



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5480/1

File Number: 2010/007608

Duration of Permit: From 12 April 2013 to 12 April 2023

PERMIT HOLDER

B & J Catalano Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 7 on Diagram 40591, Wellesley

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 2.86 hectares of native vegetation within the area shaded yellow on attached Plan 5480/1a.

CONDITIONS

1. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 12 April 2018.

2. Wind erosion management

The Permit Holder shall not clear native vegetation unless sand extraction begins within one month of the clearing being undertaken.

3. 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.

4. Revegetation and rehabilitation

The Permit Holder shall establish and maintain native vegetation within the area shaded green on attached Plan 5480/1b in accordance with the following conditions:

- (a) trees shall be established and maintained to an average planting density of 1100 live stems per hectare;
- (b) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area; and
- (c) *planting* is to commence within twelve months of clearing any area authorised under this Permit.

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 12 months following completion of extractive activities, *revegetate* and *rehabilitate* the area shaded red on attached Plan 5480/1c 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) ripping the pit floor and contour batters within the extraction site; and
 - (iv) 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 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 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 to 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 the *revegetation* and *rehabilitation* of areas pursuant to condition 4 and 5 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* report.

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 to 31 December of the preceding calendar 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 12 January 2023, 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;

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

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 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.

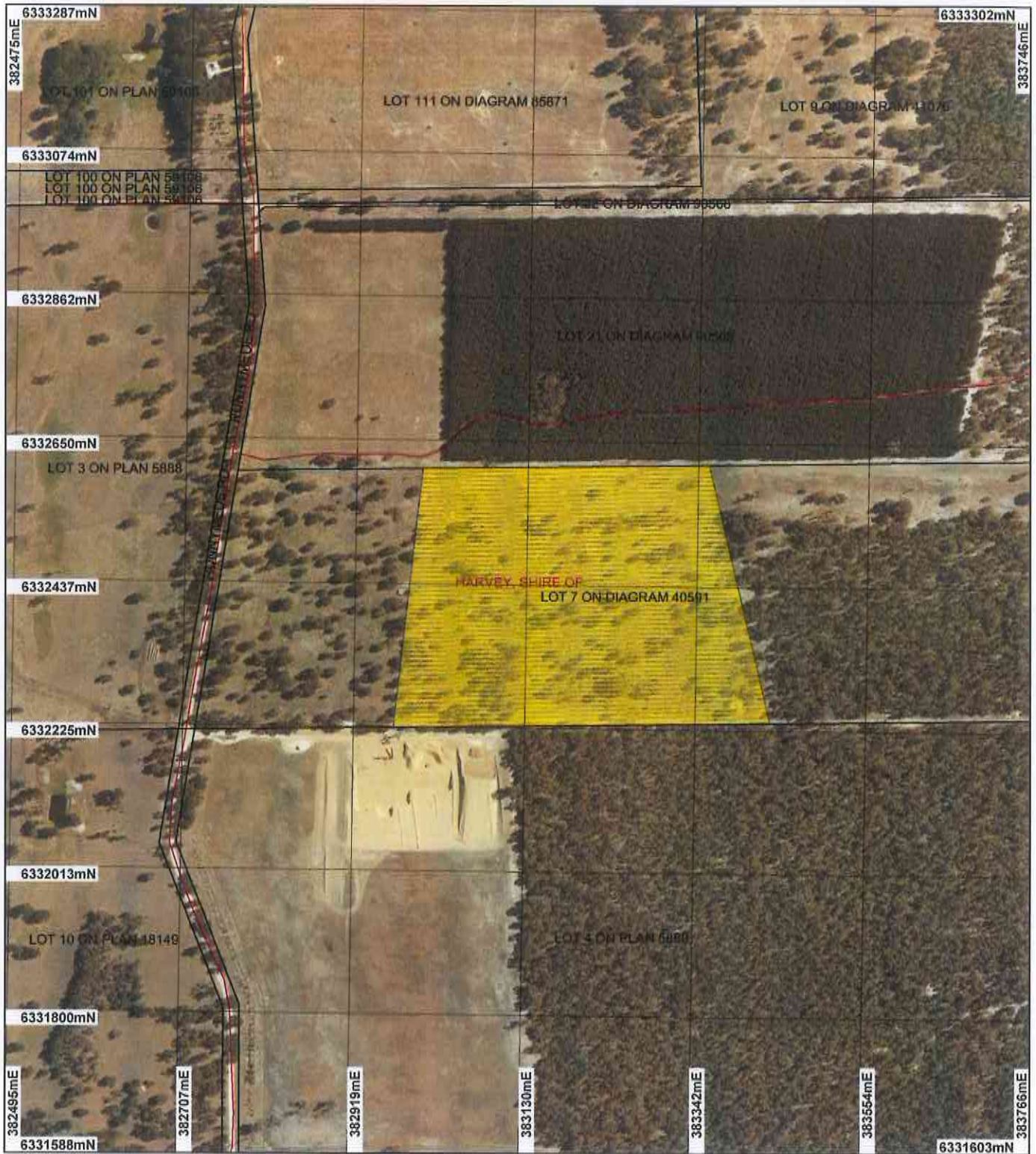


M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

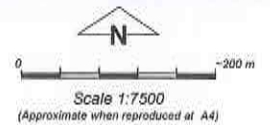
21 March 2013

Plan 5480/1a



LEGEND

- Road Centrelines
- Local Government Authorities
- Cadastre
- Clearing Instruments**
- Areas Approved to Clear
- Bunbury 50cm Orthomosaic - Landgate 2008



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 21/3/13
M Warnock

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



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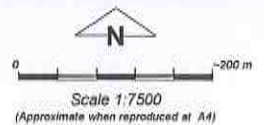
Plan 5480/1b



LEGEND

- Road Centrelines
- Local Government Authorities
- Cadastre

- Clearing Instruments
- Areas Subject to Conditions
- Bunbury 50cm Orthomosaic - Landgate 2008



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: 2/3/13
M Warnock

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

