products' including but not limited to:

(a) Cede to the Crown for the purpose of conservation 1.66 hectares of native vegetation within the area hatched blue on attached Plan 5029/1a within 12 months of commencing clearing approved under this permit.
(b) Fencing the area hatched blue on attached Plan 5029/1a within 3 months of commencing clearing approved under this permit so as to exclude all classes of livestock.
(c) Submitting a site specific restoration plan for 1.72 hectare of native vegetation hatched red on attached Plan 5029/1b to the CEO prior to commencing clearing; and.
(d) The site specific restoration plan for the area hatched red on attached Plan 5029/1b must be approved by the CEO prior to commencing restoration works.

5. Records must be kept

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

(a) In relation to the fauna management pursuant to condition 2 of this Permit,
  (i) the location of any habitat tree, 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; and
  (ii) the species name of each fauna identified.
(b) In relation to condition 3 of this Permit the Permit Holder must maintain records of activities undertaken in accordance with the Western Ringtail Possum Management Plan.
(c) In relation to the offset of areas pursuant to condition 4:
  (i) the location of any offsets recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  (ii) a description of the offset activities undertaken;
  (iii) the size of the offset area (in hectares); and
  (iv) results of measurements undertaken against restoration success criteria.

6. 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 5 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) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
(c) Prior to 19 January 2015, the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 6(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;

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

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 50cm, 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;

weed/s means any plant -

(a) that is declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*; or

(b) published in the Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or

(c) not indigenous to the area concerned.

M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

28 March 2013

Plan 5029/1a

LEGEND

Clearing Instruments

- Areas Subject to Conditions
- Areas Approved to Clear

Road Centrelines

Bunbury 50cm Orthomosaic - Landgate 2008

Cadastre for labelling

N

0 150 m

Scale 1:5487

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

M Warnock Date 28/3/13

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

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

Department of **Environment and Conservation**

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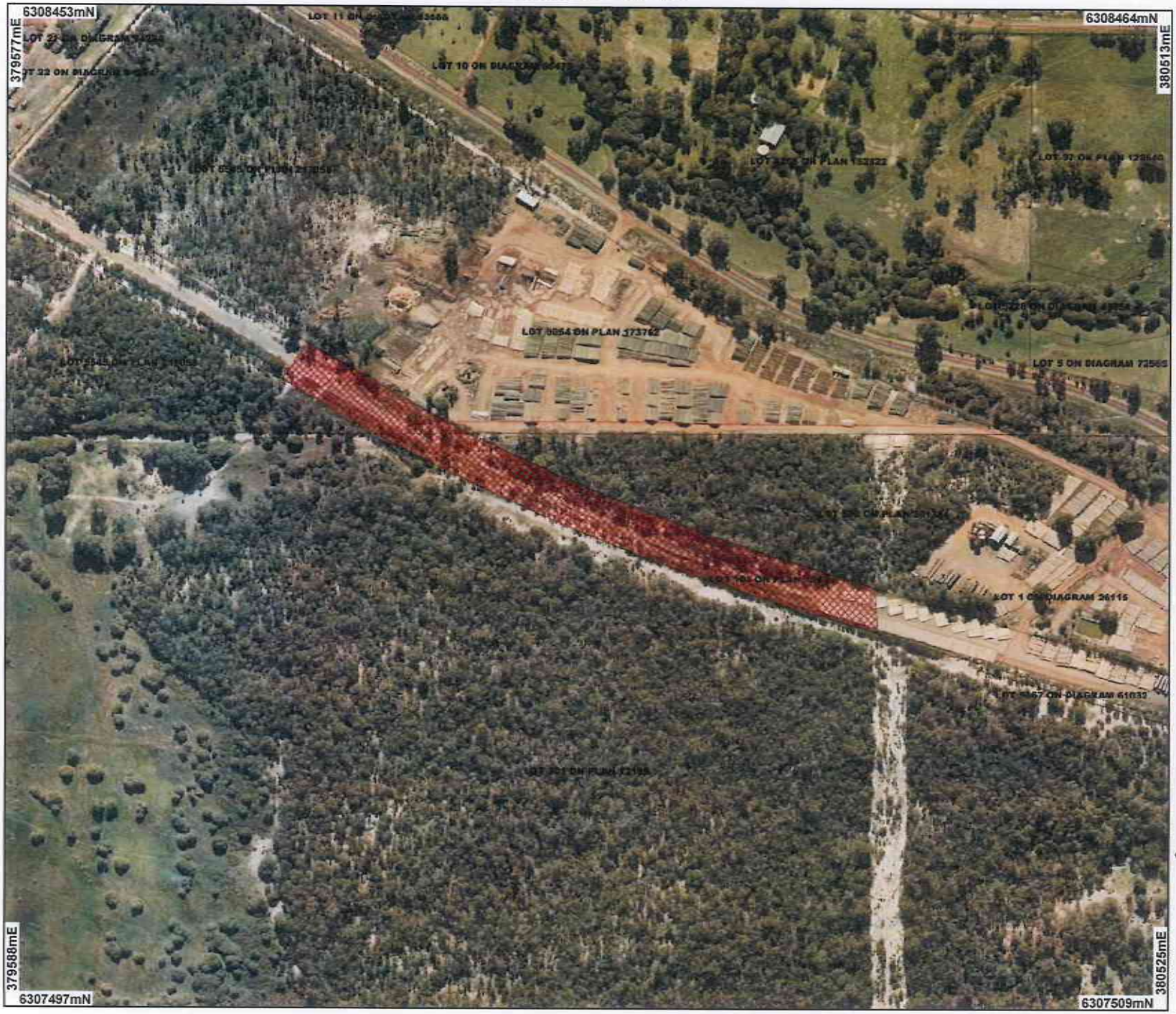
Plan 5029/1b



