



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4986/1

File Number: 2012/002191

Duration of Permit: From 14 September 2012 to 14 September 2014

PERMIT HOLDER

Bruce Francis Davidson

Helen Mary Davidson

LAND ON WHICH CLEARING IS TO BE DONE

Lot 6 on Diagram 55416, Yardarino

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 190 hectares of *Acacia rostellifera* within the combined areas hatched yellow on attached Plan 4986/1.

CONDITIONS

1. Revegetation

The Permit Holder shall: at an *optimal time* following clearing authorised under this Permit *revegetate* areas where *Acacia rostellifera* has been selectively cleared by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species structure and density of pre-clearing native vegetation types in that area to minimise the effects of land degradation.

2. Records to be kept

- (a) In relation to the *revegetation* of areas pursuant to condition 1 of this Permit:
- (i) the location of any areas *revegetated*, 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) a description of the *revegetation* activities undertaken;
 - (iii) the size of the area *revegetated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation*

3. Reporting

- (a) The Permit Holder must provide to the CEO on or before 31 July of each year, a written report:
- (i) of records required under condition 2 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 July and 30 June of the preceding year.
- (b) Prior to 14 July 2014, the Permit Holder must provide to the CEO a written report of records required under condition 2 of this Permit where these records have not already been provided under condition 3(a) of this Permit.

Definitions

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

optimal time means the period from May to July for undertaking *direct seeding*, and the period from August to September for undertaking *planting*;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.



M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

23 August 2012



1. Application details

1.1. Permit application details

Permit application No.: 4986/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Bruce Francis and Helen Mary Davidson

1.3. Property details

Property: LOT 6 ON DIAGRAM 55416 (YARDARINO 6525)
Local Government Area: Shire of Irwin
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
190		Mechanical Removal	Restoration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 August 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
Beard vegetation associations:	This application proposes to selectively clear 190 hectares of <i>Acacia rostellifera</i> for the purpose of re-establishing biodiversity. The vegetation under application consists predominately of <i>Acacia rostellifera</i> (Summer-Scented Wattle) with, in selective areas, occasional <i>Acacia scirpifolia</i> , <i>Eucalyptus drumondii</i> , <i>Nuytsia floribunda</i> (Labill.) and various banksia species (DEC, 2011).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation description and condition was determined through a site inspection undertaken by the Department of Environment and Conservation in December 2011 (DEC, 2011).
359 - <i>Acacia</i> sp. and <i>Banksia</i> sp. Shrublands.		To	
378 - <i>Eucalyptus tottiana</i> , <i>Xylomelum angustifolium</i> and mixed <i>Banksia</i> sp. scrub-heath.		Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	
433 - <i>Acacia rostellifera</i> and <i>Melaleuca cardiophylla</i> thickets with sparse low woodland of <i>Eucalyptus erythrocorys</i> .	The applicant proposes to clear <i>Acacia rostellifera</i> and replant a variety of other native species within the application area in order to re-establish the diversity of native vegetation.		

(Shepherd et al, 2001)

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**

This application proposes to selectively clear 190 hectares of *Acacia rostellifera* for the purpose of re-establishing biodiversity. The vegetation under application consists of predominately *Acacia rostellifera* (Summer-Scented Wattle) with, in selective areas, occasional *Acacia scirpifolia*, *Eucalyptus drumondii*, *Nuytsia floribunda* (Labill.) and various banksia species (DEC, 2011). The applicant proposes to remove *Acacia rostellifera* and replant a variety of other native species within the application area in order to re-establish the diversity of native vegetation.

The majority of the vegetation under application contains a limited number of flora species and is in completely degraded to good (Keighery, 1994) condition; however a small portion, approximately five hectares along the eastern boundary, retains moderate level of structure and species diversity and is in good to very good (Keighery, 1994) condition and is considered to contain plant species capable of supporting avian fauna habitat, including black cockatoo's (DEC, 2011).

As the applicant is proposing to clear *Acacia rostellifera* and that the majority of the vegetation is in completely degraded to good (Keighery, 1994) condition the application area is not considered to comprise a high level of biological diversity. Further, the applicant intends to re-establish the diversity of native vegetation within the application area post clearing and any short term impacts upon flora or fauna habitat are not likely to be significant, and offset by reinstating natural diversity.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
DEC (2011)
Keighery (1994)

GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-SAC Biodatasets (Accessed 28 May 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 is not likely to be at variance to this Principle

Seven fauna species of conservation significance have been recorded within the local area of the proposed clearing (30km radius), including *Calyptorhynchus latirostris* (Carnaby's cockatoo) which are listed as endangered under the Wildlife Conservation Act 1950 (WC Act) and *Calyptorhynchus baudinii* (Baudin's cockatoo) which are listed as vulnerable under the WC Act. Carnaby's cockatoo is also listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) while Baudin's cockatoo is listed as vulnerable under the EPBC Act. *Falco peregrinus* (Peregrine Falcon), *Morelia spilota* subsp. *imbricata* (Carpet Python), and *Neelaps calonotos* (Black-striped Snake) are also recognised as species of conservation significance and have been recorded within the local area (DEC, 2007-).

