



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4271/1
File Number: 2011/002056-1
Duration of Permit: 25 July 2011 to 25 July 2013

PERMIT HOLDER

William Bernard McPharlin
Glenis May Flanigan

LAND ON WHICH CLEARING IS TO BE DONE

Lot 2 on Diagram 62294 (Crowea 6258)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 36 hectares of native vegetation within the area shaded yellow on attached Plan 4271/1.

CONDITIONS

1. Dieback and weed control

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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

2. Watercourse management

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse* or *wetland*.

3. Records must be kept

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) 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;
- (b) the date that the area was cleared; and
- (c) the size of the area cleared (in hectares).

4. 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 3 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 25 April 2013, the Permit Holder must provide to the CEO a written report of records required under condition 3 of this Permit where these records have not already been provided under condition 4(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;

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

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;

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

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*; and

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.

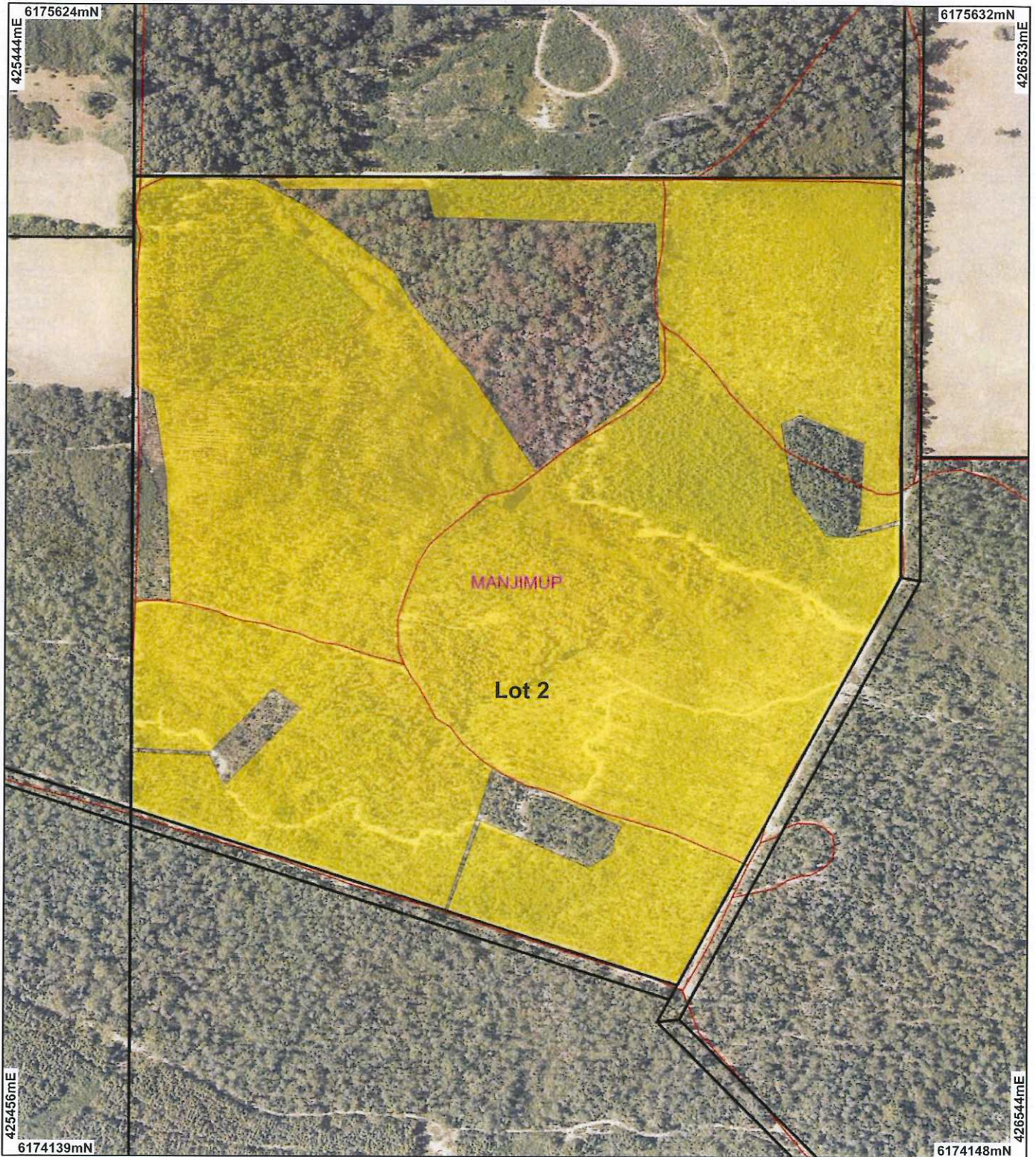


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

29 June 2011

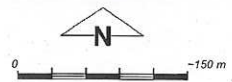
Plan 4271/1



LEGEND

- Clearing Instruments**
- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
 - Local Government Authorities

Northcliffe 50cm Orthomosaic
- Landgate 2007



Scale 1:6500
(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.

