



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4735/1
Permit Holder:	Water Corporation
Duration of Permit:	27 February 2012 – 27 February 2017

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of increasing the water yield for Phillips Creek Catchment

2. Land on which clearing is to be done

Lot 13869 on Plan 36953 (Crown Reserve 33217), DEANMILL 6258
Crown reserve 15974, DEANMILL 6258

3. Area of Clearing

The Permit Holder must not clear more than 108 hectares of native vegetation within the area hatched yellow on attached Plan 4735/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Land Administration Act 1997* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

8. Dieback and weed control

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall only move soils in *dry conditions*;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. Vegetation management

A minimum retention rate of 15m²/ha *basal area* is required within the area of clearing authorised under this Permit.

10. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify tree(s) that contain hollows suitable to be utilised as *habitat tree(s)* by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (b) The Permit Holder shall not clear *habitat tree(s)* identified under condition 9(a) unless approved by the CEO.

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
- (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to fauna management pursuant to condition 9 of this Permit:
- (i) the location of each *habitat tree* identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the *habitat/habitat tree(s)*;
 - (iii) a copy of the fauna specialist's report.

12. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 11 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 20 November 2016 the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

fill means material used to increase the ground level, or fill a hollow;

habitat tree(s) means trees that have a diameter, measured at 1.5m above the ground, of 50cm or greater, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

Wildlife Conservation (Specially Protected Fauna) Notice means those fauna taxa gazetted as rare fauna pursuant to section 14(4)(a) of the *Wildlife Conservation Act 1950* (as amended).



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

2 February 2012



1. Application details

1.1. Permit application details

Permit application No.: 4735/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Water Corporation

1.3. Property details

Property: LOT 13869 ON PLAN 36953 (DEANMILL 6258)
CROWN RESERVE 15974 (DEANMILL 6258)
Local Government Area: Shire of Manjimup

Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 2 February 2012

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
Mapped Beard vegetation association 3 is described as Medium forest; jarrah-marri (Shepherd 2009).	The application proposes to clear up to 180 hectares of native vegetation within Lot 13869 on Deposited Plan 36953 - Reserve 33217 and Crown Reserve 15974, Deanmill, for the purpose of increasing the water yield for Phillips Creek Catchment.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation was determined through a site visit (DEC 2012).
Mapped Beard vegetation association 1144 is described as Tall forest; karri & marri (Corymbia calophylla) (Shepherd 2009).			
Mattiske vegetation complex Cry - Tall open forest of Corymbia calophylla with mixture of Eucalyptus marginata subsp. marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones (Mattiske 1998).			
Mattiske vegetation complex Yanmah (YN1) - Mixture of tall open forest of Eucalyptus diversicolor and tall open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata over Agonis flexuosa and Agonis juniperina on valleys in perhumid and humid zones (Mattiske 1998).			
Mattiske vegetation complex Bevan 1 (BE1) - Tall open forest of Corymbia calophylla-Eucalyptus marginata subsp. marginata on uplands in perhumid and humid zones (Mattiske 1998).			
Mattiske vegetation complex (Crowea) CRb - Tall open forest of Corymbia calophylla-Eucalyptus diversicolor on upper slopes with Allocasuarina decussata-Banksia grandis on upper slopes in hyperhumid and perhumid zones (Mattiske 1998).			

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 application proposes to clear up to 108 hectares of native vegetation within Lot 13869 on Plan 36953 (Reserve 33217) and Crown Reserve 15974, Deanmill for the purpose of increasing water yield into Phillips Creek Catchment. Phillips Creek is one of two catchments supplying water to Manjimup.

The vegetation through the applied area consists of closed Jarrah, Marri and Karri Forest with evidence of past logging operations. The application area was burnt 8 years ago by the Department of Environment and Conservation (DEC) on behalf the Water Corporation (DEC 2012). The vegetation within the application area is

in a very good (Keighery 1994) condition (DEC 2011).

Within the local area (10km radius) 18 fauna species of conservation significance have been recorded. The closest records are the Brush-tailed Phascogale (*Phascogale tapoatafa* subsp. ssp.), (Threatened, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999), the Baudin's black cockatoo (*Calyptorhynchus baudinii*) (Endangered, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999), and the Western Ringtail Possum (WRP) (*Pseudocheirus occidentalis*), (Vulnerable, Environment Protection and Biodiversity Conservation Act 1999; Threatened, Wildlife Conservation Act 1950), were all recorded within 1km from the application area (DEC 2007-). A site inspection determined that there are some large mature trees within the application area that may contain nesting hollows. Most of the trees were marked as habitat trees and retained from previous thinning operations. It is recommended that these trees should be retained and any other large potential habitat trees (DEC 2012).

The proposal is to selectively thin Jarrah, Marri and Karri trees. As the proposed clearing area is adjacent to Donnelly and Jarnadup State Forest, recruitment post clearing should occur. Weed and dieback management should be undertaken to mitigate the spread or introduction of weeds and dieback into the reserve.

