GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3824/1
File Number: 2010/004910
Duration of Permit: From 21 November 2010 to 21 November 2012

PERMIT HOLDER

Bessell Road Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

LOT 2 ON DIAGRAM 72739 (House No. 43 BESSELL ROSA GLEN 6285)

AUTHORISED ACTIVITY

Clearing of up to 0.63 hectares of native vegetation within the area cross-hatched yellow on attached Plan 3824/1.

CONDITIONS

Nil

Kelly Faulkner
Manager
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

21 October 2010

Plan 3824/1

LEGEND

- Road Centrelines
- Clearing Instruments
- Areas Approved to Clear
- Cadastre for labelling
- Leeuwin 50cm Orthomosaic - Landgate 2004

N

0 ~125 m

Scale 1:4218
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Date 21/10/10

K Faulkner

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

WA Crown Copyright 2002

* Project Data. This data has not been quality assured. Please contact map author for details.

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3824/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Bessell Road Pty Ltd**

1.3. Property details

Property: LOT 2 ON DIAGRAM 72739 (House No. 43 BESSELL ROSA GLEN 6285)
Local Government Area:
Colloquial name:

1.4. Application

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

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 No. 3 (Nornalup) is described as medium forest; Eucalyptus marginata (Jarrah) and Corymbia calophylla (Marri). Mattiske vegetation complex: Treeton (Tw); paperbark woodlands on valley floors. (Shepherd, 2009; Mattiske, 1994)	Good to degraded (Keighery, 1994) riparian vegetation with scattered paperbark, tea- tree, bracken and introduced grasses with some scattered dead/fallen yarri, jarrah or marri. Historically grazed, and exhibits such evidence, however has been stock free for past 4 years. Proposal is to clear upto 0.63ha for construction of a soak within a naturally occurring spring.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition determined from viewing photographs supplied by applicant and aerial photography.

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 area under application does not comprise a high level of biodiversity, but exhibits disturbance from historical grazing and agricultural use in the form of an altered understorey, sparse upper storey and presence of weedy grasses.

The area exists within Beard's Nornalup vegetation association of which 69% of this vegetation association remains in the Jarrah Forest Bioregion and 67% in the Shire of Augusta-Margaret River. The vegetation proposed to be cleared is also comprised of the Treeton vegetation complex of which only 29% of this complex remains (Havel, 2002). However, given the historical landuse, the site proposed to be cleared is considered to be in a good to degraded (Keighery, 1994) condition.

Twenty-one priority listed flora species occur within a 10km radius of the proposed clearing. The closest species to the proposed clearing are: Acacia tayloriana (P4) - recorded 760m northwest, Grevillea bronwenae (P2) - recorded 1.1km south and Tyrbastes glaucescens (P4) - recorded 1.4km southwest. All except 2 occur on the same soil type and all occur within same vegetation association.

Two occurrences of a PEC (Reedia swamps - Blackwood Plateau) occur 10km southeast of the proposed clearing. The flora species which make up this PEC (perennial herbs) occur on grey-black sand/clay or peat and occur within winter-wet depressions. The area under application has similar characteristics which may support this PEC.

A site inspection did not identify any evidence of this PEC (DEC, 2010)

Grazing pressure no longer exists and the site proposed to be cleared does appear to exhibit the beginnings of some minor regeneration as indicated by the presence of bracken (DEC REF A315465).

Given the above, the proposal is not likely to be at variance to this principle.

Methodology

References:
-Shepherd (2009)
- Keighery (1994)
- Havel (2002)

GIS database:
- Interim Biogeographic Regionalisation of Australia
-SAC Biodatasets (accessed July 2010)

(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 at variance to this Principle

The site under application exhibits disturbance from historical grazing and agricultural use in the form of an altered understorey, sparse upper storey and presence of weedy grasses.

The site (a natural spring) is within a minor, perennial watercourse whose flow is impeded by a dam 350m upstream. The riparian vegetation of the site may be suitable habitat for the White-bellied and/or the Orange-bellied Frog (both listed as Threatened species; both recorded within 5-10km of the proposed clearing) and/or the Margaret River Burrowing crayfish (listed as a Threatened species; recorded 10km from the site).