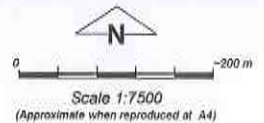
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Plan 5480/1c



LEGEND

- Road Centrelines
- Clearing Instruments
- Areas Subject to Conditions
- Local Government Authorities
- Bunbury 50cm Orthomosaic - Landgate 2008
- Cadastre



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 21/3/13
M Warnock

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



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1. Application details

1.1. Permit application details

Permit application No.: 5480/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: B & J Catalano Pty Ltd

1.3. Property details

Property: LOT 7 ON DIAGRAM 40591 (Lot No. 7 RUNNYMEDE WELLESLEY 6233)
Local Government Area: Shire of Harvey
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 21 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
Beard Vegetation Association: 6 - Medium woodland; Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) (Shepherd et al. 2001).	The application is to clear 2.86 hectares of native vegetation on Lot 7 on Diagram 40591, Wellesley for the purpose of sand extraction.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994).	Vegetation description and condition were determined through aerial imagery and supporting documentation provided by applicant (Ecoedge Environmental Pty Ltd 2010).
Hedde Vegetation Complex: Karrakatta Complex Central and South - predominantly open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) and Corymbia calophylla (Marri) and woodland of Eucalyptus marginata (Jarrah)-Banksia species (Hedde et al. 1980).	The majority of the vegetation under application is parkland cleared with scattered Agonis flexuosa, Corymbia calophylla and Eucalyptus marginata in completely degraded (Keighery 1994) condition (Ecoedge Environmental Pty Ltd 2010).	To	
	A small area, approximately 0.05 hectares, is in very good (Keighery 1994) condition (Ecoedge Environmental Pty Ltd 2010).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994).	

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The application is to clear 2.86 hectares of native vegetation on Lot 7 on Diagram 40591, Wellesley for the purpose of sand extraction.

The majority of the vegetation under application is parkland cleared with scattered Agonis flexuosa, Corymbia calophylla and Eucalyptus marginata in completely degraded (Keighery 1994) condition (Ecoedge Environmental Pty Ltd 2010). A small area, approximately 0.05 hectares, is in very good (Keighery 1994) condition (Ecoedge Environmental Pty Ltd 2010).

There are numerous priority flora mapped within the local area (10 kilometre radius). A vegetation assessment undertaken over the application area did not identify any priority flora species (Ecoedge Environmental Pty Ltd 2010). The majority of the vegetation under application is in completely degraded (Keighery 1994) condition, with little to no native understorey. The application area has been heavily impacted through historic land use activities (Ecoedge Environmental Pty Ltd 2010). Therefore, the application area is unlikely to support priority flora.