[Signature] Date 29/6/11
K. Paulkner

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 acknowledged by the agency acronym in the legend.



Department of
Environment and Conservation

Our environment, our future
WA Crown Copyright 2002

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



1. Application details

1.1. Permit application details

Permit application No.: 4271/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: William Bernard and Glenis May McPharlin/Flanigan

1.3. Property details

Property: LOT 2 ON DIAGRAM 62294 (HILL BROOK CROWEA 6258)

Local Government Area: Manjimup

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
36		Mechanical Removal	Grazing & Pasture

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 June 2011

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
The vegetation within the applied area is mapped as Beard vegetation association 3: medium forest; Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri).	The proposed clearing of 36 ha within a 61 ha footprint is for the purpose of establishment of pasture for livestock grazing.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The vegetation condition and clearing description is based on information obtained during a site inspection by DEC officers undertaken on 13 April (DEC 2011).
Beard vegetation association 1144: Tall forest; karri & marri (Corymbia calophylla) (Hopkins et al 2001; Shepherd 2009)	The area under application consists of an old Blue Gum plantation that was mostly planted in the 1980's. However, regrowth of native vegetation has since occurred with the vegetation considered to be in good (Keighery 1994) condition (DEC 2011).		
Mattiske vegetation complex Angove (A): Open forest of Eucalyptus marginata subsp. marginata-Banksia ilicifolia-Nuytsia floribunda with some Eucalyptus diversicolor on gently sloping sandy terrain in hyperhumid and perhumid zones.			
Mattiske vegetation complex Crowea (CRd): Open forest to tall open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on uplands in hyperhumid and perhumid zones.			
Mattiske vegetation complex Crowea (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 and Havel 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 proposal is to clear 36 ha of native vegetation within a 61 ha footprint, for the purpose of establishing pasture for livestock grazing.

The vegetation under application is predominantly closed scrub with tea tree and regrowth jarrah and marri;

the vegetation is considered to be in good (Keighery 1994) condition (DEC 2011).

Within the local area (10 km radius) there are records for eight priority flora species being *Actinotus* sp. Walpole (P3), *Thysanotus formosus* (P1), *Lomandra ordii* (P3), *Sphenotoma parviflora* (P3), *Hemigenia rigida* (P1), *Sphaerolobium pubescens* (P3), *Gonocarpus simplex* (P3) and *Meeboldina thysananthus* (P3). These species generally occur within riparian, seasonally inundated and swampy habitats. This preferred habitat does occur within the area under application and during a site visit (DEC 2011) individual plants of *Actinotus* sp were identified in the creek system near the southern boundary.

DEC notes that the vegetation is significantly altered from previous land uses and therefore comprises limited flora species; however, given the occurrence of priority flora it is considered the applied area may comprise a locally high level of biological diversity. Therefore, the clearing as proposed may be at variance to this Principle.

A minimum 30 metre vegetated buffer from existing creek lines and inundated areas, and associated vegetation would ensure adequate protection of riparian vegetation and the potential priority flora habitat.

Methodology References:
- DEC (2011)
- Keighery (1994)
GIS Database:
- SAC Bio Datasets Accessed 1/4/2011

(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**
Four conservation significant fauna species, Water- rat (*Hydromys chrysogaster*), Quokka (*Setonix brachyurus*) and Muir's Corella (*acacua pastinator pastinator*) have been recorded within the local area (10 km radius) (DEC 2007-).

The vegetation under application is predominantly closed scrub with tea tree and regrowth jarrah and marri; the vegetation is considered to be in good (Keighery 1994) condition (DEC 2011). A site inspection of the area under application observed riparian vegetation which is considered to be suitable habitat for the specially protected quokkas (also listed as Vulnerable under the EPBC Act 1999) (Commonwealth of Australia 2010).

DEC notes that the vegetation is significantly altered from previous land uses and therefore comprises limited habitat values; however, given the occurrence of creek lines and associated vegetation, it is considered the applied area may comprise significant habitat for fauna. Therefore, the clearing as proposed may be at variance to this Principle.