The White-bellied Frog occurs in permanently moist sites in relatively dry and seasonal climatic zones. The White-bellied Frog inhabits broad U-shaped drainage depressions with swampy floors within undulating to hilly country on Leeuwin Block granite and narrow V-shaped valleys on laterized Perth Basin sediments.

The distribution of the White-bellied Frog is extremely restricted and fragmented and is contained within an area north and west of the Blackwood River between Margaret River and Augusta. Its extent of occurrence is approximately 130 km square.

The species area of occupancy is less than 2.5 km square. It is estimated that 81 percent of the extent of occurrence and 82 percent of the area of occupancy of the White-bellied Frog exists on private land. The area of suitable habitat of the species is estimated to be 193.2 ha or approximately three percent of the species extent of occurrence (DEWHA, 2010a).

The Orange-bellied Frog occurs in permanently moist sites in relatively dry and seasonal climatic zones of lateritic uplands and narrow valleys. The species occupies six unconnected and undisturbed areas of riparian vegetation at an elevation of 120 m in broad U-shaped valleys (up to 100 m wide) where there is marked topographic relief. The species is abundant at seepages but rare on the valley floor.

The Orange-bellied Frog is confined to a 6.3 km square area east of the Leeuwin-Naturaliste Ridge, which relates to the lower reaches of six creeklines which drain south into the Blackwood River.

Dominant plant species that occur at Orange-bellied Frog sites include: Homalospermum firmum, Pseudoloxocarya grossa, Loxocarya sp. nov., Boronia molloyae, Acacia uliginosa, Agonis linearifolia and Astartea fascicularis (DEWHA, 2010b).

Given these habitat requirements and known distribution, the Orange-bellied frog is unlikely to occur on-site.

The Margaret River Burrowing Crayfish lives in the narrow, creek tributaries of the Margaret River in areas of dense vegetation that includes tea-trees (Melaleuca spp.) and eucalypts (Eucalyptus spp.). Soils are heavy grey-yellow clays (DEWHA, 2010c).

Given the distance from this site to the Margaret River (+10km), and the soil type of its habitat, this species of crayfish is unlikely to occur on-site.

The absence of significant mature upper story tree species suggests the site is unlikely to be suitable habitat for other threatened species such as the Western Ringtail Possum (recorded within 5-10km), the Brush-tailed Phascogale (recorded within 5-10km) and/or the Forest Red-tailed Black Cockatoo (recorded within 5-10km). However, the remainder of the watercourse has some limited linkages to the north and west of what appears to be vegetation in good to excellent (Keighery, 1994) condition.

A survey for the White-bellied Frog was undertaken on 5 October 2010 (the breeding season) and determined that this frog species did not occur within the area propsed to be cleared (DEC, 2010).

Methodology References:
-Shepherd (2009)
- Keighery (1994)
- DEWHA (2010a, 2010b and 2010c)
- DEC (2010)

GIS database:
- Pre European Vegetation
-SAC Biodatasets (accessed July 2010)

(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**
No records of rare flora occur within the immediate proximity of the site under application. Two occurrences of DRF Reedia spathacea occur 10km southeast of the proposed clearing. This herb grows 2-4m high and typically grows in peaty sands in swamps. The area under application does not comprise this soil type or swamp-like features.

Given the above, the proposal is not likely to be at variance to this principle.

Methodology SAC Bio Datasets (accessed July 2010)

(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 at variance to this Principle**
No records of threatened ecological communities occur within the immediate proximity of the site under application.

The site under application (a natural spring) is within a minor, perennial watercourse whose flow is impeded by a dam 350m upstream. The soils are likely to consist of clay and ironstone gravels [based on chief soil description for the soil type of the area (Tc5)] (Northcote, 1960-68).

Given the above, the clearing proposal is not at variance to this principle.

Methodology References
- Northcote (1960-68)
- DEC (2010)

GIS database
- SAC Bio Datasets (accessed July 2010)

(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 at variance to this Principle**
The site under application exists within Beard's Nornalup vegetation association of which 69% of this vegetation association remains in the Jarrah Forest Bioregion and 67% in the Shire of Augusta-Margaret River (Shepherd, 2009).

The vegetation proposed to be cleared is also comprised of the Treeton vegetation complex of which only 29% of this complex remains (Havel, 2002). Given the historical grazing of the site the vegetation under application is considered to be in a good (Keighery, 1994) condition.

