



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 7129/1
<b>Permit Holder:</b>	Shire of Jerramungup
<b>Duration of Permit:</b>	4 March 2017 to 4 March 2022

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

### PART I – CLEARING AUTHORISED

**1. Purpose for which clearing may be done**

Clearing for the purpose of road widening and improving sightlines for road safety.

**2. Land on which clearing is to be done**

Boxwood Hill-Ongerup Road reserve (PINs 11642428 and 11381580), Boxwood Hill.

**3. Area of Clearing**

The Permit Holder must not clear more than 0.21 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7129/1.

**4. Application**

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

**5. Type of clearing authorised**

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

### PART II – MANAGEMENT CONDITIONS

**6. Avoid, minimise etc clearing**

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

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

## 7. Dieback and weed control

When undertaking any clearing 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) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared;

### Definitions

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

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

*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;

*weed/s* means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



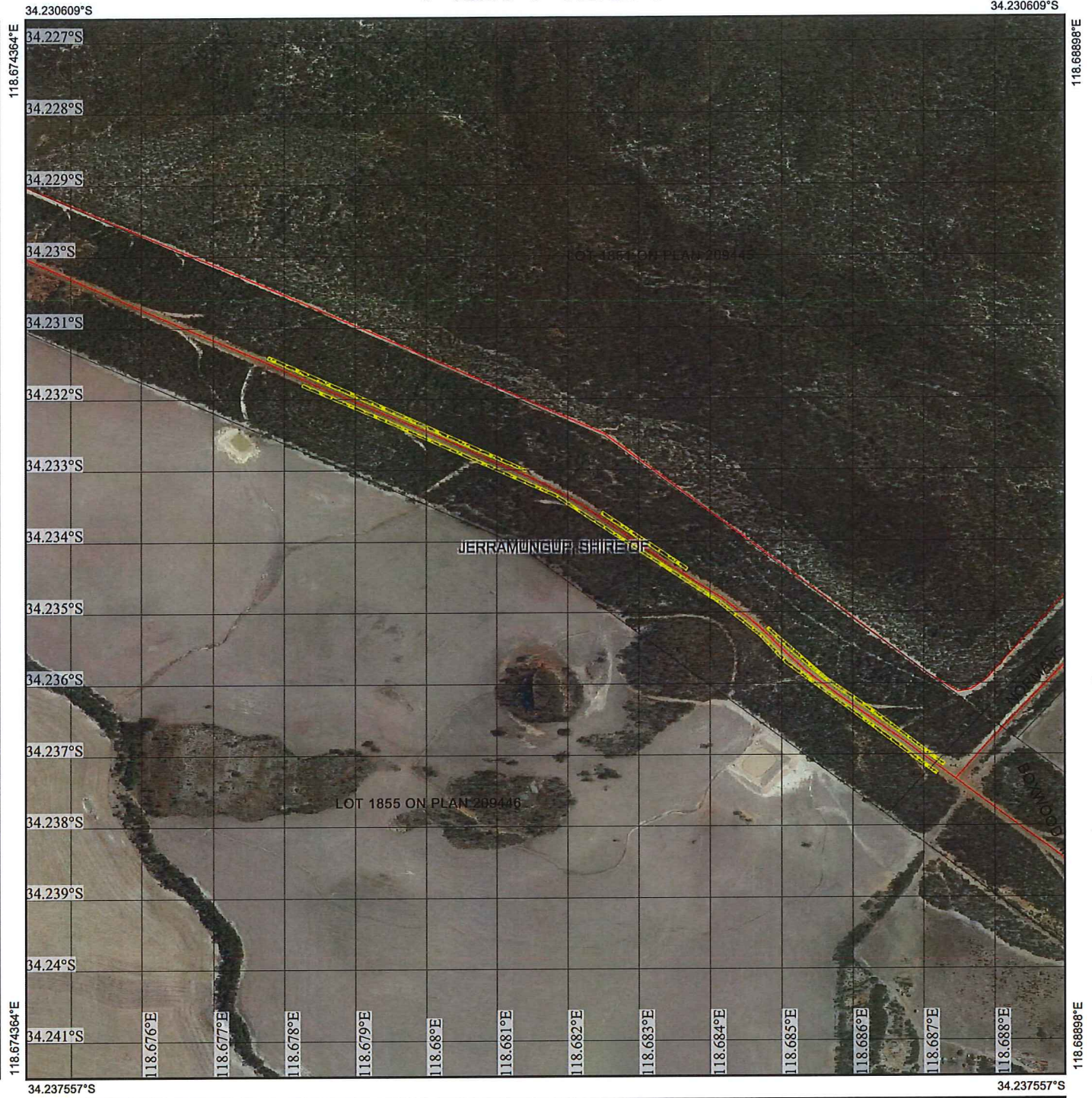
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James Widenbar  
A/SENIOR MANAGER  
CLEARING REGULATION