LEGEND

- Road Centrelines
- Bunbury 50cm Orthomosaic - Landgate 2008
- Clearing Instruments_1
- Areas Subject to Conditions
- Cadastre for labelling

N

0 ~125 m

Scale 1:4557

(Approximate when reproduced at: A4)

Geocentric Datum Australia 1994

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

28/3/13

M Warnock

Date

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

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

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Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5029/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Koppers Wood Products Pty Ltd**

1.3. Property details

Property: LOT 520 ON PLAN 301384 (PICTON EAST 6229)
Local Government Area: Shire of Dardanup

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 March 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
Mapped Beard vegetation association 968 is described as Medium woodland; jarrah, marri & wandoo Mapped Beard vegetation association 1000 is described as Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree (Melaleuca Spp.). Heddle vegetation complex Guildford Complex is described as A mixture of open forest to tall open forest of Corymbia calophylla (Marri) - Eucalyptus wandoo (Wandoo) - Eucalyptus marginata (Jarrah) and woodland of Eucalyptus wandoo (Wandoo) (with rare occurrences of Eucalyptus lane-poolei (Salmon White Gum)). Minor components include Eucalyptus rudis (Flooded Gum) - Melaleuca rhaphiophylla (Swamp Paperbark). (Shepherd et al 2001 and Heddle)	The proposed clearing of 1.35 hectares is for the purpose of lay down area for timber, access track and fire hazard reduction. The vegetation within the applied areas varies from Good to Excellent (Keighery, 1994) condition. The vegetation within the main application area (western area) is predominately in good to excellent (Keighery 1994) condition (DEC 2012, Ekologica 2012). The vegetation within the eastern area is considered to be in similar condition and contain similar species as the main application area. The vegetation under application is predominately Banksia attenuata woodland with an overstorey of Eucalyptus marginata and Corymbia calophylla distributed unevenly over the applied area (DEC 2012). Other tree species found within the applied area are Banksia grandis, Banksia illicifiolia, Xylomelum occidentale and a cluster of Agonis flexuosa trees were observed in the central northern portion of the main western application area with scattered A. flexuosa trees located within the applied area (DEC 2012). Understorey species included Kunzea glabrescens which was quite dominant in some areas as well as Persoonia longifolia, Macrozamia riedlei and groundcover species such as Xanthorrhoea gracilis, Conostylis sp. Synaphea sp., Adenanthos meisneri and native sedges (DEC 2012).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Condition of the vegetation under application was established through a site visit conducted by Department of Environment and Conservation (DEC) officers on the 30 May 2012 (DEC 2012) and through a flora and vegetation survey conducted in September and October 2012 (Ekologica 2012).

