



1. Application details

1.1. Permit application details

Permit application No.: 610/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Water Corporation

1.3. Property details

Property: LOT 1530 ON PLAN 215849 (Lot No. 1530 LAKE ROCKINGHAM 6168)
Local Government Area: City Of Rockingham
Colloquial name: 1530 Lake St, Crown Reserve 42518

1.4. Application

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

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: 3048: Shrublands; scrub-heath on Swan Coastal Plain. (Shepherd et al; 2001)	The proposal includes clearing of 0.5 hectares of vegetation, consisting of both revegetated and regrowth species, which has established since the original installation of the SDOOL pipeline.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Observed during site visit 28/4/05: The area under application consists of a thin strip of vegetation on the southern side of the unnamed vehicle access road to the north east of Lake Richmond Reserve. The vegetation under application appears to be in relatively good condition, but suffering obvious impacts through edge effects and weed infestation.
Heddle vegetation complex: Quindalup Complex: Coastal dune complex consisting mainly of two alliances - the sand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>M. lanceolata</i> - <i>Callitris preissii</i> and the closed scrub of <i>Acacia rostellifera</i> . (Heddle et al. 1980).	A flora survey conducted in February 2005 (ENV Australia, 2005) identified the vegetation as a woodland of <i>Eucalyptus gomphcephala</i> over <i>Acacia saligna</i> , <i>Acacia rostellifera</i> , <i>Acacia cyclops</i> , <i>Callitris preissii</i> , <i>Melaleuca huegelii</i> , <i>Olearia axillaris</i> and <i>Rhagodia baccata</i> subsp. <i>Dioica</i> with numerous introduced species.		

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**

A flora survey conducted in February 2005 has identified the vegetation under application as being within 'good' condition, as the structure of the vegetation has been significantly altered by multiple disturbance, but retains basic structure/ability to regenerate (ENV Australia, 2005; Keighery, 1994).

Vegetation within the area under application has been previously cleared for the installation of the SDOOL Pipeline, and Past disturbances to the site, regrowth / revegetation, fauna habitat, it is considered unlikely that the area under application is representative of higher biological diversity than nearby existing stands a vegetation.

Methodology ENV Australia (2005)
Keighery (1994)

(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 narrow linear strip of vegetation that is proposed to be cleared is unlikely to provide significant habitat for the Specially Protected fauna that have been recorded from the local area. Photographs that accompanied the application show that approximately 30% of the area that has been applied to be cleared is devoid of native vegetation and appears to be covered by slashed grasses. An accompanying flora survey of the site (DOE TRIIM ref: IN21388) identifies a total of 27 flora taxa including 11 introduced weeds. On this basis, although the area applied to be cleared is calculated at 0.5ha, only 0.3ha appears to be covered by native vegetation, and most of this appears to be unsuitable habitat for the identified fauna taxa, due to weed invasion and its close proximity to urban development.

CALM advises that the timing of the proposed clearing should be scheduled outside of the known breeding times for avian fauna (water birds) and Oblong turtles *Chelodina* (September -October) that are likely to utilise the adjacent wetland.

Methodology CALM (2005)

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

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

CALM (2005) advises that the clearing of a small linear strip of vegetation to allow access for maintenance work of a degraded section of pipeline is unlikely to impact on any declared Rare or Priority Flora populations. The impact of the clearing could be sufficiently offset through the implementation of a vegetation rehabilitation and weed control program along the affected areas of the pipeline corridor.

Methodology CALM (2005)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

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

A Flora Survey conducted in February 2005 (ENV Australia, 2005) did not identify any known Threatened Ecological Communities (TEC) present within the vegetation under application.

CALM (2005) advises that Lake Richmond contains a documented occurrence of the Endangered Threatened Ecological Community (EPBA Act) Thrombolite (microbial) community of coastal freshwater lakes of the Swan Coastal Plain. There is a possibility of this TEC being directly impacted as a consequence of an accidental pipeline rupture and associated effluent spillage. Therefore it is recommended that measures be put in place to prevent such accidental spillage during the proposed works, and that in the event of such an occurrence, every effort should be made to ensure that runoff does not reach Lake Richmond or its associated Threatened Ecological Communities.

Methodology ENV Australia (2005)
CALM (2005)

(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 vegetation proposed to be cleared is defined as Beard vegetation association 3048 (Hopkins et al. 2001) and Hedde vegetation complex 'Quindalup Complex' (Hedde et al. 1980), of which association 3048 has a representation below 30%.

The State Government is committed to the National Objective Targets for Biodiversity Conservation, which includes targets that prevent clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported.