There are several priority ecological communities mapped within the local area (10 kilometre radius). The vegetation under application is consistent with the priority three community Southern Eucalyptus gomphocephala - Agonis flexuosa woodlands. However, given the vegetation under application is in completely degraded (Keighery 1994) condition, it is unlikely to be a significant representation of this community.

The application area is adjacent to vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) and the Brunswick River (East - West) Ecological Linkage (EPA 2003). These same linkages are identified in the South West Regional Ecological Linkages (SWREL) (Molly et al. 2009). Under the SWREL Project the adjacent vegetation has a proximity value of 1a to both linkages, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molly et al. 2009). Given the condition of the vegetation, the application area is unlikely to be contributing significantly to the values of the linkage.

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

Methodology

References:

Ecoedge Environmental Pty Ltd 2010
EPA 2003
Keighery 1994
Molly et al. 2009
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2008
- SAC Biodatasets
- SWREL axis lines

(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

There are numerous fauna species of conservation significance mapped within the local area (10 kilometre radius). These include the Carnaby's Cockatoo (*Calyptorhynchus latirostris*; rare or likely to become extinct, Wildlife Conservation Act 1950; endangered, Environment Protection and Biodiversity Conservation Act 1999), Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *Naso*; rare or likely to become extinct, Wildlife Conservation Act 1950; vulnerable, Environment Protection and Biodiversity Conservation Act 1999), Baudin's Cockatoo (*Calyptorhynchus baudinii*; rare or likely to become extinct, Wildlife Conservation Act 1950; vulnerable, Environment Protection and Biodiversity Conservation Act 1999) and Western Ringtail Possum (rare or likely to become extinct, Wildlife Conservation Act 1950; vulnerable, Environment Protection and Biodiversity Conservation Act 1999) (DEC 2007-).

During a Department of Environment and Conservation (DEC) site inspection, chewed *Corymbia calophylla* nuts were identified (DEC 2010). Forest Red-tailed Black cockatoos were seen foraging at the boundary between the application area and adjacent remnant vegetation to the east (Ecoedge Environmental Pty Ltd 2011). Black cockatoos forage on the seeds, nuts and flowers of a large variety of plants including proteaceous and eucalyptus species as well as *Corymbia calophylla* (Commonwealth of Australia 2012). The vegetation under application may provide significant foraging habitat for the three black cockatoo species.

The three black cockatoo species nest in the hollows of large eucalyptus trees that have minimum diameter, measured at 1.5 metres from the base of the tree, of 500 millimetres (Commonwealth of Australia 2012). Within Lot 7 on Diagram 40591, Wellesley, 390 potential nesting trees were recorded (Ecoedge Environmental Pty Ltd 2011). The area under application occurs over approximately 20 percent of the property and is adjacent to a large area of native vegetation in better condition. Given this, the majority of the potential nesting trees are likely to occur outside of the application area. During a DEC site inspection, no nesting habitat for the three black cockatoo species was identified within the application area (DEC 2010).

The Western Ringtail Possum generally inhabits coastal or near coastal forest that includes peppermint trees (*Agonis flexuosa*) as a major component (Commonwealth of Australia 2009). Although *Agonis flexuosa* occur within the application area, they are scattered and isolated. Therefore, the application area is unlikely to provide significant habitat for ringtail possums as this species prefers sites with greater canopy connectivity for movement across the landscape.

The vegetation under application may provide habitat for the Southern Brush-tailed Phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*) as this species has a preference for dry sclerophyll forests and open woodlands containing hollow bearing trees with sparse groundcover (DEC 2006). Given the adjacent vegetation in better condition than the proposed clearing, the application area is unlikely to provide significant habitat for this species.

The application area is adjacent to vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) and the Brunswick River (East - West) Ecological Linkage (EPA 2003). These same linkages are identified in the South West Regional Ecological Linkages (SWREL) (Molly et al. 2009). Under the SWREL Project the adjacent vegetation has a proximity value of 1a to both linkages, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molly et al. 2009). Given the condition of the vegetation, the application area is unlikely to be contributing significantly to the values of the linkage.

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

To offset the possible impacts of the proposed clearing, the applicant will revegetate 2.28 hectares on the western boundary of the property under application within 12 months of commencing the extractive activity. The applicant will revegetate 2.61 hectares of vegetation within the application area within 12 months of completion of extractive industries.

