



1. Application details

1.1. Permit application details

Permit application No.: 2039/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Carossah Pty Ltd & Kestrel Holdings

1.3. Property details

Property: LOT 6 ON DIAGRAM 34501 (House No. 104 BINNINGUP BINNINGUP 6233)
 LOT 6 ON DIAGRAM 34501 (House No. 104 BINNINGUP BINNINGUP 6233)
 Local Government Area: Shire Of Harvey
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.65		Mechanical Removal	Dam construction or maintenance

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 37: Shrublands: tea-tree thicket (Shepherd et al. 2001; Hopkins et al. 2001).	The proposal is for the clearing of 0.65 ha for dam construction. The vegetation comprises regrowth Peppermint (<i>Agonis flexuosa</i>), tea-tree (<i>Melaleuca</i> spp.) and Wattle (<i>Acacia saligna</i>), varying in condition between completely degraded and degraded (Keighery, 1994) with no understorey.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Description of the clearing application area is based on a site inspection conducted by DEC officers on 2 November 2007.
Heddle Vegetation: - Vasse Complex: mixture of closed shrub <i>Melaleuca</i> spp., fringing woodland of <i>E. rudis</i> - <i>Melaleuca</i> spp, and an open forest of tuart-marri-jarrah (Hedde et al. 1980).	The applied area is an old limestone quarry that has since regenerated (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 is not likely to be at variance to this Principle

The proposal is for the clearing of 0.65 ha for the purpose of dam construction.

The vegetation within the applied area is predominantly regrowth shrub *Melaleuca* spp., Peppermint (*Agonis flexuosa*), Wattle (*Acacia saligna*) and Snottygobble (*Persoonia* spp.), within an old limestone quarry site (DEC Site Visit, 2007). The vegetation ranges in condition between completely degraded and degraded (Keighery, 1994) with no native understorey, and is currently grazed by stock (DEC Site Visit, 2007).

The vegetation is consistent with Beard association 37 (Shepherd et al. 2001), of which there is 57.8% (Shepherd et al. 2006) of the pre-1750 extent remaining.

The applied area is situated within a strip of land historically cleared for intensive horticulture (market garden) between the vegetated coast and the Old Coast Rd on the Swan Coastal Plain. The local area (10 km radius) is approximately 70% vegetated with approximately half of that vegetation in DEC-managed lands.

Given the scale (0.65 ha) and degraded condition of the applied area, and the percentage of surrounding

vegetation managed for conservation purposes, it is unlikely to comprise high biological diversity within the local context.

Methodology Keighery (1994);
DEC Site Visit (2007) (TRIM Ref: DOC39828);
Shepherd et al. (2006);
Shepherd et al. (2001);

GIS Databases:
- CALM Managed Lands and Waters - CALM 1/07/05;
- Heddle Vegetation Complexes - DEP 21/6/95;
- Pre-European Vegetation - DA 01/01;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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**

The proposal is for the clearing of 0.65 ha for the purpose of dam construction.

The vegetation has little or no understorey and is considered to vary in condition between completely degraded and degraded (Keighery, 1994). Within the local area (10 km radius from the proposed area for clearing) there are several records of threatened and priority fauna; however given the nature of the clearing and the surrounding vegetated area, the area under application is not considered to be significant habitat for fauna indigenous to Western Australia.

Methodology GIS Databases:
- CALM Managed Lands and Waters - CALM 1/07/05;
- Threatened Fauna SAC Bio Dataset - 05/06/07;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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**

A desktop study found several known populations of the declared rare *Drakaea micrantha* (EN) scattered within a 10 km radius, with the closest known population approximately 5 km east of the proposed clearing. One population of *Drakaea elastica* (CR) has also been recorded approximately 5.5 km south east of the applied area.

Several Priority listed species are also known to occur in the local area; including, but not limited to *Boronia juncea* subsp. *juncea* (P1), *Boronia capitata* subsp. *capitata* (P2) and *Schoenus* sp. *Waroona* (P3). All known species have been recorded on similar soil, but different vegetation types, as the applied area; however given the scale (0.65 ha) and condition (completely degraded to degraded) of the applied area, it is considered unlikely to be providing significant habitat values for threatened or priority flora in the local context.

Methodology GIS Databases:
- Threatened Flora Database (DEFL) - DEC 17/04/07;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 2 occurrences of 2 Threatened Ecological Communities (TEC's) within the local area (10 km radius). The closest of the records, community type *Muchea* Limestone (Shrublands and woodlands on *muchea* limestone) is approximately 8.3 km east of the applied area.

Given the scale (0.26 ha) and condition (completely degraded to degraded) of the applied area, it is unlikely to be supporting, or be necessary for the maintenance or continued existence, of any known TEC.

Methodology GIS Databases:
- TEC SAC Bio Datasets 05/06/07;
- TEC Database - DEC
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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			Conservation	% In status**** managed land
	Pre-European	Current extent reserves/CALM (ha)	Remaining (ha) (%)		
IBRA Bioregion Swan Coastal Plain	1,498,297	626,512	38.1**	Depleted	N/A
Shire of Harvey	168,294	101,085	60.1*	Least Concern	N/A
Vegetation type: Beard Unit: 37	39,385	22,748	57.8**	Least Concern	19.6
Heddle: Vasse Complex	11,190	3,287	29.4***	Vulnerable	11.0

* (Shepherd et al. 2001)

** (Shepherd 2006)

*** (EPA, 2006)

**** (Department of Natural Resources and Environment 2002)

The area under application is located in the Swan Coastal Plain Bioregion. The extent of pre-European vegetation within this area is 41.8% (Shepherd et al., 2001). The applied area is associated with Beard Vegetation Association 37; despite this association retaining 57.8% of pre-European extent (Shepherd et al. 2006), much of this association has been heavily cleared on the Swan Coastal Plain, with 30.3% of the pre-European extent remaining (Shepherd et al. 2006).