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 1.35 hectares (ha) of native vegetation for the purpose of lay down areas and fire hazard reduction.

The clearing proposed under the initial application was for 2.91ha. The assessment of this proposal concluded that the proposed clearing was at variance to principles (a), (b) and (e), may be at variance to principles (f), (h) and (i) and is not likely to be at variance to the remaining principles. The applicant was notified of these issues and was asked to modify the application. In response the applicant reduced the amount of clearing to 1.35ha (0.94ha west of a transmission line and 0.41ha east of the transmission line) and provided an offset proposal (Koppers, 2013).

The vegetation within the main application area (western area) is predominately in good to excellent (Keighery 1994) condition (DEC 2012, Ekologica 2012). The vegetation within the eastern area is considered to be in similar condition and contains similar species as the main application area. The vegetation under application is predominately Banksia attenuata woodland with an overstorey of Eucalyptus marginata and Corymbia calophylla distributed unevenly over the applied area (DEC 2012). There were a number of dead Banksia trees observed within the applied area that may indicate the presence of Phytophthora cinnamomi (dieback) (DEC 2012). Dieback hygiene management practices will be required to assist in preventing its spread to adjoining vegetation.

The applied area has been identified by the Environmental Protection Authority (EPA (2008) as having met four criteria for regional significance: diversity, rarity, maintenance of processes and wetland protection.

1. Diversity - The vegetation under application is part of a highly diverse area with respect to diversity of landforms, wetland and upland vegetation units, habitat and fauna.
2. Rarity - The applied area is part of a location for one priority and nine poorly reserved flora species, and a location for three threatened bird species (Baudin's, Carnaby's and Red-tailed Forest Black Cockatoo), one threatened mammal species (Western Ringtail Possum), and at least 11 bird species listed as conservation significant on the Swan Coastal Plain.
3. Maintenance of Ecological Processes or Natural Systems - The vegetation forms part of a regional ecological linkage McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup (north-south ecological linkage).
4. General Criteria for the Protection of Wetland, Streamline and Estuarine Fringing Vegetation and Coastal Vegetation - the area is less than one kilometre from an Environmental Protection Policy Lake, 140 metre from a major river and is surrounded by wetlands.

EPA Bulletin 1282 concluded that the area in which the proposed clearing lies within is a regionally significant natural area of high value which should be retained (EPA 2008). It recommends that the vegetation be retained as Regional Open Space (ROS) in future amendments to the Greater Bunbury Region Scheme (GBRS).

The application area is considered significant feeding and nesting habitat for the endangered Carnaby's cockatoos and also significant habitat for the threatened Western Ringtail Possum (DEC 2012).

A flora survey of the application area was undertaken in September and October of 2012 and identified 56 native species occurring within the application (Ekologica, 2012). No rare or priority flora species were identified during the flora survey.

Given the excellent (Keighery, 1994) condition of the vegetation it is considered that the application area represents highly cleared mapped vegetation communities (Beard vegetation association 1000 and Mattiske complex Guildford).

Given the above, the proposed clearing is at variance to this Principle.

Whilst potential environmental impact has been reduced as a result of the revised amount of clearing, to address the remaining environmental issues identified above the applicant has prepared an offset package. This involves rehabilitating an adjoining 1.72 hectare remnant and ceding for inclusion into conservation estate a 1.66 hectare remnant within Lot 520 that is in a very good to excellent (Keighery 1994) condition (Koppers, 2013).

