



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5217/1

File Number: 2011/006839-1

Duration of Permit: From 23 November 2012 to 23 November 2014

PERMIT HOLDER

Shire of Donnybrook-Balingup

LAND ON WHICH CLEARING IS TO BE DONE

Grimwade Road reserve (PIN 11505012) Wilga West

Irishtown Road reserve (PINS 11530381 – 11530385, 11404460) Donnybrook

Grist Road reserve (PIN 11599703) Donnybrook

Hurst Road reserve (PINS 1314702 – 1314706, 11529873) Argyle

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.15 hectares of native vegetation within the combined areas shaded yellow on attached Plan 5217/1a and Plan 5217/1b and Plan 5217/1c.

CONDITIONS

1. 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:

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

2. 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.

3. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect the area shaded yellow on Plan 5217/1c for the presence of *priority flora*.
- (b) Where *priority flora* are identified in relation to condition 3(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of identified *priority flora* occurs, unless approved by the CEO; and
 - (ii) no clearing occurs within 10 metres of identified *priority flora*, unless approved by the CEO.

4. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a *fauna specialist* who shall identify *habitat trees* suitable to be utilised by fauna species listed below:
 - (i) Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*)
 - (ii) Baudin's Black Cockatoo (*Calyptorhynchus baudinii*)
 - (iii) Red-tailed black cockatoo (*Calyptorhynchus banksii naso*)
 - (iv) Western Ringtail Possums (*Pseudocheirus occidentalis*)
- (b) Prior to clearing, any *habitat trees* identified by condition 4(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 4(a).
- (c) Where fauna are identified in relation to condition 4(b) of this Permit, the Permit Holder shall ensure that no taking of identified fauna occurs unless approved by the CEO.

5. 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 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;
 - (ii) the date that the area was cleared; and
 - (iii) the size of the area cleared (in hectares).
- (b) In relation to flora management pursuant to condition 3 of this Permit:
 - (i) the location of each priority flora species 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 each priority flora species identified; and
 - (iii) a copy of the botanists flora survey report.
- (c) In relation to fauna management pursuant to condition 4 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 tree(s)*; and
 - (iii) a copy of the fauna specialist's report.

6. 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 5 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 9 August 2014, the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 6(a) of this Permit.

DEFINITIONS

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

botanist means a person with specific training and/or experience in the biology, identification and taxonomy of Western Australian flora;

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 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;

priority flora means those plant taxa described as priority flora classes 1, 2, 3 or 4 in the *Department's Declared Rare and Priority Flora List for Western Australia* (as amended);

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*.

Roxane Shadbolt

Roxane Shadbolt
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

1 November 2012

Plan 5217/1a



LEGEND

- Cadastre
- Road Centrelines
- Clearing Instruments
- Bridgetown 50cm
- Orthomosaic - Landgate
- 2004



Scale 1:20000

(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.

R. Shadbolt 1/11/12 Date

Roxane Shadbolt

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



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

Plan 5217/1b



LEGEND

- Cadastral
- Road Centrelines
- Clearing Instruments
- Dennybrook 50cm
- Orthomosaic - Landgate 2004



0 ————— 250 m

Scale 1:10000

(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.

