



1. Application details

1.1. Permit application details

Permit application No.: 2381/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Cedar Woods Wellard Ltd (C/O Cardno BSD)

1.3. Property details

Property: LOT 200 ON PLAN 52621 (WELLARD 6170)
Local Government Area: Town Of Kwinana
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	12.8819	Mechanical Removal	Building or Structure

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 Association 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina (Shepherd, 2006)	The proposal is to clear 12.8819ha for the purpose of conducting bulk earthworks for a residential subdivision. Although the proposal is to clear 12.8819ha the vegetation under application is predominantly in completely degraded condition. The vegetation under application is sparse comprising scattered trees or shrubs over grassy weeds or grassy weeds only.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	During a site inspection on 7 April 2008 the vegetation was noted to be in completely degraded condition. The vegetation structure comprises scattered trees over grassy weeds. The vegetation in the southern portion was in degraded condition and comprises Kunzea sp over weedy grasses
Bassendean complex central and south Bassendean Complex central and south: Vegetation ranges from woodland of E. marginata - C. fraseriana - Banksia spp. to low woodland of Melaleuca species, and sedgeland on the moister sites. This area includes the transition of E. marginata to E. todtiana in the vicinity of Perth (Hedde et al 1980).			
As above	The vegetation comprises non-native Eucalyptus sp. over grassy weeds in south-western portion. The vegetation comprises Xylomelum occidentale over grassy weeds in the eastern portion of the area under application. The vegetation comprises Kunzea sp. and Pinus	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	As above

pinaster over grassy weeds in the central portion of the area under application.

As above

The vegetation comprises Kunzea thicket over grassy weeds in the southern portion and is considered to be in degraded condition.

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)

As above

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**

During a site inspection on 7 April 2008 the vegetation under application was considered to be predominantly in completely degraded condition throughout the area under application and comprises scattered non-native Eucalyptus sp, or Xylomelum occidentale, or Kunzea sp over grassy weeds throughout most of the area under application.

Given that the vegetation is predominantly in completely degraded condition with a low species diversity the vegetation under application is not considered likely to comprise a high level of biodiversity.

Methodology DEC site inspection 07/04/2008

(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 not likely to be at variance to this Principle**

Within the local area (~5km radius) there are 34 known occurrences of significant fauna including one endangered (EN) species including:

- Carnaby's Black Cockatoo Calyptrorhynchus latirostris (EN) 5.2km NE
- Western Brush Wallaby Macropus irma (P4) 3.2km E
- Quenda Isoodon obesulus fusciventer (P5) 1km NE

During a site inspection on 7 April 2008 the vegetation under application was considered to be predominantly in completely degraded condition and comprises scattered non-native Eucalyptus sp, or Xylomelum occidentale, and Kunzea sp over grassy weeds throughout most of the area under application.

Although there were mature Eucalyptus trees in the vegetation under application none appeared to contain any hollows suitable for nesting by Carnabys Black Cockatoo. The understorey was completely degraded comprising grassy weeds and therefore not considered likely to provide significant habitat for any ground dwelling mammals such as the Quenda (DEC 2007).

The area under application is not considered likely to provide a significant ecological link or corridor for native fauna as it is not connected to any conservation reserves or areas of remnant bushland within the local area. The removal of the vegetation under application is not considered likely to impact on the movement of fauna between remaining areas of native vegetation.

The Western Brush Wallaby favours open seasonally wet flats with low grasses and open scrubby thickets (DEC 2007). The vegetation in the southern portion of the area under application is in degraded condition and comprises Kunzea sp. over grassy weeds. Given the limited connectivity to other areas of remnant vegetation and given that the Kunzea thicket is surrounded by urban development it is not considered likely that the vegetation under application would provide suitable habitat for the Western Brush Wallaby.

Given the completely degraded condition of vegetation under application, and considering there is not likely to be a suitable ecological corridor in the proposed area, the vegetation under application is not considered likely to provide significant habitat for native fauna.

Methodology DEC site inspection
DEC (2007)
GIS database:
SAC biosets accessed 4/04/2008

(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) there are 18 recorded occurrences of Declared Rare Flora (DRF) and 50 recorded occurrences of Priority Flora. DRF in the local area include:

Diuris micrantha (DRF) 2.2km N
Caladenia huegelii (DRF) 3km N
Drakaea elastica (DRF) 4.8km N
Verticordia plumosa var pleiobotrya (DRF) 9.6km E
Diuris purdiei (DRF) 8km NE

The vegetation in the southern portion of the area under application is in degraded condition and comprises Kunzea sp. over grassy weeds. The habitat requirements for Drakaea elastica include Kunzea thickets (WA Herbarium, 2007). The Species and Communities branch has advised that given the degraded condition of the Kunzea thicket and thick grassy weeds in the understorey, that it is not considered likely Drakaea elastica would persist in the vegetation under application (DEC, 2008).

