



1. Application details

1.1. Permit application details

Permit application No.: 597/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Water Corporation

1.3. Property details

Property: LOT 1864 ON PLAN 211856 (Lot No. 1864 RISELEY NAVAL BASE 6165)
Local Government Area: Town Of Kwinana
Colloquial name: Barter and Riseley Roads Location 1864 Plan 211856

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.6		Mechanical Removal	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
Beard vegetation association 3048: Shrublands; scrub-heath on Swan Coastal Plain	The proposal includes the clearing of 1.6 hectares of both Degraded Acacia rostellifera thicket and Acacia rostellifera shrubland and thicket.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Observed during site visit (13/6/2005): Vegetation within the area under application has been extensively degraded by historical clearing, vehicle access, spoil dumping, and weed invasion.
Heddle vegetation complexes: Cottesloe Complex - Central and South: Mosaic of woodland of E. gomphocephala and open forest of E. gomphocephala - E. marginata - E. calophylla; closed heath on the Limestone outcrops.	Degraded Acacia rostellifera shrubland and thicket is described in James Point Port Pty Ltd (2001) as a scattered and patchy cover of A. rostellifera thickets, with scattered occurrences of A. saligna, A. pressii, M. acerosa and L. gladiatum, with an understorey of exotic species.		Much of the applied area is devoid of native vegetation, consisting of vehicle tracks and spoil piles. While the property contains stands of relatively good condition vegetation along north-eastern boundary and the western portion of the Lot, these areas are outside of the proposed clearing area.
Quindalup Complex: Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of M. lanceolata - Callitris preissii and the closed scrub of Acacia rostellifera.	Acacia rostellifera shrubland and thickets is defined as dense thickets dominated by Acacia rostellifera, with other species including Rhagodia baccata, L. gladiatum, A. pressii, Cassytha racemosa and Clematis microphylla, over a weed dominated open herbland (James Point Port Pty Ltd, 2001)		

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 vegetation within Lot 1864 Riseley Road has been significantly impacted and altered through past disturbance from clearing, vehicle access, spoil dumping and weed invasion (James Point Pty Ltd, 2001). Both upperstorey and understorey species have recovered poorly in most areas, remaining sparse and fragmented

from other vegetation on site.

Based on the condition of the vegetation and its limited habitat potential, it is considered that the area does not represent an area of high biological diversity.

Methodology James Point Pty Ltd (2001)
Site inspection (13/6/2005)

(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**

James Point Pty Ltd (2001) identifies several species of fauna listed by CALM as Schedule or Priority Fauna, with distributions which may include the James Point Port area. These species include the Western Brush Wallaby *Macropus irma* (P4) and the Southern Brown Bandicoot *Isodon obesulus* (P4). Based on the size of the area of vegetation under application, it is considered unlikely that the area is of sufficient size to support populations of the above species.

Methodology James Point Pty Ltd (2001)

(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**

There are no known Declared Rare or Priority Flora present within the area of vegetation under application. Flora surveys conducted in response to the James Point Port development (James Point Pty Ltd, 2001) identified the possibility of P4 species *Dodonaea hackettiana* and *Grevillea olivacea*, however no examples of these were found during the field survey. There are no known Declared Rare or Priority Flora present within the area of vegetation under application. Flora surveys conducted in response to the James Point Port development (James Point Pty Ltd, 2001) identified the possibility of P4 species *Dodonaea hackettiana* and *Grevillea olivacea*, however no examples of these were found during the field survey.

Methodology GIS Database - Declared Rare and Priority Flora - CALM 13/08/03
James Point Pty Ltd (2001)

(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**

There are no known Threatened Ecological Communities (TEC) present within the vegetation under application. The local area, defined as a 10 kilometre radius surrounding the property, contains 74 known TEC, with the majority of these occurring within the same vegetation complex as that under application.

A site inspection of the applied area identified that the majority of the applied area is clear of native vegetation, consisting of vehicle tracks and piles of spoil. Based on the current condition of the area, it is considered unlikely that any TEC would be impacted through the approval of this permit.

Methodology GIS Database - Threatened Ecological Communities - CALM 12/04/05
Site inspection (13/6/2005)

(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 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% retention amount, it is not considered that the approval of this application would significantly impact on the representation of the vegetation complex.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	% in reserves / CALM managed land
IBRA Bioregion	1,529,235	657,450	43%	Depleted	
Town of Kwinana	11,980.55	4,760.18	39.7%	Depleted	
Beard vegetation association:					
- 3084	14,575	4,184	28.7%	Vulnerable	19.2%
Hedde vegetation complex:					
- Cottesloe Complex - Central & South	44,995	18,474	41.1%	Depleted	8.8%
- 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**
There are no known watercourses or wetlands located within the boundary of the property under application.

Methodology GIS Database - Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DOE 15/9/04
GIS Database - Hydrography, linear - DOE 1/02/04

(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 under application is situated on Safety Bay Sand, and comprises calcereous medium grained quartz sand with abundant shell debris of shallow marine, coastal plain and aeolian origin (James Point Pty Ltd, 2001). The clearing of vegetation from the site will lead to an increased risk of both wind and water erosion, however these issues should be adequately managed through the Water Corporations plans to hardstand the area with limestone.

Methodology James Point Pty Ltd (2001)
Site inspection (13/6/2005)

(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**
Lot 1864 Riseley Road is located approximately 6.5km south-west of Harry Waring Marsupial Reserve, 9km west of Wandie Nature Reserve, and 7km north-west of Leda Nature Reserve.

Based on the current condition of the vegetation, and the distance to remaining stands of remnant vegetation, it is not considered likely that the vegetation under application contributes significantly as an ecological linkage or buffer to nearby conservation areas.

Methodology GIS Database: NLWRA, Current extent of native vegetation - DA 30/01/01
GIS Database: CALM Managed lands and waters - CALM 1/06/04
Site inspection (13/6/2005)

(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**
Lot 1864 Riseley Road is primarily comprised of calcereous medium grained quartz sand (James Point Pty Ltd, 2001), which would have a relatively high capacity for water infiltration. While the clearing of vegetation from the property will likely increase the infiltration and recharge of groundwater on site, it is not expected that this will negatively impact on ground or surface water quality, as much of the area is already devoid of vegetation.

Methodology James Point Pty Ltd (2001)
Site inspection (13/6/2005)

(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

Flooding impacts are unlikely to occur as a result of this application. While the clearing of vegetation from the property will most likely increase the infiltration and recharge of groundwater on site, this is not expected to lead to any localised flooding as much of the area under application is devoid of vegetation, and is comprised of well draining medium grained sands

Methodology GIS Database: Hydrography, linear- DOE 01/02/04
GIS Database: Geomorphic Wetlands - Swan Coastal Plain - DOE 15/09/04

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

Comments

Lot 1864 Riseley Road has been assessed by the Environmental Protection Authority (EPA) as part of the James Point Port development. This area is designated for the future construction of a private container and general cargo port, and thus vegetation on site will eventually be cleared in line with EPA approved plans.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Industrial	Mechanical Removal	1.6	Grant	The assessable criteria have been addressed and the proposal has been found to be at variance to Principle (e). The nature of the vegetation to be cleared has been highly altered through historical impacts, and is not likely to be representative of the original vegetation on site. Thus, the assessing officer recommends that the permit be granted.

5. References

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.

James Point Pty Ltd (2001). James Point Port: Stage 1 Public Environmental Review

Keighery, BJ (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.