



1. Application details

1.1. Permit application details

Permit application No.: 823/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Water Corporation

1.3. Property details

Property: LOT 13526 ON PLAN 219960 (MANJIMUP (S))
STATE FOREST 36 (DEANMILL 6258)
LOT 333 ON PLAN 36448 (TRENT 6333)
Local Government Area: Shire Of Manjimup
Colloquial name: (Samuels Brook Monitoring Site)

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.02		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
<p>Rock Bar Rd: Beard Vegetation Association 1144: Tall forest of karri and marri;</p> <p>Mattiske Veg type: Pemberton (PM1); Tall Open forest of <i>Eucalyptus diversicolor</i> with mixtures of <i>Corymbia calophylla</i> on valley slopes and low forest of <i>Agonis juniperina</i>-<i>Banksia seminuda</i>-<i>Callistachys lanceolata</i> on valley floors in the perhumid zone. (Mattiske 1994)</p> <p>Walpole Weir: Beard Vegetation Association 23: Low woodland <i>Jarrah-banksia</i>; Mattiske Veg type: Kordabup (KO); Mosaic of low forest of <i>Agonis juniperina</i>, closed heath of <i>Myrtaceae-Proteaceae-Papilionaceae</i> spp. with occasional emergent <i>Melaleuca preissiana</i> and <i>Banksia littoralis</i> on broad swampy plains in hyperhumid and perhumid zones.</p> <p>Samuels Brook: Beard Vegetation Association 27: Low woodland; paperbark (<i>Melaleuca</i> sp.) Mattiske Veg type: Angove (A); Open forest of <i>Eucalyptus marginata</i></p>	<p>The area under application to be cleared is for the maintenance of 3 bore monitoring sites (Samuels Brook, Rock Bar Road, Walpole Weir). All sites under application are within Environmentally Sensitive Areas (ESAs): Samuels Brook monitoring bore site: Is within Augusta to Walpole Geomorphic Wetland Mapping area and the majority of vegetation is regrowth vegetation. Upper and midstorey vegetation is not well developed and the complexity is low. The adjacent surrounding vegetation, particularly south of proposed bore, is of similar environmental value. However, north of the proposed bore, the structure appears intact and does not appear to have been significantly disturbed.</p> <p>Walpole Weir monitoring bore site: Is on the Register of the National Estate area and the majority of vegetation is regrowth vegetation. Upper and midstorey vegetation is not well developed and the complexity is low. The surrounding land is fragmented; consisting of</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>References: DEC's GIS databases and by Water Corporation South West Region: Maintenance clearing at Rock Bar Road, Walpole Weir and Samuels Brook gauging stations Environmental Management System 4 July 2006 Water Corporation, Mattiske 1994 GIS datasets: - Pemberton 1.4m Orthomosaic - DOLA 99 - Walpole 1.4m Orthomosaic - DOLA 99</p>

subsp. marginata-Banksia illicifolia-Nuytsia floribunda with some *Eucalyptus diversicolor* on gently sloping sandy terrain in hyperhumid and perhumid zones. (Matiske 1994)

highly cleared areas and remnant bushland with well developed complexity and structure.

Rock Bar Road monitoring bore:
is on the Register of the National Estate. The vegetation under application to be cleared appears to have been disturbed as is on the fringe of a dam. The vegetation surrounding the site appears to be largely undisturbed, and appears to be in pristine condition (from aerial imagery interpretation).

All bores are considered to be in Good condition (Keighery 1994). The condition of the vegetation under application is not considered to be comparable within adjacent DEC managed reserves.

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 may be at variance to this Principle**

The purpose of clearing 0.02ha of native vegetation is for the maintenance of bore monitoring sites. All 3 sites under application are within Environmentally Sensitive Areas (ESAs).

Samuels Brook monitoring bore site:

This site is within the Augusta to Walpole Geomorphic Wetland Mapping area and Crown Reserve 47889. The majority of vegetation is regrowth vegetation. Upper and mid-storey vegetation is not well developed and the complexity is low. The condition is considered to be Good (Keighery 1994).

Walpole Weir monitoring bore site:

This site is within an area included on the Register of the National Estate area and occurs on Crown Reserve 37311. The majority of vegetation is regrowth, consequently, upper and mid-storey vegetation is not well developed and the complexity is low. The condition is considered to be Good (Keighery 1994).

Rock Bar Road monitoring bore site:

This site is also listed on the Register of the National Estate and on State Forest 36. The vegetation under application to be cleared appears to have been disturbed as is on the fringe of a dam. The condition is considered to be Good (Keighery 1994).