The vegetation under application occurs on different soil types and vegetation associations than other DRF and Priority Species that occur within the local area, therefore the area under application is not considered likely to be representative of the habitat requirements of these species (WA Herbarium, 1998).

Given that the vegetation under application does not meet the habitat requirements for DRF and Priority Flora in the local area it is not considered likely that the vegetation under application includes, or is necessary for the continued existence of rare flora.

Methodology DEC, 2008
DEC site inspection 07/04/2008
WA Herbarium, 1998
GIS Databases:
SAC biodatasets accessed 04/04/2008
Soils statewide DA 11/99
Heddle
Mattiske
Pre European Vegetation DA 01/01

(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 30 known occurrences of Threatened Ecological Communities (TECs) within the local area (~10km radius) including:

SCP3c Eucalyptus calophylla - Xanthorrhoea preissii woodlands and shrublands, Swan Coastal Plain 5km SE
SCP08 Herb rich shrublands in clay pans 9km SE
SCP09 Dense shrublands on clay flats 5km SE
SCP19a Sedgeland in Holocene dune swales of the southern Swan Coastal Plain 8.2km SW
SCP19b Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994). 5.6km SE
SCP 26a Limestone ridges 6.7km NW

Given that the vegetation under application is in predominantly completely degraded condition and given the distance to the nearest TEC or PEC, the vegetation under application is not considered likely to comprise or be necessary for the maintenance of a Threatened Ecological Community

Methodology DEC site inspection 04/04/2008
GIS Databases: SAC biodatasets accessed 04/04/2008
Soils statewide DA 11/99
Heddle
Pre European Vegetation DA 01/01

(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

The area under application is part of the Swan Coastal Plain IBRA Region which has a current pre-European representation of 38.1% (Shepherd 2006). The vegetation under application is identified by Heddle (Heddle et al

1980) to be Bassendean complex central and south of which there is 27% of pre-European vegetation remaining, The vegetation under application is also part of Beard Vegetation Association 4 which has a current representation of 27.8% (Shepherd 2006).

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Commonwealth of Australia, 2001).

Although the vegetation complexes identified on site have less than the recommended 30% threshold remaining the applied area is considered to be within a constrained area. The EPA (2003) recognises the Perth Metropolitan Region as a constrained area, providing for the variation of the minimum percentage of vegetation complexes remaining to 10% of the pre-European extent.

In addition the majority of the vegetation is in completely degraded condition and it is not considered likely to be significant as a remnant of native vegetation.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion				
Swan Coastal Plain***	1501456.550	571758.664	38.1	24.3
Local Area (~10km radius)	~ 314,000	~ 105,055.75	~ 33.4	NA
Beard vegetation type***				
1001	57254	15944	27.8	1.5
Hedde Complex				
Bassendean complex central and south	87477	23624	27.0	0.7

* (Shepherd, 2006)
 *** (Shepherd et al, 2002)

Methodology Commonwealth of Australia (2001)
 EPA 2003
 EPA (2006)
 Hedde et al (1980)
 Shepherd (2006)
 DEC site inspection 07/04/2008
 GIS Database:
 SAC biodatasets accessed 04/04/2008
 Pre-European Vegetation DA 01/01

(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

Spectacle Swamp is a Conservation Category Wetland (CCW) located approximately 3.5km north of the area under application. There are two damplands classified as Multiple Use Wetlands (MUW) between 75 and 100m south-east of the area under application.

In addition Bollard Bulrush Swamp is classified as a Resource Enhancement Wetland (REW, also identified as an EPP Lake), located 52m west of the area under application. The minimum recommended buffer distance for REW is 50m and this is designed to protect wetlands from potential deleterious impacts while helping safeguard and maintain ecological processes and functions within the wetland and, whenever possible, in the buffer (WRC, 2001).

There are no mapped wetlands or watercourses within the area under application, however during a site inspection, Kunzea thicket was found to be growing within the vegetation under application. Kunzea thicket is most often associated with low lying seasonally wet depressions (WA herbarium 1998).

Given there are no mapped wetlands on site, but the vegetation under application includes wetland dependant vegetation it is therefore considered that the vegetation under application may be growing in association with a wetland.

Methodology WA Herbarium (1998)
 GIS databases
 ANCA, wetlands
 Geomorphic wetlands (mgt categories), Swan Coastal Plain
 Hydrography linear (heirarchy)

(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 majority of the area under application is mapped as having the soil type described as extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands (State of Western Australia 2005).

During a site inspection the soil type in the area under application was noted to be grey sands. Salinity is mapped as a high risk in the western portion of the area under application. Although the area under application is 12.8819ha the vegetation is sparse therefore the proposed clearing is not considered likely to contribute to an increase in salinity.