R. Shadbolt Date 1/11/12

Roxane Shadbolt

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

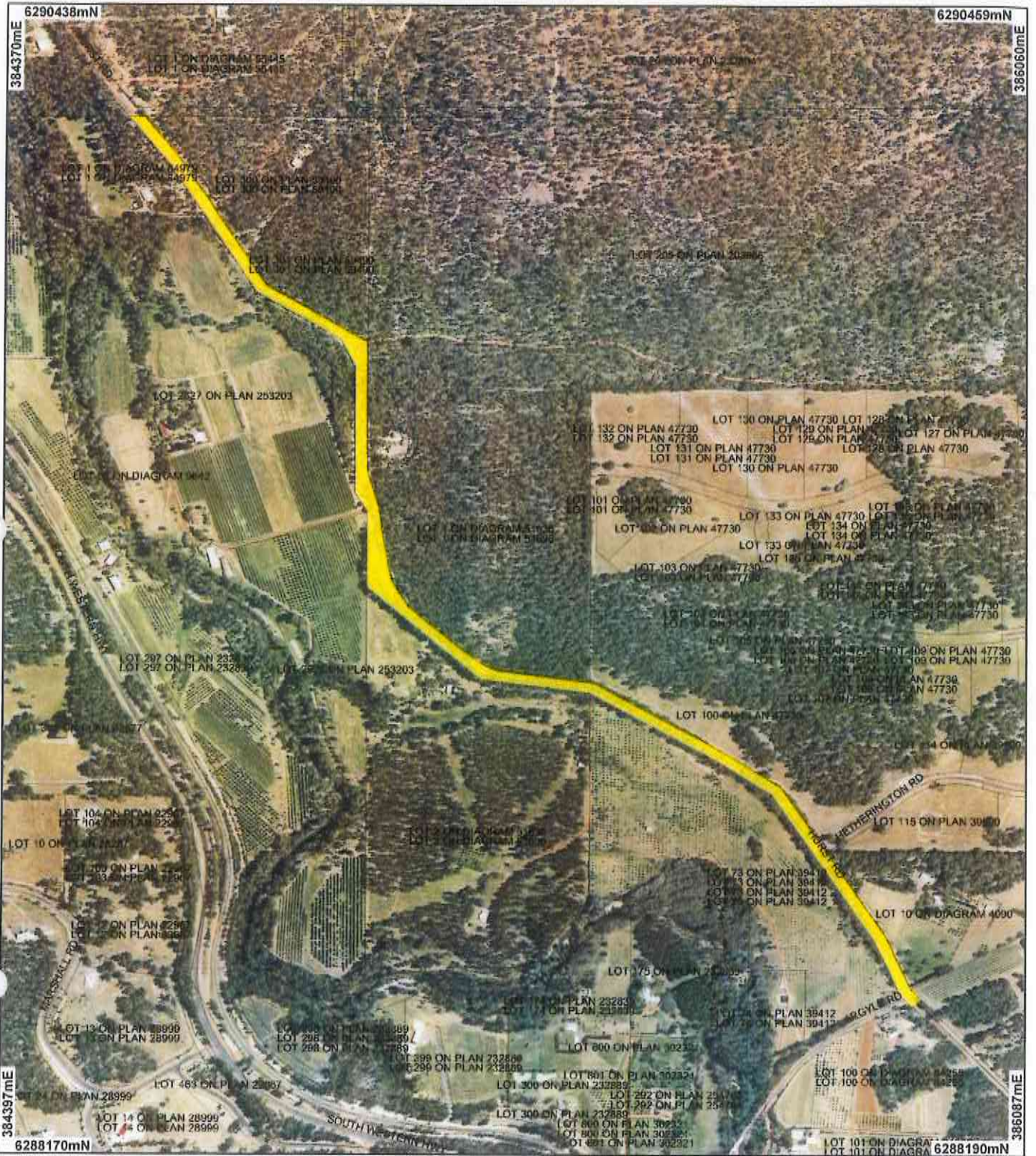


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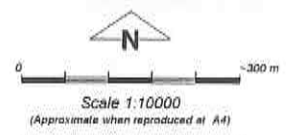
* Project Data. This data has not been quality assured. Please contact map author for details.