While association 3048 is under the recommended 30% representation figure, it is not considered that the approval of this application would significantly impact on the representation of the vegetation complex, as the proposed clearing is limited in size and extent.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	% in reserves/CALM-managed land
IBRA Bioregion	1,529,235	657,450	43%	Depleted	
City of Rockingham	24,326	8,534	35.1%	Depleted	
Beard vegetation association - 3084	14,575	4,184	28.7%	Vulnerable	19.2%
Hedde vegetation complex - Quindalup Complex	38,238	18,000	47.1%	Depleted	5.2%

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Methodology Hedde (1980)
Hopkins et al. (2001)
Department of Natural Resource and Environment (2002)
EPA (2000)
Shepherd et al (2001)

(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

The area under application does not contain vegetation associated with a watercourse or wetland. However the proposal is within relatively close proximity to an EPP Lake and Conservation Category Wetland, at lengths varying from approximately 20 to 200 metres, to the south west of the proposed clearing.

The Water and Rivers Commission (2001) provides recommended buffer widths in regards to proximity of landuse and development to significant wetlands. Proposed vegetation removal for repair works to the SDOOL pipeline, while within the recommended buffer distance, is considered unlikely to impact on environmental values of the Lake Richmond system.

Methodology Water and Rivers Commission (2001)
Site inspection (28/4/2005)

(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 Department of Agriculture (2005) advise that the application to clear approximately 0.5 hectares of vegetation, is limited in size and extent, and is not likely to cause appreciable onsite or offsite land degradation.

Methodology DAWA (2005)

(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

CALM (2005) advise that there is a possibility that the conservation values of the Rockingham Lakes Regional Park and in particular Lake Richmond and the associated TEC could be significantly impacted in the event that the existing pipeline ruptured causing effluent to be spilled into Lake Richmond. It is therefore important that the identified maintenance work be carried out to reduce the risk of such an event occurring. Provided appropriate management strategies and contingencies are put in place to minimize the risk of effluent spillage during the works, CALM advises that this proposal is not likely to be at variance to this Principle

Methodology CALM (2005)

(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 clearing of 0.5ha of vegetation from the area under application is not expected to have an adverse impact on the groundwater within the area.

Methodology Site inspection (28/4/2005)
Hydrologist Advice (DOE TRIM ref: 2005/887)

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

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

The clearing of 0.5ha of vegetation from the area under application is not expected to cause or exacerbate the incidence of flooding, due to the limited area of vegetation under application, and the free draining sandy soils which comprise much of the pipeline route.

Methodology Site inspection (28/4/2005)

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

Comments

There is a Native Title claim over the applied area. Legal advice from the Department of Environment indicates that a clearing permit may be issued without giving a notice under the Native Title Act 1993 as the works fall within section 23JA and 23JB(3) of that Act. That is, it is not the construction or establishment of a public work, but the maintenance of such a work (DoE TRIM ref: 2005/865)

Lake Richmond and its associated Threatened Ecological Communities are recognised under the Environment Protection and Biodiversity Conservation Act 1999, as having significant environmental and biological value. The clearing of the vegetation under application is considered essential to avoid environmental harm caused by the possible rupture of the SDOOL pipeline.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	0.5	Grant	<p>The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted with the following conditions and advice.</p> <p>Condition:</p> <ol style="list-style-type: none">1. The permit holder shall revegetate the area cross-hatched yellow on attached plan 610/1. The revegetation shall be established by 30 July 2006, and maintained to an average planting density of 1000 plants per hectare. The species shall consist of overstorey, midstorey and understorey species that are native to the area. <p>Advice:</p> <ol style="list-style-type: none">1. The Permit holder should ensure that all applicable pollution abatement measures are taken to ensure that the risk of accidental effluent spillage is managed throughout all stages of the maintenance project.2. The Permit holder should be aware that the proposed dewatering associated with the SDOOL pipeline repair has the potential to adversely impact on the significant environmental values of the Lake Richmond system and surrounding vegetation. Dewatering management plans associated with the proposed works should be supplied to the Department of Environment for comment, prior to the commencement of on-ground works. <p>The following advice has been extracted from the Flora and Vegetation Survey of a Portion of the Sepia Depressions Ocean Outfall Line, Lake Richmond, March 2005.</p> <ol style="list-style-type: none">3. Clearing to gain access to the pipeline should be undertaken on a selective basis and should only be undertaken where absolutely necessary. There are no adult Eucalyptus gomphocephala within the proposed area to be cleared, but there are a few very close to the boundary so these should be avoided. There are also a few seedlings scattered throughout the site and care should be taken to avoid these as well if possible (ie if not directly on top of pipeline);4. The machinery should not extend into the vegetation beyond that specified for clearing. This applies especially to turn-around points for vehicles along the pipeline.5. Workers should be informed of the conservation issues present at the lake and its surrounding vegetation so that they are aware of the implications of their actions.6. Once the work is completed, weed control of the recently cleared area should be undertaken to minimise the spread of weeds into the vegetation bordering the proposed cleared area.7. Replanting or direct seeding should be undertaken after the maintenance work is completed. Advice and/or assistance from the Rockingham Regional Environment centre would be advantageous because they have been undertaking work around Lake Richmond for years and know the site well.

5. References

- CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref XXXXX.
- DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref XXXXX.
- 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 (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.
- Hedde, 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.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- 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.