The application is within the Geraldton Sandplains and Shire of Irwin. These areas retain approximately 45 per cent and 50 per cent of their pre-European extent of vegetation (Government of WA, 2001), while the local area is highly cleared with less than 20 per cent of the area remaining vegetated.

Given that the majority of the vegetation under application is in completely degraded to good (Keighery, 1994) condition, and that the vegetation under application consists of predominately *Acacia rostellifera*, the vegetation under application is not considered to comprise significant habitat for fauna indigenous to Western Australia.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
DEC (2007-)
Government of WA (2001)
Keighery (1994)

GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-SAC Biodatasets (Accessed 28 May 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

Four rare flora species, *Conostylis dielsii* subsp. *teres*, *Conostylis micrantha*, *Leucopogon marginatus* and *Wurmbea tubulosa* have been recorded within the local area (30km radius) of the proposed clearing, however they have all been recorded within different vegetation types than the application area. *Conostylis micrantha* and *Leucopogon marginatus* has been recorded as occurring on the same mapped soil types as the application area while *Leucopogon marginatus* has also been recorded within the same mapped vegetation types.

Given that the vegetation under application consists predominately of *Acacia rostellifera*, has been used for agriculture historically and is in completely degraded to good (Keighery, 1994) condition with limited understorey, it is unlikely that the application area includes any rare flora species.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Keighery (1994)

GIS databases:
-SAC Biodatasets (Accessed 28 May 2012)

(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**
No threatened ecological communities (TEC) are recorded within the local area (30km radius) of the proposed clearing.

Given that the vegetation under application is predominately *Acacia rostellifera* (DEC, 2011) and the historical use of the land for farming, it is unlikely that the vegetation proposed to be cleared is representative of a TEC.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
DEC (2011)
Keighery (1994)

GIS databases:
-SAC Biodatasets (Accessed 28 May 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 area under application is mapped as three Beard vegetation associations; these being *Acacia* sp. and *Banksia* sp. shrublands (359), *Eucalyptus tottiana*, *Xylomelum angustifolium* and mixed *Banksia* sp. scrub-heath (378) and a mosaic of *Acacia rostellifera* and *Melaleuca cardiophylla* thickets with sparse low woodland of *Eucalyptus erythrocorys* (433) Shepherd et al (2001). Given that the vegetation under application has been significantly altered due to historic land use and now consists predominately of *Acacia rostellifera* (DEC, 2011) it is considered to be most closely aligned with vegetation association 433 and unlikely to be representative of the remaining vegetation associations.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In DEC tenure (%)
IBRA Bioregion				
Geraldton Sandplains	3,136,025	1,408,069	44.9	40.2
Shire of Irwin	236,967	117,339	49.5	24.4
Beard vegetation type in the Bioregion				
359	44,417	11,082	24.9	3.7
378	95,109	60,976	64.1	22.0
433	32,460	14,854	45.8	10.8

(Government of WA, 2011)

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 local area (30km radius) is highly cleared with less than 20 per cent remaining vegetated.

The application area is located within the Intensive Land-use Zone (ILZ), which has been extensively cleared for intensive agriculture (Shepherd et al. 2001). The application area is also within the area defined in Environmental Protection Authority (EPA) Position Statement No. 2, in which clearing for agriculture is not generally supported (EPA 2000).

While the application area is located within the ILZ and EPA Position Statement No. 2 area and the local area is highly cleared, given that the majority of the vegetation under application is in completely degraded to good (Keighery, 1994) condition, that the vegetation under application consists of predominately *Acacia rostellifera* and that the applicant is proposing to re-establish the diversity of other native vegetation within the application area, the vegetation under application is not considered significant as remnant.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Commonwealth of Australia (2001)
DEC (2011)
EPA (2000)
Government of WA (2011)
Keighery (1994)
Shepherd et al (2001)

GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-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 not likely to be at variance to this Principle

An unnamed, minor, non-perennial watercourse is located in the north-west corner of the application area. Approximately 0.05 hectares of native vegetation is associated within this watercourse. The applicant has advised that a number of *Eucalyptus camaldulensis*, occur within this area and that these trees will be retained.

The proposed clearing is not likely to be at variance to this Principle.

Methodology GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-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 area proposed to be cleared is mapped within the Mount Horner Allanooka Subsystem and is described as being alluvial and colluvial deposits in broad, gently inclined drainage depressions (DAFWA, 2011a). The soils within the areas of this subsystem are pale deep sands of the Balline Soil Series (DAFWA, 2011a).

An assessment to determine potential land degradation impacts from the proposed clearing has been conducted by the Department of Agriculture and Food Western Australia. The Commissioner of Soil and Land Conservation has advised that due to the loose deep sandy soils within the area under application the proposed clearing will significantly increase the risk of wind erosion by removing the protective vegetative cover provided by the *Acacia rostellifera* (DAFWA, 2011b). This risk can be managed by carefully timing the clearing operations, managing clearing residues and by establishing perennial pastures in the grazing alleys to protect the proposed planting of native vegetation seedlings during their establishment phase. The proponent is aware of the potential for land degradation and has developed a strategy to manage and minimise the risks, while revegetated areas become established.