Methodology

References
-EPA (2008)
-DEC (2012)
-Keighery (1994)
- Koppers (2013)
-Ekologica (2012)
GIS Databases
-Naturemap
- NLWRA, Current Extent of Native Vegetation
- Heddle Vegetation Complexes

- Pre European Vegetation

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is at variance to this Principle

The amended area under application (1.35 hectares) provides habitat for three threatened bird species (Baudin's, Carnaby's and Forest Red-tailed Black Cockatoo), one threatened mammal species (Western Ringtail Possum), and at least nine bird species listed as conservation significant on the Swan Coastal Plain (DEC, 2012 and Harewood, 2012).

The vegetation under application is predominately Banksia attenuata woodland with an overstorey of Eucalyptus marginata and Corymbia calophylla distributed unevenly over the applied area (DEC, 2012 and Harewood, 2012) in a very good to excellent (Keighery 1994) condition.

The application area occurs within a highly cleared local landscape with approximately 15 per cent of native vegetation remaining within a 10 km radius.

The Western Ringtail Possum (WRP) (listed as vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC) and rare under the Western Australian Wildlife Conservation Act 1950 (WC Act)) has been recorded within the local area. This species is known to nest and feed on Agonis flexuosa (peppermint tree). During a site visit potential habitat for WRP was identified along the northern boundary of the application area where a grove of Agonis flexuosa occurred. WRP scats were also observed within this area (DEC, 2012 and Harewood, 2012).

The fauna survey of the application area identified two habitat types including Marri and Jarrah woodland over Banksia low open forest over low shrubland and Flooded Gum woodland over shrubland. Three WRP dreys were identified within the application area and six hollows suitable for WRPs were observed. Two nocturnal counts identified five WRPs on the first night and seven on the second night and also two Common Brush-Tail Possums within the application area. All of the remnant vegetation under application has the potential to be used as habitat (refuge, foraging and dispersal) for WRPs (Harewood 2012).

The Forest Red-tailed Black Cockatoo (listed as vulnerable under EPBC Act and rare under WC Act), Carnaby's Cockatoo (listed as endangered under the EPBC Act and rare under WC Act) and Baudin's Cockatoo (listed as vulnerable under the EPBC Act and rare under WC Act) have been recorded within the local area (10 km radius). Important food for these species includes Banksia attenuata, B. menziesii, B. grandis, B. ilicifolia, B. sessilis, B. prionotes, Corymbia calophylla and Eucalyptus marginata (Valentine and Stock 2008, Johnstone and Kirkby 2008, CALM 2005). The application area consists of 1.35 hectares of Banksia and Marri woodland predominately in very good to excellent (Keighery 1994) condition which could provide feeding habitat for these species.

Black cockatoo species have also been known to nest in Marri tree hollows (Valentine and Stock 2008, Johnstone and Kirkby 2008, CALM 2005). During the site visit numerous large tree hollows were observed within the application area with some of them having the potential to provide nesting habitat for black cockatoo species (DEC, 2012 and Harewood, 2012).

A fauna survey identified six trees within the application area that fit Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) criteria as Forest Red-tailed Black Cockatoo, Carnaby's Cockatoo and Baudin's Cockatoo breeding habitat (diameter at breast height of greater than 50cm and with hollows). Foraging evidence of these cockatoos was also observed. No roosting trees were observed during the survey period (Harewood 2012).

The application area has been identified as a part of the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup north-south ecological linkage identified within the Greater Bunbury Regional Scheme (EPA 2003). This linkage is also recognised within the South West Regional Ecological Linkages technical report (Molley et al 2009) which has been endorsed by the Environmental Protection Authority (EPA, 2009).

Given that the application area provides habitat for threatened black cockatoo species and WRP's and is a part of an ecological linkage that is important for fauna dispersal, the proposed clearing is at variance to this Principle.

Whilst potential environmental impact has been reduced as a result of the revised amount of clearing, to address the remaining environmental issues identified above the applicant has prepared an offset package. This involves rehabilitating an adjoining 1.72 hectare remnant and ceding for inclusion into conservation estate a 1.66 hectare remnant within Lot 520 that is in a very good to excellent (Keighery 1994) condition (Koppers, 2013). Fauna management practices will also assist to mitigate environmental harm.