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).

Given the extent of vegetation remaining in the Shire and Bioregion and vegetation condition, it is not considered likely that the vegetation under application is a significant remnant.

Given the above, the proposal is not likely to be at variance to this principle.

Pre-European (ha)	Current extent (ha)	Remaining (%)

IBRA Bioregion*			
Jarrah Forest	2,390,591	1,657,963	69.3
Treeton complex**	8,723	2,524	29
Shire of Augusta-Margaret River*	169,669	114,082	67.2

* (Shepherd, 2009)
** (Havel, 2002)

Methodology

References:
- Commonwealth of Australia (2001)
- Shepherd (2009)
- Havel (2002)

GIS Databases:
- Interim Biogeographic Regionalisation of Australia
- Pre-European Vegetation

(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 at variance to this Principle

The site proposed to be cleared is a natural spring within a watercourse. The flow of this watercourse is impeded by an existing dam, 350m upstream from the site of the proposed soak. A major, perennial watercourse occurs 330m downstream.

The upper boundary of a geomorphic wetland, associated with the Upper Chapman Brook, exists 280m to the south.

Given the site is within a watercourse, the proposal is at variance to this principle. However, the proposed clearing is not likely to impact on the values of the watercourse.

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

Land degradation from salinity, wind or water erosion is unlikely to occur. The site (a natural spring) proposed to be cleared is within a minor, perennial watercourse whose flow is impeded by a dam 350m upstream. The soils are likely to consist of clay and ironstone gravels [based on chief soil description for the soil type of the area (Tc5)] (Northcote, 1960-68). Topographically, the relief of the land is considered low, dropping 5m over 177m in a southerly direction.

Given the above, the proposal is not likely to be at variance to this principle.

Methodology

References:
Northcote et al (1960-68)

GIS database:
- Hydrography, linear
- Soils

(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 removal of the vegetation under application is not likely to have any impact on the environmental values of any nearby conservation areas.

The southern boundary of a national park occurs 5km to the north of the area under application; a timber reserve occurs 1km south. Some limited linkage may occur to these areas; however other linkages from other land parcels exist in the immediate area.

The upper extent of a geomorphic wetland is recorded 280m south.

Given the above, the proposal is not at variance to this principle.

Methodology GIS dataset:
- 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 is not likely to be at variance to this Principle**
The removal of the vegetation under application is not likely to have any long term impact on the quality of surface or underground water.

The creation of a soak may initially result in a reduction in the water quality within the confines of the soak.

Erosion is unlikely given the soil types [clay and ironstone gravels; (Northcote, 1960-68)] and relief of the land is considered low, dropping 5m over 177m in a southerly direction.

Given the above, the proposal is not likely to be at variance to this principle.

Methodology GIS database:
- Hydrography, linear

(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 at variance to this Principle**
The area proposed to be cleared is a natural spring within a watercourse. The flow of this water course is impeded by an existing dam, 350m upstream from the site of the proposed soak. As such, flooding is unlikely to increase or be exacerbated.

Given the above, the proposal is not at variance to this principle.

Methodology GIS database:
- Hydrography, linear

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

Comments

Department of Water will issue a permit to 'interfere with bed and banks' once a clearing permit has been granted by DEC (DEC REF A323833).

Shire of August-Margaret River has recommended that clearing occur off-stream and that no clearing of the Treeton vegetation complex occurs (DEC REF A321621). Impact on this vegetation complex has been addressed in Principle (e).

Methodology

4. References

DEC, 2010. Department of Environment and Conservation Regional advice. Survey results for Geocrinia alba (A340316).

DEWHA, 2010a. Department of the Environment, Water, Heritage and the Arts . Geocrinia alba in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Mon, 16 Aug 2010 12:54:14 +1000

DEWHA, 2010b. Department of the Environment, Water, Heritage and the Arts (2010). Geocrinia vitellina in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Wed, 18 Aug 2010 14:34:10 +1000.

DEWHA, 2010c. Department of the Environment, Water, Heritage and the Arts (2010). Engaewa pseudoreducta in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Mon, 16 Aug 2010 13:21:12 +1000

Havel, J.J. (2002); Review of management options for poorly represented vegetation complexes. Prepared for Conservation Commission

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

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.

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)