Plan 5217/1c



LEGEND

- Cadastral
- Road Centrelines
- Clearing Instruments
- Donnybrook 50cm
- Orthomosaic - Landgate 2004

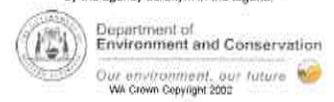


Geocentric Datum Australia 1994

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

R. Shadbolt Date 1/11/12
Roxane Shadbolt

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



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



1. Application details

1.1. Permit application details

Permit application No.: 5217/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Donnybrook Balingup

1.3. Property details

Property:
ROAD RESERVE (WILGA WEST 6243)
ROAD RESERVE (DONNYBROOK 6239)
ROAD RESERVE (DONNYBROOK 6239)
ROAD RESERVE (ARGYLE 6239)

Local Government Area: Shire of Donnybrook Balingup

Colloquial name: Grimwade Road reserve, Irishtown Road reserve, Grist Road reserve and Hurst Road reserve

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 1 November 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 association: 3 - Medium forest; jarrah-marri (Shepherd et al. 2001).	The vegetation along Grimwade Road reserve, Wilga West is a <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> overstorey with occasional <i>Agonis flexuosa</i> . The understorey and groundcover is <i>Banksia grandis</i> , <i>Persoonia longifolia</i> , <i>Bossiaea linophylla</i> , <i>Hakea amplexicaulis</i> , <i>Xanthorrhoea gracilis</i> , <i>Acacia pulchella</i> , <i>Pteridium esculentum</i> , <i>Leucopogon verticillatus</i> , <i>Macrozamia riedlei</i> and <i>Hibbertia hypericoides</i> (DEC 2012).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	Vegetation description and condition were determined through aerial imagery, site inspection (DEC 2012) and information provided by proponent (Shire of Donnybrook-Balingup 2012).
Mattiske vegetation complex: Dwellingup (D1) - Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> on lateritic uplands in mainly humid and subhumid zones (Mattiske & Havel 1998).			
Beard vegetation association: 1182-Medium woodland; <i>Eucalyptus rudis</i> & <i>Melaleuca raphiophylla</i> . (Shepherd et al. 2001).	The vegetation along Irishtown and Grist Road reserves, Donnybrook is a <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> overstorey with occasional <i>Eucalyptus rudis</i> . The understorey and groundcover is <i>Persoonia longifolia</i> , <i>Xanthorrhoea preissii</i> , <i>Acacia pulchella</i> , <i>Acacia urophylla</i> , <i>Pteridium esculentum</i> , <i>Macrozamia riedlei</i> , <i>Hibbertia hypericoides</i> , <i>Conostylis</i> sp. and other small herbs (DEC 2012).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994).	As above
Mattiske vegetation complex: Preston (PR) - Woodland of <i>Eucalyptus rudis</i> - <i>Agonis flexuosa</i> - <i>Banksia seminuda</i> along streams, open forest of <i>Corymbia calophylla</i> - <i>Eucalyptus patens</i> on slopes in the humid zone and Rosa (RO) as Woodland to open forest of <i>Corymbia calophylla</i> - <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Xylomelum occidentale</i> on slopes and tall shrubland of <i>Agonis linearifolia</i> in valley floors in the humid zone (Mattiske & Havel 1998).		To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	
Beard vegetation association: 1182-Medium woodland; <i>Eucalyptus rudis</i> & <i>Melaleuca raphiophylla</i> . (Shepherd et al. 2001).	The vegetation along Hurst Road reserve, Argyle is a <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> overstorey with occasional <i>Agonis flexuosa</i> . The understorey and groundcover is <i>Persoonia longifolia</i> , <i>Grevillia manglesioides</i> , <i>Bossiaea linophylla</i> , <i>Xanthorrhoea preissii</i> , <i>Xanthorrhoea gracilis</i> , <i>Acacia pulchella</i> ,	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994).	As above
Mattiske vegetation complex: Preston (PR) - Woodland of <i>Eucalyptus rudis</i> - <i>Agonis flexuosa</i> - <i>Banksia seminuda</i> along streams,		To	

open forest of *Corymbia calophylla*-*Eucalyptus patens* on slopes in the humid zone and *Rosa* (RO) as Woodland to open forest of *Corymbia calophylla*-*Eucalyptus marginata* subsp. *marginata*-*Xylomelum occidentale* on slopes and tall shrubland of *Agonis linearifolia* in valley floors in the humid zone (Mattiske & Havel 1998).