Methodology

References

-CALM (2005)
-EPA (2008)
-EPA (2003)
-DEC (2012)

-Valentine and Stock (2008)
-Johnstone and Kirkby (2009)
-Harewood (2012)
-Keighery (1994)
- Koppers (2013)
GIS Databases
-Naturemap
- NLWRA, Current Extent of Native Vegetation

(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

Five rare flora species have been recorded within the local area (10 km radius). The closest known record of rare flora is located within 1.5 kilometres of the proposed clearing area, on the same vegetation type, but different soil type as application area.

The vegetation under application is predominately Banksia attenuata woodland with an overstorey of Eucalyptus marginata and Corymbia calophylla distributed unevenly over the applied area (DEC 2012) predominately in a very good to excellent (Keighery 1994) condition. The mapped soil type of the proposed area is sandy acidic yellow mottled soils, some of which contain ironstone gravel (Northcote 1960-68).

One rare flora species occurs in deep sandy soils in banksia woodland in low-lying areas alongside winter wet swamps (Brown et al. 1998). Another species occurs within Banksia and Jarrah woodland on deep sandy soils (Brown et al. 1998). Another species is an emergent water plant and occurs in freshwater creeks and clayplans (Brown et al. 1998) and one rare species occurs near winter wet flats in low woodland (WA Herbarium 2008-).

The application area does not contain the preferred habitat for these species.

A flora survey was undertaken within the application area and did not identify rare flora (Ekologica, 2012).

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

Methodology

References
-DEC (2012)
-Brown et al (1998)
-EPA (2008)
-Keigehry (1994)
-WA Herbarium (2008)
-Ekologica (2012)
-DEC (2008)
GIS Databases
-SAC Bio datasets (10 May 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

The closest Threatened Ecological Community (TEC) to the application area is Floristic Community Type SCP09, dense shrublands on clay flats which is located 4.6 km west of the application area.

The application area consists of Banksia attenuata woodland with an overstorey of Eucalyptus marginata and Corymbia calophylla (DEC 2012) and therefore does not contain habitat suitable for this TEC.

The proposed clearing is not likely to be at variance to this Principle

Methodology

References
-DEC (2012)
GIS Databases
-SAC Bio datasets (10 May 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 application area consists of the Beard Vegetation Association 1000 and 968 and Heddle Vegetation complexes Guildford complex and Southern River complex which have approximately 28 per cent , 33 per cent, 5 per cent and 21 per cent of pre European vegetation remaining, respectively.

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). One of the mapped Beard and both of the mapped Heddle vegetation types within the application area retain less that 30 per cent vegetation within the Swan Coastal Plain bioregion (see table below).

The application area is part of two ecological linkages. The significance of these linkages has been recognised by the South West Regional Ecological Linkage project which is endorsed by the Environmental Protection Authority (Molloy et al., 2009). The application area also contains high biodiversity and provides habitat for Baudin's Cockatoo, Carnaby's Cockatoo, Forest Red-tailed Black Cockatoo and Western Ringtail Possum. Therefore, the area under application is a significant remnant.

As the application area contains vegetation that is representative of vegetation complexes that have been highly cleared, contains high biodiversity and occurs in a highly cleared area, the proposed clearing is at variance to this Principle.

Whilst potential environmental impacts have been reduced as a result of the revised amount of clearing, to address the remaining environmental issues identified above the applicant has prepared an offset package. This involves rehabilitating an adjoining 1.72 hectare remnant and ceding for inclusion into conservation estate a 1.66 hectare remnant within Lot 520 that is in a very good to excellent (Keighery 1994) condition (Koppers, 2013).