A minimum 30 metre vegetated buffer from existing creek lines and inundated areas and associated vegetation would ensure adequate protection of riparian vegetation and the associated quokka habitat.

Methodology References:
- Commonwealth of Australia (2010)
- DEC (2007-)
- DEC (2011)
- Keighery (1994)
GIS Database:
- SAC Bio Datasets Accessed 1/4/2011

(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 records of three species of rare flora within the local area (10 km radius), being *Kennedia glabrata*, *Myriophyllum trifidum* and *Caladenia christineae*.

Kennedia glabrata generally occurs on granite outcrops; *Myriophyllum trifidum* generally occurs in the margins of drainage lines/creek lines; and *Caladenia christineae* generally occurs in margins of winter-wet flats and swamps (WA Herbarium 1998-). Suitable habitat for these flora species may exist along the creek lines that traverse the applied area. Therefore, the clearing as proposed may be at variance to this Principle.

A minimum 30 metre vegetated buffer from existing creek lines and inundated areas and associated vegetation would ensure adequate protection of riparian vegetation and the potential rare flora habitat.

Methodology Reference:
- WA Herbarium (1998-)
GIS Database:

(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 are no known records of Threatened Ecological Communities (TEC) within 50 km of the area under application. Given the distance, it is not considered likely that the vegetation under application comprises or is necessary for the maintenance of a TEC.

Methodology GIS Database:
- SAC Bio Datasets Accessed 1/4/2011

(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 is described as Beard vegetation association 3 (50%) and 1144 (50%), which there is 80.27% and 79.63% of pre-European extent remaining, respectively (Shepherd 2009). The vegetation under application is also described as Mattiske Vegetation Complex Angove (A), Crowea (CRd) and Crowea (CRy), which there is 89.89%, 80.15% and 74.37% of pre-European vegetation extent remaining respectively (Mattiske and Havel 1998).

The vegetation associations/complexes all retain more than the threshold level (30%) for pre-1750 vegetation remaining recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Western Australia 2001). In addition, there is 84.50% of pre-1750 vegetation remaining in the Shire of Manjimup and ~84% remaining in the local area (10km radius).

Given the extent of vegetation remaining in the Shire and bioregion and the high representation of the vegetation types, the local area is not considered to be extensively cleared and the vegetation under application is not considered to be significant. Therefore, the clearing as proposed is considered not likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining %
IBRA Bioregion			
Warren*	833,981	667,164	80.5*
Shire of Manjimup*	69,730	58,9248	84.5*
Local Area (~10km radius)	31,500	~26,800	~85.0
Beard types in Bioregion*			
3	250,262	200,890	80.2
1144	159,668	127,144	79.6
Mattiske Complexes**			
A	39,698	35,683	89.8
CRd	1,904	1,526	80.1
CRy	33,764	25,111	74.3

(Shepherd 2009)*
(Mattiske and Havel 1998)**

Methodology References:
- Commonwealth of Australia (2001)
- Mattiske and Havel (1998)
- Shepherd (2009)
GIS Databases:
- Interim Biogeographic Regionalisation of Australia
- Mattiske Vegetation Complexes
- NLWRA, Current Extent of Native Vegetation
- 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

A minor perennial watercourse (tributary of Warren River) traverses the north and central sections of the Lot 2 (and a section of the applied area) and another minor perennial watercourse (tributary of Warren River)

traverses the across the southern section of the applied area. A site inspection observed the creek lines and associated riparian vegetation (DEC 2011). Therefore, the clearing as proposed is at variance with this Principle.

Department of Water (2011) recommends minimum 30 metre vegetated buffers to all waterways for water quality protection purposes.

A minimum 30 metre vegetated buffer from existing creek lines and inundated areas and associated vegetation would ensure adequate protection of riparian vegetation.

Methodology References:
- DEC (2011)
- Department of Water (2011)
GIS Databases:
- Hydrography, linear
- Rivers

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

Comments **Proposal may be at variance to this Principle**
The mapped soil type is Wd8, which is described as gently undulating drainage divides developed on quartzite with the chief soils being sandy yellow mottled soils with leached sands, sometimes associated with ironstone gravelly (Northcote et al 1960-8). These soils are prone to water erosion.

Given the risk of water erosion, the proposed clearing may cause short term appreciable land degradation. Therefore, the proposal may be at variance to this Principle.

Methodology Reference:
- Northcote et al (1960-8)
GIS Database:
- 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**
Lot 2 (includes the application area) is surrounded [except on the western boundary] by the conservation area Warren State Forest.

