



1. Application details

1.1. Permit application details

Permit application No.: 298/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: WATER CORPORATION (WC)

1.3. Property details

Property: LOT 5904 ON PLAN 214407 (Lot No. 5904 FRENCHMAN BAY TORNDIRRUP 6330)
 PLANTAGENET LOCATION 7375 (Lot No. 7375 FRENCHMAN BAY TORNDIRRUP 6330)

Local Government Area: City Of Albany
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.14		Mechanical Removal	Bore construction

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 49; Shrublands: mixed heath. Beard vegetation association 423; Shrublands: Acacia scrub-heath unknown Albany Hinterland Vegetation Survey (Connell & ATA Environmental 2001); describes the area as Acacia Mallee Heath C ; Coastal shrublands and heath in coastal dune swales. Species include Acacia flexuosa, E angulosa, Sporobolus virginica, Isolepis nodosa, Phyllanthus calycinus. Area also described as Acacia Mallee D ; Coastal shrublands and heath on calcareous low plains (<15m elevation). Species include Agonis flexuosa, Hakea suaveolens, Scaevola crassifolia, Olearia axillaris, Phyllanthus calycinus, various Epacridaceae and Myrtaceae. Beard Vegetation Association type 23; Low woodland, jarrah-banksia Mattiske RFA Vegn Complex Mapping (CALM 1998) type Kordabup KO; Mosaic of low forest of Agonis juniperina, closed heath of Myrtaceae-Proteaceae-Papilionaceae spp. with occasional	The vegetation along the proposed access routes, power/water pipe routes and around the bore sites is typical of the coastal limestone areas around Albany-Denmark. The vegetation is dominated by Agonis flexuosa Low Open Woodland over a variety of Tall Shrublands, Shrublands and Low Open Shrublands and Open Sedgeland. In the swales where soils are often sandy loam, Eucalyptus cornuta, Euc megacarpa and Euc diversicolor may form Open Woodland Forest above the Agonis flexuosa Low Woodland whilst on the deeper sandy soils Banksia attenuata and banksia illicifolia may be co-dominant trees. On the very shallow limestone soils Agonis flexuosa is usually absent.	Pristine: No obvious signs of disturbance (Keighery 1994)	E.M. Sandiford (Dec-1999) ; Flora and vegetation survey proposed bores - Torndirrup National park. TRIM A1687
		Pristine: No obvious signs of disturbance (Keighery 1994)	

emergent Melaleuca
preissiana and Banksia
Beard Vegetation
Association type 27; Low
woodland, paperbark
(Melaleuca sp)
Mattiske RFA Vegn
Complex Mapping (CALM
1998) type Keystone Kb;
Mosaic of tall open forest
of Eucalyptus guilfoylei-
Eucalyptus jacksonii-
Eucalyptus diversicolor on
slopes of major hills rising
above coastal plain with
Allocasu

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 along the access routes and around the proposed bores in Torndirrup National Park and the Albany Rifle Range is typical of the limestone coastal area in the region (Sandiford 2003). Most of the vehicle access routes within Torndirrup National Park have previously been cleared (Sandiford 2003). Typically the area has a high level of biodiversity. The clearing proposal is for the establishment of two bore sites within the Albany Rifle Range and six bore sites on the boundary of, but within Torndirrup National Park, totalling 2.14 ha and as such is not likely to have an impact on the biodiversity values of the area.

Methodology Flora and vegetation Survey Proposed Bores - Torndirrup National Park Vicinity (Sandiford 2003)

(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**

Torndirrup National Park (A-class Reserve No. A24258) and the adjoining Albany Rifle Range (Reserve No. 23524) represent a significant habitat for native fauna in this locality. The proposal to clear 625sqm, per bore site for a total of eight bore sites (an alternative site also occurs within Albany Rifle Range), together with limited clearing by widening approximately one metre along the existing tracks and Torndirrup National Park boundary firebreak access routes where the proposed bore sites occur, and the possible creation of a short track extension within Albany Rifle Range to the alternative site, is however unlikely to present any significant impact on the fauna habitat in the area. The proposed clearing will not significantly fragment the area and is unlikely to inhibit the movement of fauna. The proposal is therefore not likely to be at variance with this Clearing Principle.