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209	587,889	39.1	33.3
Shire*				
Shire of Dardanup	52,832	25,745	48.7	80.5
Beard Vegetation Association in Bioregion*				
968	296,878	98,816	33.3	55.04
1000	99,836	28,426	28.5	16.34
Heddle Vegetation Complex **				
Guildford complex	92,497	4662	5.0	0.2
Southern River complex	57,170.63	12,058.97	21.1	1.52

* Government of Western Australia (2011)
** Shepherd et al (2001)

Methodology

References:
- Government of Wesetrn Australia (2011)
- Molley et al (2009)
- Commonwealth of Australia (2001)
- Shepherd et al (2001)
- Koppers (2013)

GIS database:
- Heddle Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia
- Pre European Vegetation
- NLWRA, Current Extent of Native Vegetation

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

Comments

Proposal may be at variance to this Principle

The clearing application area is located within the Leschenault Estuary and Preston River catchment.

The Ferguson River (a major river) is 141 metres north of the applied clearing and the Preston River lies 1.4 kilometres west. The vegetation under application is separated from the Ferguson River associated vegetation by cleared industrial land and a road. The clearing also falls outside the recommended buffer required for watercourses.

There is a multiple use palusplain wetland 4 metres north of the area under application that is likely to be associated with the Ferguson River. Additionally, the Environmental Protection Authority (EPA, 2008) has identified the area under application and the vegetation to the south of this area to be significant as it contains a conservation category wetland. As the vegetation under application is elevated in the landscape it is not likely to be directly associated with these wetlands, however, the vegetation is likely to buffer any further degradation to them.

Therefore, the clearing as proposed may be at variance to this principle.

Methodology

References:
- EPA (2008)

GIS database:
- Geomorphic Wetlands (Mgt Categories), 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 is not likely to be at variance to this Principle

The area under application is situated on soils described as sandy acidic yellow mottled soils, some of which contain ironstone gravel (Northcote et al. 1960-68).

Water erosion is considered to be a low risk given the relatively flat nature of the landscape.

The groundwater salinity associated with the area under application is 500 - 1000mg/L and is considered marginal. The limited extent of the proposed clearing is not considered likely to increase salinity in the local area causing appreciable land degradation.

The proposed clearing is not likely to be variance to this Principle.

Methodology

References:
- Northcoate et al (1960-68)

GIS database:
- Hydrogeology, statewide
- Hydrographic catchments, catchments
- Hydrography, linear
- Groundwater salinity
- Soils, Statewide
- Topographic contours 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 may be at variance to this Principle

Two nature reserves and one conservation park occur between five and seven kilometres north, and one State Forest occurs 9 kilometres southeast of the application area. There is minimal connectivity (vegetation linkage) between these conservation areas and the application area due to residential, industrial and agricultural landuses.

The Environmental Protection Authority (EPA, 2008) has identified the applied area as being part of a regionally important ecological linkage, namely the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup north-south ecological linkage.

Native vegetation within the Preston Industrial Park, of which the applied area is apart of, is considered to be important as it links four ecological linkages together. The EPA (2008) considers that naturally vegetated areas in the area of the linkages should be priorities for retention and protection and has recommended that the vegetation under application be retained as Regional Open Space in future amendments of the Greater Bunbury Region Scheme.

Clearing to 1.35 hectares as proposed, in a largely cleared landscape, is likely to cause some disruption to the north-south ecological linkage, and therefore may impact on the environmental values of the nearby conservation reserves which include System 6 conservation reserves to the north, south east, west and south west.

Phytophthora cinnamomi (dieback) management practises will be required as some dead Banksia trees were observed within the application area that may indicate the presence of dieback (DEC 2012).

The clearing as proposed may be at variance to this Principle.

Whilst potential environmental impact has been reduced as a result of the revised amount of clearing, to address the remaining environmental issues identified above the applicant has prepared an offset package. This involves rehabilitating an adjoining 1.72 hectare remnant and ceding for inclusion into conservation estate a 1.66 hectare remnant within Lot 520 that is in a very good to excellent (Keighery 1994) condition (Koppers, 2013).