The majority of the area applied to be cleared is regrowth vegetation (Water Corp 2006) and considered to be in Good condition (Keighery 1994). Although the total area of vegetation applied to be cleared is small (0.02ha) and therefore, unlikely to have an adverse impact on surrounding biodiversity values, permit conditions will be applied to control the potential spread of dieback and weeds due to the sensitivity of the surrounding areas (BCS October 2006).

Water Corporation's Environmental Management System (EMS) dated 4th July 2006 states that existing DEC managed tracks will be used to avoid the need to clear for access to the gauging stations.

Therefore, although the three bore sites subject to this clearing application may be at variance to this Principle, permit conditions have been imposed to avoid or minimise clearing, to accommodate weed and dieback management and for the proponent to revegetate the sites once the monitoring bores have been installed. It is also necessary for the bores to be installed to monitor water levels. Therefore, the application is not at variance to this Principle.

Methodology DEC Biodiversity Coordination Section October 2006

South West Region: Maintenance clearing at Rock Bar Road, Walpole Weir and Samuels Brook gauging stations Environmental Management System 4 July 2006 Water Corporation
Keighery 1994

GIS databases:

- Pemberton 1.4m Orthomosaic - DOLA 99
- Walpole 1.4m Orthomosaic - DOLA 99
- Cadastre

(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**
Walpole Weir and Samuels Brook:
There are 59 known records of 14 species of Threatened, Specially Protected or Priority fauna species occurring within a 10km radius of the notified area. It is therefore likely that the area is utilised by a number of these species, particularly for access to water. However, it is estimated that only 60m² of vegetation needs to be removed at Walpole Weir and approximately 40m² needs to be removed at Samuels Brook.

Rock Bar Rd:
There are 59 known records of 12 species of Threatened, Specially Protected or Priority fauna species occurring within a 10km radius of the notified area. It is therefore likely that the area is utilised by a number of these species, particularly for access to water. However, it is estimated that only 60m² of vegetation needs to be removed. In view of this relatively small area, some of it regrowth, it appears highly unlikely that the vegetation consists of significant habitat to fauna indigenous to Western Australia (DEC BCS 2006) and bores need to be installed to monitor water levels. This proposal is not likely to be at variance to this Principle.

Methodology DEC Biodiversity Coordination Section October 2006 (DEC BCS 2006)
South West Region: Maintenance clearing at Rock Bar Road, Walpole Weir and Samuels Brook gauging stations Environmental Management System 4 July 2006 Water Corporation

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

Comments **Proposal may be at variance to this Principle**
There are 22 known records of 7 species of Declared Rare Flora (DRF) and 256 records of 51 species of Priority Flora occurring within a 10km radius of the 3 monitoring bores under application to be cleared. Some of these species may not be suited to the habitat around the 3 gauging stations (DEC BCS 2006). Due to the small scale of clearing (0.02ha) of native vegetation over 3 bore sites, and that the vegetation is mostly regrowth, it is not likely that these sites are necessary for the continued existence of rare flora.

Therefore, this proposal is not likely to be at variance to this Principle.

Methodology DEC Biodiversity Coordination Section October 2006 (DEC BCS 2006)

(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**
Rock Bar Road:
There are no known threatened ecological communities (TECs) within a 10km radius of this site.

Walpole Weir and Samuels Brook: There are 10 known occurrences of TECs within 10km radius of these subject areas. The closest TEC is the Reedea Swamp which is approximately 900m south-east of Walpole Weir gauging station (BCS 2006). GISViewer indicates that the Walpole Weir monitoring site is within a TEC buffer zone. There are two TECs within a 10km radius of Samuels Brook site, two of which are of the same Beard Vegetation Association 27 (7.5km and 8.8km SE, respectively).

However, given that a small area of vegetation is proposed to be cleared (36m² and 80m²), and that much of it is regrowth (BCS 2006) and considering the distance between the bore sites and TECs, it is unlikely that this proposal is likely to be at variance to this condition.

Therefore, the proposal is not likely to be at variance to this Principle. (BCS 2006)

Methodology DEC Biodiversity Coordination Section October 2006 (BCS 2006)
GIS databases:
- Threatened Ecological Communities - CALM 12/4/05
- Pre-European Vegetation - DA 01/01
- SAC Bio datasets 18/04/2007

(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 National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is the target. The Environmental Protection Authority Position Statement No. 2 (EPA 2000) also identifies a 30% threshold level for vegetation types, beyond which species extinction is believed to occur at an exponential rate. Any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported.

