



1. Application details

1.1. Permit application details

Permit application No.: 1325/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: NBR INVESTMENTS PTY LTD

1.3. Property details

Property: LOT 15 ON DIAGRAM 64665 (Lot No. 15 SOUTH WESTERN DAVENPORT 6230)

Local Government Area: City Of Bunbury

Colloquial name:

1.4. Application

Clearing Area (ha)
20

No. Trees

Method of Clearing
Mechanical Removal

For the purpose of:
Industrial

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
The vegetation is a component of the Beard Vegetation Association 1000 which comprises of 'medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree (Melaleuca spp.)' (Shepherd et al 2001)	The area under application is approximately 80% vegetated and consists of a woodland of Jarrah, Marri, Peppermint and Banksia attenuata (Slender Banksia) with an understorey mainly of pasture grasses on the sandy soils of the ridges and an open woodland of Melaleuca preissiana (Moonah) over pasture grasses and occasional rushes (Juncus pallidus in the central depression. (DEC site visit May 2007)	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Observed during site visit (DEC Site Visit 2007)

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 may be at variance to this Principle

The area proposed for clearing (20ha) comprises of 80% vegetation in a degraded condition (Keighery 1994), consisting of a woodland of Jarrah (Eucalyptus marginata), Marri (Coymbia calophylla), Peppermint (Agonis flexuosa) and Banksia (Banksia attenuata) with an understorey of pasture grasses, and an open woodland of Moonah (Melaleuca preissiana) over pasture grasses with occasional grasses in the central depression (DEC site visit). The purpose of clearing is for industrial subdivision.

Within a 10 kilometre radius of the area under application there is approximately 15% native vegetation cover, much of this fragmented due to land clearing and development. The area has a low richness in relation to floristic biodiversity (DEC site visit 2007), however contains two distinct habitats (terrestrial and wetland) and is likely to provide habitat for a diversity of fauna owing to extensive clearing in the landscape. Thus in a local context the vegetation within the area under application is likely to comprise a high level of biological diversity, and therefore this proposal may be at variance to this principle.

Methodology

Keighery 1994
DEC site visit (21/05/2007) trim ref DOC25271
GIS Database:
- SAC Bio datasets 120607
- CALM Managed Lands and Waters - CALM 1/06/04

(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 proposed clearing involves the removal of approximately 20ha of vegetation, including a woodland comprising Jarrah, Marri, Peppermint and Banksia over predominantly introduced grasses, and an open woodland of Moonah over predominantly introduced grasses (DEC site visit). Two distinct habitats are present, being terrestrial and wetland.

Within a 10 kilometre radius of the area under application, there are approximately 30 records of threatened and priority fauna, two-thirds of these being for threatened species. Of those species recorded, the most likely to occur within the area under application are discussed here. The Western Ringtail Possum (*Pseudocheirus occidentalis*, vulnerable) has been recorded from seven locations within 10 kilometres of the area under application, the closest of these being from now-cleared private property approximately 2.3 kilometres north. Given the presence of Peppermint and Marri trees within the area under application, this species may also frequent this vegetation. There are two records of the Baudins Black-Cockatoo (*Calyptorhynchus baudinii*, endangered) and one record of the Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*, vulnerable) in close proximity to the area under application. Baudins Black-Cockatoo has been recorded approximately 600 metres west of the area under application within a Crown Reserve, and the Forest Red-tailed Black-Cockatoo has been recorded approximately 4.6 kilometres west. Both species are known to utilise Jarrah and Marri trees for foraging and breeding, and it is likely, particularly given the close proximity of the recorded occurrences, that these species utilise the habitat present within the area under application. The Southern Brown Bandicoot or Quenda (*Isodon obesulus fusciventer*, priority 5) has been recorded approximately 600 metres west of the area under application within a Crown Reserve. This species occurs within wetland habitats with dense understorey, and given its close proximity this species may utilise the wetland habitat present within the area under application. There may other threatened or priority species previously not recorded within the area that utilise the habitats within the area under application.

It is expected that many locally significant and non-threatened fauna utilise the area under application as habitat. The presence of both terrestrial and wetland habitats within the area to be cleared indicates a range of potential avian visitors. The Common Brushtail Possum (*Trichosurus vulpecula*) occurs within 2.6 kilometres of the area under application (Jones, 2003), and it is likely that it would also utilise large trees present within the site to be cleared. Given the presence of grasses in the understorey, it is possible that local Western Grey Kangaroo families would utilise the site for grazing and shelter.

The Environmental Protection Authority (EPA) states in the Greater Bunbury Region Scheme that the remnant vegetation present in this area is a significant fauna habitat. Given the above, the proposed clearing is at variance to this principle.