Methodology Water Corporation Application

(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**

One Priority 4 species, *Adenanthos cunninghamii* is known to occur within the proposed clearing area and several plants were located during the survey. This species was formerly listed as declared rare when assessment of this application first commenced but has since been confirmed to be a hybrid between *A. sericea* and *A. cuneatus* showing a wide degree of leaf variability and has been reduced in status to Priority 4. There were three priority species located during the survey (Sandiford, 2003), including *Thomasia quercifolia* P2, *Gahnia scleroides* P3 and *Eucalyptus goniantha* subsp. *goniantha* P4). No DRF or priority listed flora however occurs within the areas proposed for clearing. The proposal is therefore not likely to be at variance with this Principle.

Methodology Sandiford (2003)
GIS Layer:
Sac Biodata set

(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**

The closest recorded Threatened Ecological Community is 50km to the north (Knight-East). The proposal is not likely to be at variance with this Clearing Principle. A Proposed Ecological Community Thicket of *Banksia coccinea* in association with a Low Woodland of *Eucalyptus staeri* and *Allocasuarina fraseriana* occurs within Gull Rock National Park and at Bayonet Head approximately 15-20 km distant however this PEC is not known

from this locality (DEC Albany). The proposal is not likely to be at variance to this Principle.

Methodology GIS Layers:
Sac Bio Datasets

(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**

	Pre-European area (ha)	Current extent (ha)	Remaining %*
IBRA Bioregion - Warren	851,529	739,273	86.8
Shire - City of Albany	383,843	149,341	38.9
Beard veg type - 423	32,108	20,115	62.6
Albany Hinterland - Heath C	7,924	7,352	92.8
Albany Hint-Acac/Mallee H D	15,301	13,130	85.8

* (Shepherd et al. 2001)

The 2.14 hectares under application fall within the IBRA Bioregion of Warren and the Beard vegetation type 423. These complexes still maintain 86.8% and 62.6% of its pre-European vegetation (Shepherd et al., 2001). The proposed clearing area falls within the City of Albany, which has a current extent remaining of 38.9% vegetation. The State Government is committed to the National Objectives Target for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (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.

As the vegetation complex that the proposed clearing application falls within a conservation category that is above the National Objective Target for Biodiversity Conservation, it is not seen as a significant remnant of native vegetation in an area that has been extensively cleared and is therefore not likely to be at variance to this principle.

Methodology 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 at variance to this Principle**
The sites where clearing is proposed are considered to be in areas of waning lower slopes to flat, with open depressions (swales) present between sand ridges built up by previous wind action. There is no apparent stream channel spacing, which indicates that channel stream spacing is absent or rare (DAWA, 2005a). The proposed clearing does not impact on any wetlands within the locality (Landgate 02 orthomosaic). The proposal is therefore not at variance with this clearing Principle.

Methodology DAWA (2005a)
GIS Layers:
Wetlands
Plantagenet Orthomosaic

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

Comments **Proposal is not at variance to this Principle**
The proposed access to two bore sites already exists within Albany Rifle Range with a short track extension being required to reach a second alternative site. If it is considered necessary to develop. The proposed bore sites within Torndirrup National Park are all accessible via existing boundary firebreak/management tracks. The tracks need to be 5m wide to allow for the passage of drilling machinery and will be upgraded by sheeting with limestone rubble. Access will be controlled by Water Corporation installing locked steel gates at the park boundary interface with public access. Regeneration of vegetation along tracks within the national park has been observed suggesting that localised disturbance is relatively temporary. Water corporation will revegetate all but one square metre of sites that will be retained as monitoring bore sites. Where the bore is developed as a production water bore to provide drinking water to cater for the expansion of the urban areas of Albany, Water Corporation will revegetate all but 100 sqm of each remaining bore site. The bore areas are small, localised and well protected by surrounding vegetation. All water boring infrastructure will be removed at the conclusion of drilling and rehabilitation will be undertaken on areas not needed for production bore infrastructure (DAWA, 2005a). Associated pipeline and electrical supplies to new production bores will be trenched-in along the access tracks to each site. Wind and water erosion is not considered a problem as the areas where clearing is to occur are generally well protected on relatively level ground and are very small. The proposal is therefore not at

variance with this Clearing Principle.