Methodology **References:**
Commonwealth of Australia 2009
Commonwealth of Australia 2012
DEC 2006
DEC 2007-
DEC 2010
Ecoedge Environmental Pty Ltd 2011
EPA 2003
Molly et al. 2009

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

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

There are several rare flora species mapped within the local area (10 kilometre radius).

A vegetation assessment undertaken over the application area did not identify any rare flora species (Ecoedge Environmental Pty Ltd 2010). However, the assessment was undertaken in May, which is not an appropriate time to survey for the rare flora species mapped within the local area.

The majority of the vegetation under application is in completely degraded (Keighery 1994) condition, with little to no native understorey. The application area has been heavily impacted through historic land use activities (Ecoedge Environmental Pty Ltd 2010). Therefore, the application area is unlikely to support rare flora.

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

Methodology **References:**
Ecoedge Environmental Pty Ltd 2010
Keighery 1994
GIS Databases:
- SAC Biodatasets

(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 two threatened ecological communities mapped within the local area (10 kilometre radius). These communities are 'Shrublands and woodlands on Muchea limestone' (Endangered) and 'Dense shrubland on clay flats' (Vulnerable), which are located approximately 4 kilometres and 6 kilometres from the application area, respectively.

The vegetation under application does not represent either of these communities. Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology **GIS Databases:**
- SAC Biodatasets

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

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

Aerial photography indicates the local area (10 kilometre radius) is approximately 30 percent vegetated.

The IBRA Bioregion (Swan Coastal Plain) and the local government agency (Shire of Harvey) retain approximately 39 percent and 52 percent of their respective pre-European extents (Government of Western Australia 2011).

The application area is mapped as Beard Vegetation Association 6, which retains approximately 14 019 hectares (25 percent) of its pre-European extent within the Swan Coastal Plain IBRA Bioregion.

The area is mapped as Heddle Vegetation Complex Karrakatta Complex Central and South, which retains approximately 14 729 hectares (30 percent) of its pre-European extent within the Swan Coastal Plain IBRA Bioregion. Approximately three percent of Karrakatta Complex Central and South is held in secure land tenure

(Government of Western Australia 2011).

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

Given the completely degraded condition of the vegetation, the proposed clearing is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1 501 209	587 833	39	35
Shire*				
Shire of Harvey	170 788	89 075	52	75
Beard Vegetation Association in Bioregion*				
6	56 343	14 019	25	36
Hedde Vegetation Complex **				
Karrakatta Complex - Central and South	49 912	14 729	30	3

* Government of Western Australia 2011
** Hedde et al. 1980

Methodology References:
Commonwealth of Australia 2001
Government of Western Australia 2011
Hedde et al. 1980
GIS Databases:
- Hedde Vegetation Complexes
- NLWRA, Current extent of Native Vegetation
- Bunbury 50cm Orthomosaic - Landgate 2008
- Pre-European Vegetation
- SAC Biodatasets

(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 numerous watercourses and wetlands within the local area (10 kilometre radius). The closest of these is an Environment Protection Policy lake, which is located approximately 600 metres from the application area.

A vegetation assessment undertaken over the application area did not identify any vegetation growing in association with a watercourse (Ecoedge Environmental Pty Ltd 2010).

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

Methodology References:
Ecoedge Environmental Pty Ltd 2010
GIS Databases:
- EPP Lakes
- Geomorphic Wetlands, Swan Coastal Plain
- Hydrography, Linear

(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 soil within the application area is mapped as Cb39, which Northcote et al. (1960 - 1968) describes as subdued dune-swale terrain: chief soils are leached sands.

The main land degradation risk associated with this sandy soil type is wind erosion. Without vegetation cover, the proposed clearing may result in land degradation and may be at variance to this principle.

Wind erosion management practises would manage and mitigate the impacts of the proposed clearing.

Methodology References:
Northcote et al. 1960-1968
GIS Databases:
- Soils Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposal may be at variance to this Principle

There are numerous DEC managed lands within the local area (10 kilometre radius) including Byrd and Bengier Swamp Nature Reserve, Myalup State Forest, Yalgorup National Park, Leschenault Peninsula Conservation Park and many areas of CALM Executive Body Freehold land.

There are numerous wetlands within the local area (10 kilometre radius), and an EPP lake is located approximately 600 metres from the application area.