Methodology Environmental Protection Authority, Greater Bunbury Region Scheme - Bulletin 1108
Jones 2003
GIS Database:
- SAC Bio datasets 120607

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

Comments Proposal may be at variance to this Principle

There are 6 populations of Declared Rare Flora (DRF) and 41 populations of priority flora within the local area (10km radius). Of these 2 DRF and 16 priority populations occur within the same Heddle complex (Southern River). Furthermore of the populations within the same vegetation complex only 3 Priority populations occur in a different soil type. In addition, 9 Priority populations that occur within the same vegetation complex will only occur in wetland areas.

Based on the soil description and the preferred habitat of the DRF and Priority Flora there is the possibility that the area under application may contain DRF or Priority populations (Biodiversity Coordination Section 2007)

Methodology Biodiversity Coordination Section, DEC (Mar 2007) trim ref DOC18525
GIS Database:
- SAC Bio datasets 120607
- Heddle Vegetation Complexes - DEP 21/06/95

(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 may be at variance to this Principle

There are 19 known occurrences of 6 Threatened Ecological Communities (TEC), the closes being community type 7, 2.3km to the west of the area under application.

DEC's Species and Communities Branch (2007) have indicated that there is the possibility that the communities (1b, 3a and 3c) listed in Gibson et al (1994) could be located within the application. It was also suggested that

the claypan communities (SCP08 and SCP09) could be found in the application given the vegetation descriptions and orthophotos but are less likely to be present as the application is located on the upper slope in the landscape. In addition, the SCP21a community is located approximately 3km away and occurs on the same soil type as the application and therefore may be located within the area under application. (Biodiversity Coordination Section 2007)

Methodology Biodiversity Coordination Section, DEC (Mar 2007) trim ref DOC18525
GIS Database:
- SAC Bio datasets 120607

(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 proposed clearing is located in the City of Bunbury and within the Swan Coastal Plain Bioregion. The extent remaining within these areas is 3% and 38% respectively. The conservation status is Endangered and Depleted respectively

The vegetation is a component of the Beard Vegetation Association 1000 of which 23.9% of Pre-European vegetation is remaining. In addition it is a component of Heddle Complex Southern River of which 19.8% is remaining. Both of these representations are considered to have a conservation status of 'Vulnerable' (Department of Natural Resources and Environment 2002).

Within a 10km radius of the proposed clearing there is approximately 15% vegetation remaining and within the property, of the proposed clearing, there is 25% of vegetation cover, this will be reduced to 5% if the clearing is approved.

Furthermore the Environmental Protection Authority (EPA) states in the Greater Bunbury Region Scheme that the remnant vegetation is regionally significant.

Given the vegetation remaining in surrounding areas (10km radius and Shire of Bunbury) are low and the conservation status of the vegetation is below the target level of 30% as per the National Objectives and Targets for Biodiversity Conservation 2001-2005 (Commonwealth of Australia 2001a) it is considered that the area proposed to be cleared is a significant remnant of native vegetation within an extensively cleared area and is therefore at variance to this principle.

Methodology Environmental Protection Authority, Greater Bunbury Region Scheme - Bulletin 1108
Commonwealth of Australia (2001a)
Department of Natural Resources and Environment (2002)
GIS Database:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Heddle Vegetation Complexes - DEP 21/06/95

(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 at variance to this Principle

There is one Conservation Category Wetland and one Multiple-use Wetland within the area under application. Approximately 260m west of the proposed area is another Conservation Category Wetland and 750m north-east is an EPP Lake. There are also over 20 other mapped occurrences of Conservation Category, Multiple-use Wetland and EPP Lakes within a 10km radius of the proposed clearing.

The area is also in association with major perennial watercourse (Preston River, 375m to the east).

Given the proximity to wetlands and watercourses the proposed clearing is considered to be at variance with this principle.

Methodology GIS Database:
- Hydrography, linear - DOE 01/02/04
- EPP, Areas - DEP 06/95
- EPP, Lakes - DEP 28/07/03
- EPP, Wetlands - DEP 21/07/04
- Anca Wetlands - CALM 08/01
- Geomorphic Wetlands - Swan Coastal Plain

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

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

There is a mapped medium to low risk of Acid Sulfate Soil (ASS), a mapped medium level of salinity risk and a groundwater salinity of 500-1000 mg/L. Topography shows a low relief with surficial sediments with shallow aquifers.

Additionally DAFWA report (Dec 2006) advised that the proposed clearing of 20ha of land is unlikely to cause appreciable land degradation and is unlikely to be at variance with principle (g).