Given the large size of the area under application and the potential habitat value for flora and fauna, the 108 ha of vegetation under application may comprise a locally high level of biological diversity and therefore, the clearing may be at variance to this Principle.

Methodology DEC (2007 -)
DEC (2012)
Keighery (1994)

GIS Database:
- DEC Tenure
- Donnelly 50cm Orthomosaic - Landgate 2007
- SAC Biodatasets - accessed January 2012

(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 may be at variance to this Principle**

Within the local area (10km radius) 18 fauna species of conservation significance have been recorded. The closest records are the Brush-tailed Phascogale (*Phascogale tapoatafa* subsp. ssp.), (Threatened, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999), the Baudin's black cockatoo (*Calyptorhynchus baudinii*) (Endangered, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999), and the Western Ringtail Possum (WRP) (*Pseudocheirus occidentalis*), (Vulnerable, Environment Protection and Biodiversity Conservation Act 1999; Threatened, Wildlife Conservation Act 1950), were all recorded within 1km from the application area (DEC 2007-).

Baudin's black cockatoo feeds on Marri, Jarrah, Banksia and Hakea plants (Burbridge 2004) and the areas under application contain species suitable as feeding habitat for this species and also for other Threatened Black cockatoo species.

Tree hollows occur within the area under application, and these hollows may provide habitat for local fauna including black cockatoos. Potential habitat trees have a diameter, at average adult human chest height, of greater than 50cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts. A site inspection determined that there are some large mature trees within the application area that may contain nesting hollows. Most of the trees were marked as habitat trees and retained from previous thinning operations. It is recommended that these trees should be retained and any other large potential habitat trees (DEC 2012).

The very good (Keighery 1994) condition of the vegetation throughout the applied area and the variation in vegetation types creates a variety of habitat for native fauna. The hollow logs on the ground would provide habitat for ground dwelling fauna such as Brush-tailed Phascogales and the southern brown bandicoot.

Given the nature of the clearing there will be some disturbance to this habitat but only in the short term and only to some areas of the forest. The area proposed to be cleared is surrounded by state forest and timber reserves which are likely to be providing the same habitat values.

Given the above, the clearing as proposed may provide significant habitat trees and therefore the clearing may be at variance to this Principle.

A fauna condition will manage and mitigate impacts from the proposed clearing on black cockatoos.

Methodology References
Burbridge (2004)

DEC (2012)
 DEC (2007-)
 Keighery (1994)

GIS Databases
 -SAC Bio Datasets - accessed January 2012

(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**
 There were two records of rare flora species recorded in the local area (10 km radius) Andersonia annelsii and Caladenia christineae; A. annelsii is recorded 6.4km from the application area and C. christineae is recorded 10km away, both are recorded on different soil and vegetation types.

The application area does not contain suitable habitat for these rare flora. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases
 -SAC Bio Datasets - accessed January 2012
 -Soils, Statewide
 -Pre European Vegetation

(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 were no records of threatened ecological communities recorded within the local area (10km radius) of the area under application. Therefore the application is not likely to be at variance to this principle.

Methodology GIS Databases
 -SAC Bio Datasets - accessed January 2012

(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 under application has been identified as Beard vegetation complex 3 of which there is approximately 80 per cent of it pre-European extent remaining and Beard vegetation complex 1144 of which there is approximately 79 per cent of it pre-European extent remaining within the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (Shepherd 2009).

The application area is also mapped as Matiske Vegetation Complex's, Crowea b and y, Yanmah, and Bevan 1 of which 88, 74, 82 and 84 per cent of their pre-European extent are remaining respectively.

The local area has approximately 50 per cent of native vegetation remaining with the majority located within state forests.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001). The mapped vegetation types in the application area retain more than the 30 per cent threshold.

The application area may contain significant fauna habitat and biodiversity values and therefore may be significant as a remnant. However, as the local area retains about 50 per cent native vegetation the area is not considered to be extensively cleared. Therefore, the clearing as proposed is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion* Warren	833 981	667 164	80	82
Shire* Shire of Manjimup	697 370	589 248	84.5	92.3
Beard Vegetation Association in Bioregion* 3	250 262	200 890	80.27	84
Beard Vegetation Association in Bioregion* 1144	159 668	127 144	79	90

Mattiske Vegetation Complex CRy**	33 764	25 111	74.37	67.36
Mattiske Vegetation Complex CRb**	52 753	46 468	88	82
Mattiske Vegetation Complex BE1**	76 781	64 556	84	78
Mattiske Vegetation Complex YN1**	19 512	15 993	82	75
* Shepherd 2009				
** Shepherd 2007				

Methodology References:
Commonwealth of Australia (2001)
Shepherd (2007)
Shepherd (2009)
GIS Database:
- Local Government Authorities
- Pre European Vegetation
- Donnelly 50cm Orthomosaic - Landgate 2007
- SAC Biodatasets - accessed January 2012

(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 watercourses or wetlands within the area under application. Jarnadup Brook a minor perennial watercourse runs through the two individual application areas; there is more than a 30m buffer between the watercourse and the application area.
The site inspection (DEC 2012) did not identify any wetland dependant vegetation. Therefore, the vegetation under application is not considered likely to be associated with a watercourse or wetland. Therefore, the proposal is not likely to be at variance to this principle.