Acacia urophylla, *Acacia dentifera*, *Leucopogon verticillatus*, *Pteridium esculentum*, *Macrozamia riedlei* and *Hibbertia hypericoides*, *Conostylis* sp. and other small herbs (DEC 2012).

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).

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 is for the purpose of road upgrades. The proposed clearing consists of approximately 0.7 hectares within Grimwade Road reserve, approximately 0.15 hectares within Irishtown and Grist Road reserves and approximately 0.3 hectares within Hurst Road reserve.

The vegetation within the Grimwade Road reserve is in good (Keighery 1994) condition. The vegetation is considered to be of medium-high to high conservation value (RCC 2008). However, given the large extent of the surrounding similar vegetation, it is unlikely that this application area consists of a significant level of biological diversity compared to the surrounding vegetation. There are no priority species within a 10 kilometre radius of this application area. Given this, the proposed clearing in the Grimwade Road reserve is not likely to be at variance to this principle.

The vegetation within the Irishtown and Grist Road reserves ranges from completely degraded to good (Keighery 1994) condition, with the majority being in degraded (Keighery 1994) condition. The vegetation ranges from low to medium-high conservation value as it has low species diversity and vegetation continuity, but has high value as a biological corridor (RCC 2008). There is one record of a priority three species located approximately 180 metres from the application area. However, given the condition of the vegetation under application and the differing soil type, it is unlikely that this species occurs within the application area. It is not likely that the proposed clearing in the Irishtown and Grist Road reserves would be at variance to this principle.

The vegetation within the Hurst Road reserve ranges from degraded to good (Keighery 1994) condition, with the majority being in good (Keighery 1994) condition. The vegetation within the Hurst Road reserve ranges from medium-low to high conservation value (RCC 2008). The vegetation structure is relatively intact and supports several native species. Although the continuity of the vegetation is relatively good, the reserve provides little value as a biological corridor (RCC 2008). There are three records of a priority three species occurring within and in close proximity to this application area. During a Department of Environment and Conservation (DEC) site inspection, a plant thought to be priority flora was observed just north of the application area. Given the above, this area under application may contain high levels of biological diversity and may be at variance to this principle.

Flora management practices will ensure that priority species are not removed during the clearing process.

Methodology

References:

DEC 2012

Keighery 1994

RCC 2008

GIS databases:

- Bridgetown 50cm Orthomosaic - Landgate 2004
- Donnybrook 50cm Orthomosaic - Landgate 2004
- Mattiske Vegetation Complexes
- Pre European Vegetation
- SAC Biodatasets
- Soils, Statewide

(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

There are four threatened and two priority four fauna species within a 10 kilometre radius of the Grimwade Road reserve application area. There are several large, potentially hollow bearing trees within the application area. Given the extent of the surrounding vegetation (Wilga State Forest), the vegetation under application is not likely to be significant habitat for these species. Fauna management practices will ensure that no fauna is harmed during clearing.

There are seven threatened, five priority, two protected under international agreement and one specially protected fauna species within the local area (10 kilometre radius) of the Irishtown, Grist and Hurst Road reserves. The Irishtown and Grist Road reserves have high importance as a biological corridor and are surrounded by cleared land. During a DEC site inspection, a small flock of Forest Red-Tailed Black Cockatoos (*Calyptorhynchus banksii* subsp. *Naso*; rare or likely to become extinct, Wildlife Conservation Act 1950; vulnerable, Environment Protection and Biodiversity Conservation Act 1999) were seen feeding on *Corymbia*

calophylla trees. Given the above, this proposed clearing may be at variance to this principle.