The proposed clearing may indirectly impact on the environmental values of the adjoining conservation reserve through the spread or introduction of weed species or dieback by machinery. The consequences associated with the spread of such exotic species into areas reserved for conservation, include the significant degradation of the reserve.

Given the possible indirect impact through the spread of weeds and dieback; it is considered likely that the clearing as proposed may impact on the environmental values of nearby conservation areas. Therefore, the clearing as proposed may be at variance to this Principle.

Weed control and dieback management would mitigate any impacts from the proposed clearing.

Methodology GIS Database:
- 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 may be at variance to this Principle**
A minor perennial watercourse (tributary of Warren River) traverses the north and central section of the Lot 2 (and a section of the applied area) and another minor perennial watercourse (tributary of Warren River) traverses the across the southern section of the applied area. A site inspection observed the creek lines and associated riparian vegetation (DEC 2011).

The soils mapped within the area under application are described as yellow mottled soils with some sandy yellow mottled soils with leached sands, sometimes associated with ironstone gravelly gravels (Northcote et al 1960-8). These soils are prone to water erosion, which may result in sedimentation and increased turbidity of the creeklines (on-site and off-site).

The surface water quality may be adversely impacted by the proposed clearing. Therefore, the clearing as proposed may be at variance with this Principle.

A minimum 30 meter vegetated buffer from existing creek lines and inundated areas and associated vegetation would ensure adequate protection of riparian vegetation and the associated creek line.

Methodology References:
- DEC (2011)
- Northcote et al (1960-8)
GIS Databases:
- Hydrography, linear
- Rivers
- Soils, statewide

(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 area under application comprises soils mapped as sandy yellow mottled soils with leached sands, sometimes associated with ironstone gravelly (Northcote et al 1960-8). These sandy soils have a low risk of flooding due to high infiltration rates. Therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology Reference:
- Northcote et al (1960-8)
GIS Database:
- Soils, statewide

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

Comments
The applied area is located within the Proclaimed Warren River surface water area and any interference with bed and banks would require a licence from the Department of Water.

Department of Water (2011) advised that they have received applications to take surface water and a permit to interfere with the bed and/or banks of the watercourse for the purposes of aquaculture, which are currently being processed.

The applied area falls within Zone D of the Warren River Catchment, which is subject to clearing controls under the Country Areas Water Supply Act 1947. Department of Water (2011) advised that three licences were granted to clear all except 8.7 ha of the 87.2 ha holding area. Department of Water notes that 8.5 ha, and stands and single trees of jarrah are to be retained, consequently as at least 10% of native vegetation will be retained.

The Commissioner of Soil and Land Conservation (2011) advised that there is some risk of phosphorous loss from the proposed aquaculture ponds unless suitable management activities are employed.

The Shire of Manjimup (2011) advised that the applicant is to confer with the Shire with the need to comply as relevant with all Shire requirements and that conditional approval for aquaculture has been granted.

Lot 2 is freehold land, zoned rural under the local Town Planning Scheme.

The applicant (McPharlin 2011) submitted correspondence in response to DEC letter dated 26 May 2011. The applicant agreed to a 30m buffer zone to protect gullies, and advised that the purpose of the clearing has changed from pasture and marron ponds to pasture only.

Methodology References:
- Commissioner of Soil and Land Conservation (2011)
- Department of Water (2011)
- McPharlin (2011)
- Shire of Manjimup (2011)
GIS Database:
- Town Planning Scheme Zones

4. References

Commissioner of Soil and Land Conservation (2011); Land Degradation Advice and Assessment Report for clearing permit application CPS 4271/1 received 13/05/2011; Department of Agriculture and Food Western Australia (TRIM Ref A395621).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Commonwealth of Australia (2010) Species Profile and Threats Database, *Setonix brachyurus*-Quokka; Department of Sustainability, Environment, Water Population and Communities; Canberra ACT. Online http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=229 (Accessed 18 May 2011)

DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 1/04/2011

DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4271/1, Lot 2 Hill Brook Road. Site Inspection undertaken 13/04/2011, Department of Environment and Conservation, Western Australia. DEC Ref A391804

Department of Water (2011) Direct Interest Submission for Clearing Permit Application CPS 4271/1. DEC Ref A389644 and A396048

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, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

McPharlin, B. (2011) Supporting Information for Application CPS 4271/1. DEC Ref A403120 and A406506

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.

Shire of Manjimup (2011) Direct Interest Submission for Clearing Permit Application CPS 4271/1. DEC Ref A384794 and A404464

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. Online <http://florabase.dec.wa.gov.au/> (Accessed 17/5/2011)

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)