Given the above, the proposed clearing may be at variance to this Principle.

Methodology References:
DAFWA (2011a)
DAFWA (2011b)

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 is not likely to be at variance to this Principle

Four conservation areas are located within the local area (30km radius) of the proposed clearing, being Dongara Nature Reserve, Burma Road Nature Reserve, Beekeepers Nature Reserve and Yandanogo Nature Reserve. The closest of these is Dongara Nature reserve, located approximately 12 kilometres from the application area. There is a limited amount of native vegetation linking the application area to the nature reserves and given the limited existing ecological linkage, the distance to these nature reserves and that the majority of the vegetation under application is in completely degraded to good (Keighery, 1994) condition it is considered that impacts to the nature reserves are unlikely to be significant.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Keighery (1994)

GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-DEC Tenure (Category)

(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

An unnamed minor non-perennial watercourse is located in the north-west corner of the application area; approximately 0.05 hectares of the vegetation under application is associated with this watercourse. Three other minor non-perennial watercourses are located approximately 1.6 kilometres to the west of the application area while there is a largely un-vegetated area subject to inundation approximately 500 metres to the south. The proposed clearing is not likely to exacerbate deterioration in the quality of surface water within these watercourses.

The salinity of groundwater within the vicinity of the application area is 1000-3000mg/L, which is classified as brackish to moderately saline. The underlying geomorphology of the application area consists of deep sediments. The risk of increased groundwater salinity is not likely to be appreciable.

Given the above and that the applicant intends to re-establish the diversity of other native vegetation within the application area, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
DAFWA (2012b)

GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-Groundwater Salinity, Statewide
-Hydrogeology, Statewide
-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 likely to be at variance to this Principle

An unnamed minor non-perennial watercourse is located in the north-west corner of the application area; approximately 0.05 hectares of the vegetation under application is associated with this water course. Three other minor non-perennial watercourses are located approximately 1.6 kilometres to the west of the application area while there is a largely un-vegetated area subject to inundation approximately 500 metres to the south.

The underlying geomorphology of the application area consists of deep sediments.

Given the underlying geomorphology of the application area and that the applicant intends to re-establish the diversity of other native vegetation post clearing it is considered unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding. The proposed clearing is not likely to be at variance to this Principle.

Methodology GIS databases:
-Dongara 50cm Orthomosaic - Landgate 2006
-Hydrogeology, Statewide
-Hydrography linear

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

Comments

The area under assessment is within the Arrowsmith proclaimed Groundwater Area under the Right in Water and Irrigation Act 1914. If the applicant intends on modifying/clearing the banks of the water source a license from the Department of Water is required.

The vegetation is within the agricultural area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 (EPA 2000) states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation, and therefore any further reduction in native vegetation through clearing for agriculture cannot be supported. The EPA (2000) recommends that all existing native vegetation be protected from passive clearing through, for example, grazing by stock or clearing by other means.

In exceptional circumstances the EPA would consider supporting clearing for agriculture within this region if:

- (a) There are alternative mechanisms for protecting biodiversity.
- (b) The area to be cleared is relatively small, depending on the scale at which biodiversity changes over the area, including extent of vegetation in the surrounding area and recognising that values will vary for different ecosystems.
- (c) The proponent demonstrates that the elements set out in Section 4.3 of Position Statement No 2 are being met. This will require extensive local and regional biodiversity work.
- (d) Land degradation, including aquatic environments and threatening processes, such as dieback, salinisation or disruption of catchment processes, on-site and off-site would not be exacerbated.

The majority of the application area has been previously cleared and was subject to historic cropping and grazing. These cleared areas were not maintained and *Acacia rostellifera*, known to be a species that regenerates strongly following disturbance, is inhibiting the natural regeneration of other native species. Given that the applicant is proposing to clear *Acacia rostellifera* and replant the area with a variety of other native species in order to re-establish the diversity of native vegetation within the application area, it is considered that the clearing supports the objectives of EPA Position Statement No. 2.

Methodology References:
EPA (2000)
Landgate (2011)

GIS Databases:
-ICMS Polygons, DEC Current
-RIWI Act, Groundwater Areas

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Commissioner of Soil and Land Conservation (2012a); Land Degradation Advice and Assessment Report for ICMS 21605 received 20/02/2012; Department of Agriculture and Food Western Australia (Ref. A467961).
- Commissioner of Soil and Land Conservation (2012b); Land Degradation Advice and Assessment Report for clearing permit application CPS 4986/1 received 22/06/2012; Department of Agriculture and Food Western Australia (Ref. A506532).
- DEC (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 28/05/2012.
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4986/1, Lot 6 Mount Horner West Road, Yardarino. Site inspection undertaken 07/12/2011. Department of Environment and Conservation, Western Australia (Ref. A461875).
- 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, Western Australia.
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Landgate (2011) Historical aerial imagery search for ICMS 21605. Western Australian Land Authority Government of Western Australia. Sales Order Number 9349630. Obtained 6 October 2011 (Ref: A514183).
- 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)