The application area is adjacent to vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) and the Brunswick River (East - West) Ecological Linkage (EPA 2003). These same linkages are identified in the South West Regional Ecological Linkages (SWREL) (Molly et al. 2009). Under the SWREL Project the adjacent vegetation has a proximity value of 1a to both linkages, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molly et al. 2009). Given the condition of the vegetation, the application area is unlikely to be contributing significantly to the values of the linkage.

The disturbance caused by the proposed clearing may increase the risk of weeds and dieback spreading into the adjacent vegetation associated with the ecological linkage. Weed and dieback management practices will assist in reducing the potential impacts

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

Methodology References:
EPA 2003
Molly et al. 2009
GIS Databases:
- ANCA Wetlands
- DEC Tenure
- EPP Lakes
- RAMSAR Wetlands
- SWREL axis line

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

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

There are no watercourses or wetlands within the application area and therefore the proposed clearing is unlikely to cause deterioration in the quality of surface water.

The groundwater salinity within the application area is 500-1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal.

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

Methodology GIS Databases:
- CAWSA Areas
- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater Salinity, Statewide
- Hydrography, Linear
- PDWSA

(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 soil within the application area is mapped as Cb39, which Northcote et al. (1960 - 1968) describes as subdued dune-swale terrain: chief soils are leached sands on the low dunes.

Given the porous nature of the sandy soils of the application area, the proposed clearing is unlikely to cause or exacerbate flooding. Therefore it is not likely to be at variance to this principle.

Methodology References:
Northcote et al. 1960 - 1968
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2008
- Soils, Statewide

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

Comments

The application is to clear 2.86 hectares of vegetation in completely degraded to good (Keighery 1994) condition for sand extraction. A clearing permit previously granted over the application area for this purpose (CPS 3989/1) expired on 11 December 2011 without any clearing have been conducted (B & J Catalano Pty Ltd 2010).

Lot 7 on Diagram 40591 is zoned as 'General Farming' under the Town Planning Scheme.

The property falls within the 'Rural' zoning of the Greater Bunbury Region Scheme and is within the Kemerton Industrial Zone Buffer (Special Control Area) (Western Australian Planning Commission 2000). Any concerns regarding this are required to be addressed by Local Government in regards to the extractive industry licence and planning consent. In relation to past proposals, the Shire of Harvey has advised that "Extractive Industry can still be considered within this buffer area" (Shire of Harvey 2007).

In association with the assessment of the Greater Bunbury Region Scheme, the EPA provided advice with regards to the significance of vegetation within the Kemerton Industrial Area. EPA resolved that this area was not deemed to be considered significant remnant vegetation requiring conservation and was mapped as being an area that could be considered for development (EPA 2003).

The Shire of Harvey has provided planning consent for the extraction associated with the proposed clearing (Shire of Harvey 2011).

The application area is located within the South West Coastal Groundwater Area covered by the Rights in Water and Irrigation Act 1914. The applicant has advised that groundwater extraction is not required.

The proposed clearing was referred to the Department of Sustainability, Environment, Water, Population and Communities under the Environmental Protection and Biodiversity Conservation Act 1999 in relation to potentially significant black cockatoo habitat. The proposed clearing was approved by the Department of Sustainability, Environment, Water, Population and Communities subject to the following conditions (DSEWPC 2011):

- Within 12 months of commencing the action, the person taking the action must revegetate 2.28 hectares with suitable Black Cockatoo habitat species
- The person taking the action must ensure that no less than 7.03 hectares of native vegetation is retained in perpetuity, and protected and managed in accordance with the Runnymede Road Sand Mine: Black Cockatoo Management Plan.
- Within 12 months of completion of mining operations, the person taking the action must revegetate a further 2.61 hectares with suitable Black Cockatoo habitat species
- Monitoring of seedling survival must be undertaken biannually in the revegetated/rehabilitated areas, until such time as planting is completed.

Methodology References:
B & J Catalano Pty Ltd 2010
DSEWPC 2011
EPA 2003
Keighery 1994
Shire of Harvey 2007
Shire of Harvey 2011
Western Australian Planning Commission 2000
GIS Databases:
- RIWI Act groundwater areas
- Town Planning Schemes

4. References

- B & J Catalano Pty Ltd (2013) Clearing Permit Application - Lot 7 on Diagram 40591, Wellesley (DEC REF: A597576).
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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)