Given the scale (0.65 ha) of the applied area, and the percentage of surrounding vegetation managed for conservation purposes, it is not considered to be significant as a remnant that has been extensively cleared.

Methodology Department of Natural Resources and Environment (2002);
Shepherd et al. (2001);
Shepherd (2006);
Heddle et al. (1980);

GIS databases:

- Heddle Vegetation Complexes - DEP 21/06/95;
- 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 is not likely to be at variance to this Principle**
Previous extraction activities on the property have resulted in the applied area being dug out below the watertable, which has resulted in a small soak.

Despite the proposal being for construction of a dam, the applied area is not associated with any wetland or watercourse.

Methodology GIS Databases:
- Hydrography, Linear - DOE 1/2/04;
- ANCA Wetlands - CALM 06/95;
- EPP Area - DEP 06/95;
- EPP Lakes - DEP 1/12/92;
- RAMSAR, Wetlands - CALM 14/02/03

(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 proposed to be cleared has a low salinity risk (GIS Database) and a groundwater salinity of 500-1000mg/L (GIS Database); however is mapped as containing a high risk of Acid Sulphate Soils occurring within 3 metres of the natural soil surface.

Despite this, the applied area has already been excavated below ground level, with no apparent signs of ASS occurring.

Given the above and the scale (0.65 ha) of the proposed clearing, appreciable land degradation is unlikely to occur.

Methodology GIS Databases:
- Soils, Statewide - DA 11/99
- Salinity Mapping LM 25m - DOLA 00;
- Salinity Risk LM 25m - DOLA 01;
- Acid Sulphate Soil risk map, Swan Coastal Plain, DEC

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

Comments **Proposal is not likely to be at variance to this Principle**
There are several DEC-managed lands within a 10 km radius of the proposed clearing, including Yalgorup National Park 4 km north; Myalup State Forest 4.7 km north east; and an un-named Ex-dir land 2.7 km south east. The area is also part of the Yalgorup/Myalup/Leschenault Coastal Ecological Linkage, as identified by the EPA (2003).

However, given the scale (0.65 ha) and completely degraded to degraded nature of the applied area, it is unlikely to impact on the values of any nearby lands managed for conservation purposes.

Methodology Keighery (1994);
EPA (2003);

GIS databases:
- CALM Managed Lands and Waters - CALM 1/07/05;
- Register of National Estate EA 28/01/03

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

Comments **Proposal is not likely to be at variance to this Principle**
The application is located within the Leschenault Estuary/Lower Collie catchment of the Collie River Basin. The area proposed to be cleared has a low salinity risk (GIS Database) and a groundwater salinity of 500-1000mg/L (GIS Database).

Due to the scale (0.65 ha) and the high percentage of vegetation remaining within the local area, the proposed clearing is not likely to cause deterioration of water quality.

Methodology GIS databases:
- CAWSA Part2A clearing control catchment - DoE 17/11/05
- Evaporation Isopleth - BOM 09/98
- Hydrogeology, statewide - WRC 05/02/02
- Hydrographic Catchments, Catchments - DoE 3/4/03
- PDWSA, Gazetted - WRC 01/11/02
- Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
- Rainfall, Mean Annual - BOM 30/09/01
- RIWI Groundwater Areas - WRC 13/06/00;
- RIWI Surface Water Areas - WRC 18/10/02

(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**
Given the scale (0.65 ha) and the high percentage of vegetation within the local area, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology GIS databases:
- Hydrography, linear - DOE 01/02/04;
- Topographic Contours, Statewide - DOLA 12/09/02;
- Rainfall, Mean annual - BOM 30/09/01

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

Comments The property is zoned General Farming under the local Town Planning Scheme. The Shire of Harvey has been

provided the opportunity to comment on the proposal and no comment has been received to date.

The proposed clearing is within the South West Coastal groundwater area gazetted for water management under the Rights in Water and Irrigation Act 1914 (RIWI) by the Department of Water (DoW). The applicant advises that applications to Construct or Alter Well (CAW) and for a Groundwater licence (GWL) are currently being assessed by the DoW.

No other approvals are required from the Department of Environment and Conservation.

No public submissions have been received by the Department.

- Methodology** GIS Databases:
- Town Planning Scheme Zones - MFP 08/98
 - RIWI Groundwater Areas - WRC 13/06/00;
 - RIWI Surface Water Areas - WRC 18/10/02

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Dam construction oRemoval maintenance	Mechanical	0.65	The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is not likely to be at variance to all ten clearing principles.

5. References

DEC Site Visit (2007). Site Inspection Report, Department of Environment and Conservation (DEC). Bunbury, Western Australia. TRIM Ref: DOC39828.

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 Region Scheme: Report and recommendations of the Environmental Protection Authority, Bulletin 1108, Perth, Western Australia.

EPA (2006). Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, 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.

Shepherd, D.P. (2006). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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)