Therefore the proposed clearing is considered unlikely to be at variance with this principle.

Methodology DAFWA report (Dec 2006) trim ref DOC15277

GIS Database:

- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
- Groundwater Salinity, Statewide - DOW
- Hydrogeology, Statewide - DOW
- Soils, Statewide - DA 11/99
- Topography Contours, Statewide - DOLA 12/09/02

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

Comments Proposal is at variance to this Principle

There are five System 6 Conservation Reserves within the local area (10km radius), with the closest being 5.5km West of the proposed area. There is one Conservation Park (Leschenault Peninsular) 9km North and one unnamed Nature Reserve 8.5km North-East.

The vegetation under application is recognised to be within the Maidens - Preston River ecological linkage by the EPA (2003) given the size of the proposed clearing the proposed clearing is considered to be at variance to this principle.

Methodology EPA (2003)

GIS Database:

- CALM Managed Lands and Waters - CALM 1/06/04
- System 6 Conservation Reserves - DEP 06/95

(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 proposed area lies within the Preston River Catchment area. Topography shows the area under application has a low relief. The area also has low groundwater salinity (500-1000mg/L) and an evaporation rate of 1200-1400 mm combined with a rainfall rate of 750-800mm. Soil geology mapping shows the area has surficial sediments with shallow aquifers.

Preston River is 375m east of the proposed clearing and topography shows the slope runs towards the river, as there is no vegetation between the proposed area and Preston River, it is possible that surface water run off carrying soils will enter Preston River.

Given the size of the area to be cleared, the low relief, shallow aquifers and distance to the Preston River (375m East) the proposed clearing may have an impact on groundwater and surface water quality.

Methodology GIS Database:

- Public Drinking Water Source Areas (PDWSAs) - DOW
- Hydrographic Catchments - Subcatchments - DOW
- RIWI Act, Surface Water Areas - DOW
- RIWI Act, Rivers - DOW
- RIWI Act, Irrigation Districts - DOW
- RIWI Act, Groundwater Areas - DOW
- RIWI Act, Areas
- Hydrography, linear - DOE 01/02/04

(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 in the area under application consists of surficial sediments with shallow aquifers, a rainfall of 750-800

and an evaporation rate of 1200-1400. Due to the low rainfall, high evaporation and sedimentary soils it is considered unlikely that the proposed clearing will increase incidence of flooding.

In addition 'The risk of waterlogging causing land degradation is low' (DAFWA Report, Dec 2006)

Therefore it is considered unlikely to be at variance with this principle.

Methodology DAFWA Report (Dec 2006) trim ref DOC15277
GIS Database:
- Topography Contours, Statewide - DOLA 12/09/02
- Evaporation Isopleths - BOM 09/98
- Mean Annual Rainfall Isohyets (1975-2003) - DOW
- Hydrogeology, Statewide - DOW

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

Comments

The area under application was assessed under the Environmental Protection Agency's (EPA) Greater Bunbury Regional Scheme, Bulletin 1108. The EPA assessed the area as a Deferred Factor and states that the remnant vegetation on Lot 15 is a significant fauna habitat and effort should be made to conserve a consolidated area of remnant vegetation and appropriately manage the remnant vegetation as part of any future zoning, subdivision and/or development of the site and the environmental factors remnant vegetation and fauna should be deferred until the land is subdivided or development, whichever comes first, so that a more detailed consideration of the potential environmental impacts of the subdivision can be undertaken by the EPA pursuant to Part IV of the Environmental Protection Act 1986.

The area under application lies within a General Industry (2) zoned area.

There is one Native Title claim (Gnaala Karla Booja) over the area under application, as the property is privately owned the granting of the clearing permit is a secondary approval and does not constitute a future act under the Native Title Act 1993.

The proposed area is within the RIWI Groundwater area of Bunbury, however a RIWI license is not required.

Methodology GIS Database:
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Industrial	Mechanical Removal	20	The application has been assess against the assessable criteria and found to be at variance to principles (b), (e), (f) and (h), may be at variance to principles (a), (c), (d) and (i), and is not likely to be at variance to principles (g) and (j).

5. References

- DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref DOC15277.
- DEC (2006) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR), received 27 Mar 2007. Biodiversity Coordination Section, Department of Environment and Conservation, Western Australia. TRIM Ref DOC18525
- DEC site visit (21/05/2007) trim ref DOC25271
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- EPA (2003). Greater Bunbury Regional Scheme - Bulletin 1108. Perth
- Jones, B. 2003. Unpublished report on fauna survey in Lot 5, Picton.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)