Methodology

References:
- DEC (2012)
- EPA (2008)
- Koppers (2013)

GIS database:
- DEC Managed Lands
- Hydrography, linear
- System 1 to 5 and 7 to 12 areas

(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 may be at variance to this Principle

The application area is located within the Leschenault Estuary and Preston River catchment. The Ferguson River (a major river) is 141 metres north of the applied clearing and the Preston River lies 1.4 kilometres west. The recommended minimum buffer width for a major river is 100 metres. The area 100 metres either side of the river is sparsely vegetated and therefore is unlikely to be acting as an effective buffer.

The Preston River catchment is 43 per cent cleared, and the Ferguson River catchment is 70 per cent cleared (Department of Water, 2007). The Environmental Protection Authority (EPA, 2008) has identified the area under application as being important for the protection of the watercourses and wetlands in the area, and the vegetation is likely to buffer them from any further degradation.

The clearing of native vegetation as proposed may be at variance to this Principle.

Methodology

References:
- Deparment of Water (2007)
- EPA (2008)

GIS database:
- Groundwater Salinity Statewide
- Hydrographic catchments, catchments
- Hydrographic catchments, subcatchments
- Hydrography, linear
- Salinity Risk LM 25m
- Topographic Contours, Statewide

(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 situated on soils described as sandy acidic yellow mottled soils, some of which contain ironstone gravel (Northcote et al. 1960-68) which have low waterlogging risks. The applied area occurs in low lying areas and this contributes to the susceptibility of the area flooding. However, given the soil type and the likelihood of any surface runoff flowing into the nearby Ferguson river, the clearing is not likely to increase the incidence of flooding on the clearing site.

The clearing of native vegetation as proposed is not likely to be at variance to this Principle.

Methodology

References:
- Department of Water (2007)
- Northcote et al (1960-68)

GIS database:
- Hydrographic catchments, catchments
- Hydrographic catchments, subcatchments
- Hydrography, linear -
- Topographic Contours, Statewide

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

Comments

The proposed clearing of 1.35 hectares is for the purpose of creating a lay down area for timber, access track and fire hazard reduction. The applicant has advised that the application area is adjacent to the plant that processes wood power poles for use by Western Power. To meet the State's needs, the applicant is required to process additional pine poles imported from South Australia.

The applicant has advised that as the number of poles stored on the property (adjacent to application area) increases, the higher the fire hazard becomes especially as the poles are stored without appropriate space between stacks due to lack of space. The proposed clearing will alleviate the risk of fire and the potential for pole losses due to fire (Koppers, 2012).

A previous clearing application for the same purpose (2.79ha) on the property under application was received in June 2008 and refused in April 2009. The applicant appealed this decision and the Minister for Environment dismissed the appeal on 13 November 2009, advising;

- a more targeted flora and fauna survey of the area under application would provide a definitive understanding of the conservation significance of the land. A site- specific survey would enable the appellant to determine if and to what extent, the environmental constraints highlighted by the DEC are relevant to the proposal' (Minister for Environment 2009), and;

- I am also of the view that a modified clearing permit which addresses these principles (at variance) and includes the proponent's proposed offset may be sufficient to address the environmental concerns raised by this proposal, recognising also that the area of land is relatively small and that it is zoned for industrial use and is within an industrial area' (Minister for Environment, 2009).

The area under application is zoned industrial under the Shire of Dardanup Town Planning Scheme and the Greater Bunbury Regional Scheme.

The application has been referred to Department of Sustainability, Environment, Water, Population and Communities. The proposed action is a controlled action under the Environment Protection and Biodiversity Conservation Act 1999.

Whilst potential environmental impacts have been reduced as a result of the revised amount of clearing, to address the remaining environmental issues identified above the applicant has prepared an offset package. This involves rehabilitating an adjoining 1.72 hectare remnant and ceding for inclusion into conservation estate a 1.66 hectare remnant within Lot 520 that is in a very good to excellent (Keighery 1994) condition (Koppers, 2013).

Methodology

References
-Koppers (2012 and 2013)
-Minister for Environment (2009)
-DEC (2012)
-Ekologica (2012)
-Stategen (2012)
-EPA (2012)
GIS Databases
-Town Planning scheme Zones
-Greater Bunbury Regional 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)