Rock Bar Road (60m²) occurs in Beard Veg Association 1144, and Mattiske Veg type: PM1 (Mattiske 1994, Sheperd et al. 2001).

Samuels Brook (36m²) occurs in Beard Veg Association 27, and on Mattiske Veg type: A, (Mattiske 1994, Sheperd

et al. 2001).

Walpole Weir (80m²) forms part of Beard Veg Association 23, and on Mattiske Veg type: KO (Mattiske 1994, Sheperd et al. 2001).

	Pre-European Area (ha)	Current extent (ha)	Remaining %	Reserves %
Mattiske - Angove	39727	35623	89.7	39.6
Mattiske - Kordabup	2724	1265	47.3	9.8
Mattiske - Pemberton	2581	16785	65	1.6
Beard Veg Assoc 1144: tall forest; karri & marri	201257	140235	69.7	24.6
Beard Veg Assoc 23: low woodland; jarrah-banksia	50127	33700	67.2	57.4
Beard Veg Assoc 27: low woodland; paperbark (<i>Melaleuca</i> sp)	161222	106631	66.1	39.9

More than 30% of the Pre-European extent of the Pemberton vegetation complex represented is remaining but it is very poorly represented on conservation estate (1.6%) (Hopkins et al. 2001, Shepard et al 2001). However, clearing of 60m² will have minimal to no impact on that vegetation type in conservation estate.

Rock Bar Road forms part of the Warren River Catchment, Zone D (CAWS Catchment). Licences will normally be granted in Zone D, subject to the statutory limitation that 10% of the land in question remains uncleared. (WRC,1996)

All Beard Vegetation Associations have over 30% (or even 40%) remaining, and all are well represented in conservation reserves, with the exception of Beard Vegetation Association 1144 (Hopkins et al. 2001, Shepard et al 2001). The areas under application to be cleared are small (0.02ha), and mostly consist of regrowth vegetation, therefore, this proposal to clear native vegetation is not likely to be at variance to this Principle.

Methodology

DEC Biodiversity Coordination Section October 2006 (BCS 2006)
 South West Region: Maintenance clearing at Rock Bar Road, Walpole Weir and Samuels Brook gauging stations Environmental Management System 4 July 2006 Water Corporation
 AGPS 2001
 Shepard et al 2001
 Hopkins et al. 2001
 Water and Rivers Commission (1996)
 EPA Position Statement 2 2000
 GIS databases:
 - Mattiske Vegetation - CALM 24/3/98
 - 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

Rock Bar Road:
 Forms part of the Warren River Catchment, Zone D (CAWS Catchment). Licences will normally be granted in Zone D, subject to the statutory limitation that 10% of the land in question remains uncleared. (WRC,1996)
 Also occurs on the Scabby Gully stream. There are also 16 unnamed lakes within 10km radius of subject area. Clearing of 60m² of vegetation, which is likely to be riparian and thus, necessary for the healthy functioning of the water system, may therefore, be at variance to this Principle. Thus, this proposal to clear 60m² may be at variance to this Principle at the Rock Bar Road site.

Samuels Brook and Walpole Weir:
 Form part of the Nornalup Inlet of the Shannon River. They both occur on watercourses, and 2 large areas subject to inundation occur with 10km radius, and the Frankland River occurs 5.5km SE of the subject area. Walpole Weir site is 285m NE from a significant stream, and is 1590m NE from an estuary. Clearing of 40m² and 80m² of native vegetation, respectively, likely to be riparian, may also be at variance to this Principle.

Also, "A vegetated buffer of at least 20m either side of any recognised watercourse on the property should be retained" (Shire of Manjimup 2006) needs to be considered.

The vegetation to be cleared is largely regrowth (Water Corporation 2006) growing in association with a watercourse at each proposed monitoring bore location and, consequently, the proposal may be at variance to this Principle. (BCS 2006). However, due to the very small scale of clearing proposed for the purpose of maintenance of bore monitoring sites, which is unlikely to impact on the watercourses, the permit is recommended to be granted.

Methodology

South West Region: Maintenance clearing at Rock Bar Road, Walpole Weir and Samuels Brook gauging stations Environmental Management System 4 July 2006 Water Corporation
 Water and Rivers Commission (1996)

Shire of Manjimup 2006
 GIS datasets:
 - Hydrographic Catchments - Catchments - DOW
 - Geodata, Lakes - GA 28/06/02-1
 - Hydrography, linear - DOE 1/2/04
 - Rivers 250K - GA
 - Rivers, 1M - GA 01/06/00
 - CAWSA Part IIA Clearing Control Catchments - DOW

(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 Groundwater salinity at all sites: 500-100 TDS mg per litre, is likened to the salinity of hot water systems. Rainfall-mean, annual is 1200-1300mm Higher rainfall also indicates lower salinity levels. (WRC, 1996)

The proposed clearing of 0.02ha of riparian vegetation is for the maintenance of a cleared area around monitoring bores. The very small area to be cleared occurs within an area that is well vegetated, has low salinity levels, and is unlikely to cause any appreciable land degradation. It is therefore unlikely that the proposal will be at variance to this principle.