As the vegetation under application is part of the Bassendean dune system it is considered that there is a very high risk of wind erosion however the cover of grassy weeds in the understorey of the vegetation under application should reduce the impact of the proposed clearing on wind erosion (State of Western Australia 2005).

The vegetation under application occurs on the Bassendean Dune System which contains sandy soils with high infiltration rates and therefore the proposed clearing is not considered likely to significantly increase water erosion leading to appreciable land degradation.

The area under application has a moderate to low acid sulphate soil risk, however it is not considered likely that the proposed clearing would significantly disturb these soils so that management would be required.

Given that the vegetation under application is mostly in completely degraded condition and its removal is not considered likely to significantly increase salinity, acid sulphate soils or wind erosion the proposed clearing is not considered likely to cause appreciable land degradation.

Methodology State of Western Australia, 2005
DEC site inspection
GIS Database
Soils Statewide DA 11/99

(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

Within the local area (~10km radius) there are five DEC managed conservation areas, 24 Bush Forever sites and nine Systems 6 conservation reserves. The closest conservation reserve is Leda Nature Reserve classified as a System 6 reserve and part of Bushforever sites 345 and 349 located approximately 1.5km west of the vegetation under application.

The vegetation under application is mostly in completely degraded condition, surrounded by urban development and does not provide a significant ecological link to any nearby conservation areas. Therefore it is not considered likely that the proposed clearing will have a direct or indirect impact on the environmental values of any nearby conservation areas

Methodology DEC site inspection 07/04/2008
GIS databases
Bushforever Sites
CALM Manages Land
System 6 Conservation Reserves

(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 mapped watercourses or wetlands within the area under application. There is no mapped Public Drinking Water Source Area within the area under application. The Peel main drain is located approximately 400m west of the area under application.

The vegetation under application occurs on the Bassendean Dune System which contains sandy soils with high infiltration rates and therefore a low risk of water erosion leading to sedimentation resulting in decreased surface water quality.

In addition, although the area under application is 12.8819ha the vegetation is sparse and considered to be in completely degraded condition therefore the proposed clearing is not considered likely to cause deterioration in the quality of underground water.

Given that the vegetation under application is predominantly in completely degraded condition and sparse, the proposed clearing is not considered likely to cause deterioration in the quality of surface or underground water

Methodology State of Western Australia 2005
GIS databases
Salinity risk mapping
Acid sulphate
Hedde
PDWSA
Hydrography linear (hierarchy)

(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

There are no mapped watercourses or wetlands within the area under application. The Peel main drain is located approximately 400m west of the area under application

The vegetation under application occurs on the Bassendean dune system which contains sandy soils with high infiltration rates. During a site inspection the vegetation under application was considered to be predominantly in completely degraded condition. The vegetation structure comprises mostly a scattered overstorey of trees with grassy weeds in the understorey,

Given the area under application comprises sparse vegetation on soil with high infiltration rates the proposed clearing is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

Methodology DEC site inspection 07/04/2008
GIS databases
Hydrography linear

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

Comments

The lot under application is part of a Native Title Claim however, since it is privately owned Native Title is extinguished under the Native Title Act. Therefore the clearing as proposed is not considered to fall under the future acts process of the Native Title Act 1993.

DEC received the structure plan and Bulk earthworks approval from the Town of Kwinana on 19 June 2008.

The bulk earthworks approval includes a condition trees to be retained in public open spaces and road reserves.

The vegetation under application has been amended to exclude native vegetation in the public open spaces and road reserves as part of the tree retention plan. .

A subdivision application has been lodged with the WAPC, but has not yet been approved. The proponent has applied for a clearing permit prior to the statutory planning process in an attempt to enable clearing prior to the Moratorium period and without subdivision approval.

Methodology GIS Databases
Native Title - DLI

4. Assessor's comments

Comment

5. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
DEC (2008) Advice for clearing permit application, Advice to Assessing Officer, Native Vegetation Branch received 8 April 2008. Species and Communities Branch, Department of Environment and Conservation, Western Australia. DEC TRIM ref. DOC49972
DEC. (2008). NatureBase - Fauna Species Profile: Western Brush Wallaby/Carnaby's Black Cockatoo/Quenda. <http://www.naturebase.net/content/view/840/1288/> (Accessed 04/04/2008).
EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement

- No 10. Environmental Protection Authority, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- 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.
- State of Western Australia (2005) Agmaps Land Manager CD Rom.
- Water and Rivers Commission (2001). Position Statement: Wetlands, Water and Rivers Commission, Perth.
- Western Australian Herbarium (1998). FloraBase The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed xx/xx/xxxx).

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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)