Within the Hurst Road reserve application area, there are several large trees that contained hollows or are potentially hollow bearing. During a DEC site inspection, evidence of Western Ringtail Possums (*Pseudocheirus occidentalis*; rare or likely to become extinct, Wildlife Conservation Act 1950; vulnerable, Environment Protection and Biodiversity Conservation Act 1999) was found. The presence of peppermint trees (*Agonis flexuosa*) within the road reserve provides further evidence that the application area provides habitat for Western Ringtail Possums. Given the above, this proposed clearing may be at variance to this principle.

The Shire of Donnybrook-Balingup (2012) has advised that, where possible, clearing can occur on one side or both sides of the roads under application, so that the removal of large trees will be limited.

Fauna management practices will ensure that no fauna is harmed during the clearing process.

Methodology **References:**
 DEC 2007-
 DEC 2012
 Shire of Donnybrook-Balingup 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 are no records of rare flora within 10 kilometres of the Grimwade Road reserve application area. There are several records of rare flora within 10 kilometres of the Irishtown, Grist and Hurst Road reserves, but none that occur on the same soil and vegetation complexes as the application areas. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology **GIS Databases:**
 - Mattiske Vegetation Complexes
 - Pre European Vegetation
 - SAC Biodatasets
 - Soils, Statewide

(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 records of threatened ecological communities within 10 kilometres of the application areas and therefore the proposed clearing is not likely to be at variance to this principle.

Methodology **GIS Databases:**
 - SAC Biodatasets

(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**
 Aerial photography indicates the local area (10 kilometre radius) around the Grimwade Road reserve is approximately 70 per cent vegetated.

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 vegetation associations mapped over the application area retain over 30 per cent of their pre-European extents within the Jarrah Forrest IBRA Bioregion (Government of Western Australia 2011). The majority of the remaining vegetation occurs in DEC managed lands.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion				
Jarrah Forest	4 506 657	2 473 560	55	68
Shire				
Shire of Donnybrook-Balingup	156 004	88 388	57	83
Beard Vegetation Association in Bioregion*				
3	2 390 592	1 641 272	69	80

Mattiske Vegetation Complex Dwellingup (D1)	208 273	186 732	90	85
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The local area around the Irishtown, Grist and Hurst Road reserves is approximately 50 per cent vegetated.

The vegetation associations mapped over the application area retain over 30 per cent of their pre-European extents within the Jarrah Forrest IBRA Bioregion (Government of Western Australia 2011).

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion				
Jarrah Forest	4 506 657	2 473 560	55	68
Shire				
Shire of Donnybrook-Balingup	156 004	88 388	57	83
Beard Vegetation Association in Bioregion*				
1182	11 128	4 839	43	68
Mattiske Vegetation Complex**				
Preston	9 773	5 539	57	44
Rosa	16 514	13 020	79	68

* Government of Western Australia 2011

** Mattiske & Havel 1998

Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology

References:

- Commonwealth of Australia 2001
- Government of Western Australia 2011
- Mattiske & Havel 1998
- Shepherd et al 2001
- GIS Databases:
 - Bridgetown 50cm Orthomosaic - Landgate 2004
 - DEC Managed Lands
 - Donnybrook 50cm Orthomosaic - Landgate 2004
 - Mattiske Vegetation Complexes
 - NLWRA, Current extent of Native Vegetation
 - Pre-European Vegetation
 - SAC Bio Datasets

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal may be at variance to this Principle

There are no watercourses or wetlands within close proximity to the Grimwade Road reserve application area.

There is one minor, perennial watercourse intersecting the Irishtown and Grist Road reserves application area and two minor, perennial watercourses intersecting the Hurst road reserve application area. There is a small area of *Agonis flexuosa* growing in association with one of the watercourses intersecting the Hurst Road reserve. Therefore the proposed clearing may be at variance to this principle.

The purpose of the proposed clearing is to upgrade existing roads and therefore there is likely to be road side infrastructure, such as drains and culverts, already in place to minimise impacts to these watercourses.