Methodology Water and Rivers Commission (1996)
 GIS datasets:
 - Groundwater Salinity, Statewide – DOW
 - Rainfall, Mean Annual - BOM 30/09/01

(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**
 Rock Bar Road:
 There are eight reserves within 10km radius, three listed and two interim Land for Wildlife sites. The area is within Donnelly State Forest which is a Karri Management Priority Area on the Register of National Estate. It is also within Zone D of the Warren River Water Reserve. Although the site is within an environmentally sensitive area, being riparian vegetation, given the very small area of vegetation that is proposed to be removed (40m² and 80m², respectively) the environmental values of the surrounding conservation estate are unlikely to be impacted.

Walpole Weir and Samuel Brook:
 There are eight reserves and nine Land for Wildlife sites within 10km radius. Although both gauging stations are within an environmentally sensitive area, being riparian vegetation, given the very small area of vegetation that is proposed to be removed (40m² and 80m², respectively) the environmental values of the surrounding conservation estate are unlikely to be impacted if clearing takes place. (BCS 2006)

Therefore, this proposal is therefore not likely to be at variance to this Principle.
Methodology DEC Biodiversity Coordination Section October 2006 (BCS 2006)

(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 Rock Bar Road monitoring site is within the Lefroy Brook Catchment Area and occurs on the Scabby Gully Stream. The site is also within the Warren River Water Reserve, Zone D (CAWS Catchment).

Samuels Brook and Walpole Weir are part of Plain Road Bridge Walpole River Catchment and within the Walpole Weir Catchment Area (Walpole Weir Catchment Area and Butlers Creek Catchment Area Water Source Protection Plan: Walpole Town Water Supply).

The Groundwater salinity at all sites: 500-100 TDS mg per litre, is likened to the salinity of hot water systems. Rainfall-mean, annual is 1200-1300mm Higher rainfall also indicates lower salinity levels. (WRC, 1996)

Due to the small scale of proposed clearing, of up to 0.02ha of native vegetation for the purpose for the maintenance of bore sites, in an area of lower salinity levels, it is unlikely that clearing will affect the quality of surface and underground water.

The proposal is therefore, unlikely to be at variance to this Principle.
Methodology Water and Rivers Commission (1996)
 GIS databases:
 - CAWSA Part IIA Clearing Control Catchments - DOW
 - Hydrographic Catchments - Subcatchments - DOW
 - Public Drinking Water Source Areas (PDWSAs) – DOW
 - Groundwater Salinity, Statewide – DOW

- Rainfall, Mean Annual - BOM 30/09/01

(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**
Rock Bar Road Topography: 225m AHD (downslope from 275m AHD)
Samuels Brook Topography: 60 AHD (downslope from 110m and 115m AHD)
Walpole Weir Topography: 5 AHD (downslope from 10m and 15m AHD)

Given the very small size of the area under application (0.02ha), the surrounding native vegetation (particularly, Rock Bar Road site) and the relatively flat terrain of the surrounding area, it is unlikely that the clearing as proposed would exacerbate peak flood height or duration. This is unlikely to be at variance to this Principle.

Methodology GIS datasets:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
The proposed clearing is within DEC managed lands. Approval for the clearing was received from the DEC's Frankland District Office.

There are Native Title Claims over the areas under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

Methodology GIS Database:
- Native Title Claims - DLI 7/11/05
CALM correspondence (TRIM ref DOC 9076)

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Bore construction	Mechanical Removal	0.02	The Principles have been addressed and it is considered that the clearing as proposed is not likely to be at variance. Given that the majority of vegetation to be cleared is regrowth and due to the small area under application, 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.
- Department of Environment and Conservation – Biodiversity coordination section (2006) Comments relating to application for permit to clear native vegetation in accordance with sub-section 51E (4)(b) of the Environmental Protection act 1986 TRIM ref: DOC 8381
- 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.
- 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.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- 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
- Water and Rivers Commission (1996) Policy and Guidelines: Granting of Licenses to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation. Land Management and Clearing Controls, Regional Services Division

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)