Methodology GIS Databases
-Hydrography, linear

(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 property under applications mapped soil type Tc6 is described as Dissected lateritic plateau of hilly relief at moderate elevation: chief soils of the dissected hilly areas are hard acidic yellow mottled, with some hard acidic red mottled soils and brown earths, all containing ironstone gravels; some soils on major stream terraces. It is unlikely that erosion will increase due to the proposed clearing as the 108ha is to be selectively cleared (i.e. not clear felled).
Given the proposed clearing is for thinning, the proposal is not considered likely to cause appreciable land degradation and therefore the clearing is not likely to be at variance to this principle.

Methodology GIS Databases
-Soils, statewide

(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 may be at variance to this Principle**
The area proposed to be cleared is adjacent to Donnelly State Forest. Within the local area (10km radius) there is also Jarnadup State forest and a timber reserve.
The proposed clearing may indirectly impact on the environmental values of the adjoining conservation reserves through the spread or introduction of weed species or dieback by machinery. Given the indirect impacts the clearing may impact on the environmental values of nearby conservation areas. Therefore, the clearing may be at variance to this Principle.
Weed and dieback management will mitigate any impacts to surrounding conservation areas from the proposed clearing.

Methodology GIS Databases
-DEC Tenure

(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 not likely to be at variance to this Principle**
Application area falls within the Donnelly River and Tributaries' area covered by the Rights in Water and Irrigation Act 1914 and the Warren River Water Reserve' a zone D Surface water area and the Manjimup Phillips Creek Catchment area, a Public Drinking Water Source Area, both covered by the Country Areas Water Supply Act, 1947. Groundwater salinity is mapped as 500-1000 (medium).

A zone D Surface Water area is a low risk area due to its position in the landscape, catchment and the vegetation extent in the local area. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases
- Public drinking Water Source Areas (PDWSAs)
- CAWSA Part IIA Clearing Control Catchments
- RIWI Act, SurfaceWaterAreas, Irrigation districts
-Topography, statewide
-Groundwater Salinity

(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 at variance to this Principle**
As the application area is within Phillips Creek Catchment area the clearing is likely to exacerbate the intensity of flooding, therefore the clearing is at variance to this principle.

Given the intended purpose of the application is to increase the water yield of Phillips Creek Catchment the risks associated with flooding are likely to be minimal.

Methodology GIS Databases
-Hydrography linear

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

Comments
The application proposes to clear up to 108 hectares of native vegetation within Lot 13869 on Plan 36953 (Reserve 33217) and Crown Reserve 15974, Deanmill for the purpose of increasing water yield into Phillips Creek Catchment. Phillips Creek is one of two catchments supplying water to Manjimup.

The area under application falls within the Donnelly River and Tributaries Surface Water area covered by the Rights in Water and Irrigation Act 1914.

The area under application falls within the Manjimup Phillips Creek Catchment Area a Public Drinking Water Source Area and the Warren River Water Reserve, a zone D Surface Water Area, both covered by the Country Areas Water Supply Act, 1947.

The Department of Water (DoW) Policy and Guidelines for the 'Granting of Licences to Clear Indigenous Vegetation' provide for the grant of a licence subject to the retention of native vegetation on at least 10% of the holding area and the retention of riparian buffers. The DoW (2012) advised that there will still be 10% native vegetation and DoW has no objection in principle to the proposal subject to finalisation of the relevant management plan and its approval by DoW.

The property is zoned as Parks and Recreation and Rural and State Forest under the Town Planning Scheme.

The Shire of Manjimup advised that Water Corporation should be encouraged to carry out some environmental offset planting within the district. It would be advisable that this offset planting be carried out on Water Corporation managed land. The Shire also requested that the following be noted
"There is no Planning or other matters which would affect the proposal' (Shire of Manjimup 2012).

With respect to the requested offsetting, DEC is of the view that the impacts identified in the clearing principles can be managed through permit conditions.

There is one known Aboriginal Sites of Significance that runs through the two individual application areas.

Methodology GIS Databases:
- RIWI Act, SurfaceWaterAreas, Irrigation districts
- Town Planning Scheme Zones

4. References

- Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Accessed 11/01/2012).
- DEC (2012) Regional Advice Report for Clearing Permit Application CPS 4735/1. Site Inspection undertaken 09/01/2012. Department of Environment and Conservation, Western Australia. (DEC Ref: A468828)
- DoW (2012) CPS 4735 Clearing Application - Water Corporation, R33217 and R15974 Deanmill. DEC ref: A470887
- 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. (2007) 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.
- Shepherd, D.P. (2009) 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.
- Shire of Manjimup (2012) Application to clear native vegetation - Lot 13869 Reserve 33217 Wildwood Road, Deanmill. DEC ref: A464017

5. 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)