Methodology

GIS Databases:

- ANCA Wetlands
- Bridgetown 50cm Orthomosaic - Landgate 2004
- Donnybrook 50cm Orthomosaic - Landgate 2004
- Hydrography, Linear
- Ramsar Wetlands

(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 soil within the Grimwade Road reserve application area is mapped as JZ1, which Northcote et al. (1960-1968) describes as dissected plateau having a strongly undulating relief, and with some moderately incised valleys. It is characterized by lateritic gravels and block laterite. The chief soils are ironstone gravels with sandy and earthy matrices; the soils blanket the slopes and ridges extending down into the upper ends of the minor valleys.

The soil within the Irishtown and Grist Road reserves application area is mapped as Tc5, which Northcote et al. (1960-1968) describes as dissected plateau at low elevation of gently undulating to low hilly relief and characterized by extensive block laterite and lateritic (ironstone) gravels; some swamps: chief soils on slopes and undulating areas generally are hard acidic yellow mottled soils containing small to very large amounts of ironstone gravels.

The soil within the Hurst Road reserve application area is mapped as Tc5 (described above) and Mu11 which Northcote et al. (1960-1968) describes as river terraces: chief soils are neutral red earths and neutral yellow earths on the higher terrace.

Given the linear area under application and the existing road infrastructure it is unlikely that appreciable land degradation will occur. The proposed clearing is therefore unlikely to be at variance to this principle.

Methodology References:
Northcote et al. 1960-1968
GIS Databases:
- Mean Annual Rainfall
- Soils, Statewide
- Topographic Contours, 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 Grimwade Road reserve application area is adjacent to Wilga State Forest. The Irishtown and Grist Road reserves application area has a small section adjacent to the Boyanup State Forest and the Hurst Road reserve is adjacent to the Boyanup State Forest. The disturbance caused by the proposed clearing may increase the risk of weeds and dieback spreading into the adjacent state forests. Weed and dieback management practices will assist in reducing the potential impacts.

The proposed clearing may be at variance to this principle.

Methodology GIS Databases:
- Bridgetown 50cm Orthomosaic - Landgate 2004
- Donnybrook 50cm Orthomosaic - Landgate 2004
- DEC Managed Lands

(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 groundwater salinity within all the application areas is 500-1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal.

One minor, perennial watercourse intersects the Irishtown and Grist Road reserves application area and two minor, perennial watercourses intersecting the Hurst road reserve application area. During the works, the proposed clearing may cause short term water quality issues, such as localised surface water sedimentation. However, these issues are likely to be minimal as existing road infrastructure will prevent any significant water quality issues.

Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- Groundwater Salinity, Statewide
- Hydrography, Linear
- Public Drinking Water Source Areas (PDWSA)
- 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

Given the small, linear areas under application and the existing road infrastructure to manage drainage the proposed clearing is unlikely to cause or exacerbate flooding. Therefore is not likely to be at variance to this principle.

Methodology GIS Databases:
- Bridgetown 50cm Orthomosaic - Landgate 2004
- Donnybrook 50cm Orthomosaic - Landgate 2004
- Soils, Statewide

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

Comments

The Irishtown Road reserve and Hurst Road reserve application areas occur within the Busselton-Capel Groundwater Area covered by the Rights in Water and Irrigation Act 1914. The Department of Water has advised that they have no objections to the proposed clearing (DoW 2012).

No public submissions have been received in response to this application.

Methodology References:
DoW (2012)
GIS Databases:
- RIWI Act area

4. References

- 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 04/09/2012.
- DEC (2012) Site Inspection Report for Clearing Permit Application CPS 5217/1, Grimwade Road reserve, Wilga West, Irishtown Road reserve, Donnybrook, Hurst Road reserve, Argyle. Site inspection undertaken 03/10/2012. Department of Environment and Conservation, Western Australia (DEC REF: A557170).
- DoW (2012) Advice for clearing permit application CPS 5217/1. Received 16/10/2012, Department of Water, Western Australia (DEC REF: A556806).
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
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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)