Methodology DAWA (2005a)

(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 at variance to this Principle

The proposal to clear involves six sites within A-class Reserve No. 24258, Torndirrup National Park, and two sites within the adjoining Albany Rifle Range land, Reserve No. 23524, initially 625 sqm per site, and approximately 4550 m of track widening. The 2000m of track within the rifle range is substantially overgrown and will require widening to the full 5m width to allow for the passage of the drilling rig. The tracks within Torndirrup National Park constitute boundary firebreak/management access tracks which are maintained at 4m width. Track widening in the national park will therefore be restricted to increasing the track width from 4m to 5m for a total distance within the park of 2550m. The bore sites which will not be developed for water production purposes will be rehabilitated and revegetated using locally provenanced native flora species (Water Corp), but an area of 1sqm will be retained as cleared land to allow for access to the bore site. Where a bore is to be developed for water production the net remaining cleared area per site will be 100sqm. The balance of these latter sites will also be rehabilitated and revegetated using locally provenanced native flora. Access tracks will be maintained at the cleared width of 5m as they will be sheeted with limestone rubble to stabilise the surface. Where these tracks occur within Torndirrup National Park, Water Corp will install locked steel gates to a design approved by DEC to control unauthorised access. The net impact of this proposal will therefore be minimal and it is considered that this clearing will not have any long term detrimental impact on nature conservation or environmental values of the land involved. The proposal is therefore not at variance with this Principle as clearing will be limited to small areas and access tracks only.

Methodology DAWA (2005a and 2005b)

(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 proposed clearing is to provide for eight bore sites within the Water Corporation Albany South Coast Borefield. The Water Corporation currently abstracts potable water for domestic and other purposes for the town of Albany and surrounding areas. Water is taken from the Werillup Formation, an aquifer which underlies Torndirrup National Park, and other coastal reserves to the west. The development of the borefield which is central to this proposal is planned to provide additional supplies for the expanding urban demand in Albany. A number of existing bores in the borefield will be closed down due to salt intrusion and four of the eight proposed bores will be developed as new production bores to replace the closed bores, while four will be retained as monitoring bores to monitor water quality and levels in the aquifer. The clearing of 2.14 ha of native vegetation, of which is not considered to represent a threat to the quality of surface or underground water. Surface water in the locality is virtually non-existent due to the free-draining siliceous and lime sands in the locality. The Water Corporation is committed to ensuring that both surface and underground water supplies are maintained at a high quality since this is the main source of potable water for Albany. The clearing is therefore not likely to be at variance with this principle.

Methodology Water Corporation Application

(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 lack of distinct waterways in the proposed clearing areas (DAWA, 2005a) suggests that water erosion, waterlogging or flooding are negligible in the sandy soils where the various bore sites and tracks are located. It is therefore not regarded as a problem likely to impact on the nature conservation values of the national park and adjacent land. The proposal is not likely to be at variance to this Principle.

Methodology DAWA (2005a)

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

Comments

Water Corp. has prepared an Environmental Management Plan (May 2007) that addresses the environmental impacts and how the work is planned to be undertaken. This plan has been presented to the Conservation Commission of Western Australia which has given approval for the project to be undertaken within Torndirrup National Park. The Water Corp has made an undertaking in the EMP that rehabilitation and revegetation of drilling sites will occur at the cessation of drilling at all sites in accordance with the EMP. Additionally, Water Corp has offered an area of undisturbed native vegetation measuring 120m x 375m (4.5ha) within Water Reserve No. 25480 (Locn No. 6709) Limeburner's Creek Water Reserve at Big Grove, adjacent to Torndirrup National Park. The DEC South Coast Region is considering this conservation offset offer and may suggest an amendment to the area which may result in a larger area being offered. It is recommended that the Water Corporation be granted the permit to clear.

The proposal is not known to be at variance with any planning instrument or previous decision.

Methodology

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Bore construction	Mechanical Removal	2.14	The assessment has demonstrated that this proposal is not at variance with any clearing principle.

5. References

- DAWA (2005b) Department of Agriculture Western Australia - Advice from Commissioner for Soil and Land Conservation. TRIM Ref AD116.
- DAWA(2005a), Report by Department of Agriculture Western Australia officer -Assessment of proposed bore proposal. DAWA file ARO 771/05, TRIM REF AI688
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Sandiford, EM (2003) Flora and Vegetation Survey Proposed Bores - Torndirrup National Park and Vicinity. Trim Ref AI687
- 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)