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

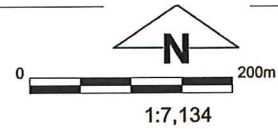
2 February 2017

# Plan 7129/1



## Legend

-  Roads
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



(Approximate when reproduced at A4)  
GDA 94 (Lat/Long)  
Geocentric Datum of Australia 1994

*[Signature]* Date *2/2/2017*

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



## 1. Application details

### 1.1. Permit application details

Permit application No.: 7129/1  
Permit type: Purpose Permit

### 1.2. Applicant details

Applicant's name: Shire of Jerramungup

### 1.3. Property details

Property: ROAD RESERVE - 11642428, BOXWOOD HILL  
ROAD RESERVE - 11381580, BOXWOOD HILL  
Colloquial name: Boxwood Hill-Ongerup Road  
Local Government Authority: JERRAMUNGUP, SHIRE OF  
DER Region: South Coast  
DPaW District: ALBANY  
Localities: NEEDILUP and BOXWOOD HILL

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Granted

Decision Date: 02 February 2017

Reasons for Decision: The clearing permit application received on 21 June 2016 has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is not likely to be at variance to any of the clearing principles.

The Delegated Officer determined that the proposed clearing may introduce or spread weeds and dieback into adjacent areas of remnant vegetation. Weed and dieback management practices will assist to minimise this risk.

The Delegated Officer had regard to the biological survey findings and noted that a population of approximately 60 individuals of the priority 4 flora species *Acrotriche dura* was detected during the flora and vegetation survey undertaken by Great Southern Bio Logic (2017), however determined that the proposed clearing will not impact on the conservation status of this species given this species is locally abundant.

The Delegated Officer determined that the proposed clearing of a linear area of 0.21 hectares of native vegetation adjacent to an extensive area of remnant vegetation, is unlikely to have any other significant environmental impacts.

## 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 940 is described as mosaic: Shrublands; mallee scrub, black marlock / Shrublands; tallerack mallee-heath (Shepherd et al., 2001).	The application is to clear 0.21 hectares of native vegetation within Boxwood Hill-Ongerup Road reserve (PINs 11642428 and 11381580), Boxwood Hill, for the purpose of road widening and improving sightlines	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).  To  Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate	The condition and description of the application area was determined via a site inspection conducted by Department of Environment Regulation (DER) officers on 2 August 2016 (DER, 2016) and via a flora and vegetation survey conducted by Great Southern Bio Logic (2017).  The vegetation and flora survey of the application area identified three vegetation communities within the application area,

for road safety.

(Keighery, 1994).

being:

- Open mallee woodland of *Eucalyptus pleurocarpa*, *Eucalyptus ecostata* and *Eucalyptus phenax* over a tall shrubland of *Banksia media* over a shrubland of *Melaleuca spathulata* and *Melaleuca bracteosa*.
- Open shrubland of *Calothamnus quadrifidus* and *Grevillea tetragonoloba* over a sparse low shrubland of *Hibbertia* spp. and a sedgeland of *Lepidosperma* spp.
- Dense mallet forest of *Eucalyptus platypus* over low sparse shrubland of *Melaleuca* spp.

### 3. Assessment of application against clearing principles

#### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

##### **Proposed clearing is not likely to be at variance to this Principle**

The application is to clear 0.21 hectares of native vegetation within Boxwood Hill-Ongerup Road reserve for the purpose of road widening and improving sightlines for road safety along a 1.2 kilometre stretch of road commencing at the Normans Road and Boxwood-Ongerup Road intersection in a north-west direction. The applicant proposes to clear up to one metre from the existing back slope for the proposed works (Shire of Jerramungup, 2016). Clearing for sightlines at curves will be restricted to only one side of the road to reduce the clearing footprint area (Shire of Jerramungup, 2016).

A Level 1 flora and vegetation survey of the application area was undertaken on the 10 October 2016 by Great Southern Bio Logic (2017), and was undertaken in accordance with the Environmental Protection Authority and Department of Parks and Wildlife's (2015) 'Technical Guide – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment'. The flora and vegetation survey and site inspection undertaken by DER officers identified the vegetation within the application area to range from a good to excellent (Keighery, 1994) condition (Great Southern Bio Logic 2017; DER, 2016).

The flora and vegetation survey of the application area identified three vegetation communities within the application area (Great Southern Bio Logic, 2017). The majority of the application area consisted of open mallee woodland of *Eucalyptus pleurocarpa*, *Eucalyptus ecostata* and *Eucalyptus phenax* over a tall shrubland of *Banksia media* over a shrubland of *Melaleuca spathulata* and *Melaleuca bracteosa*. A small section of approximately 90 metres located on the south side of Boxwood-Ongerup Road approximately 300 metres north of Normans Road comprised of open shrubland of *Calothamnus quadrifidus* and *Grevillea tetragonoloba* over a sparse low shrubland of *Hibbertia* spp. and a sedgeland of *Lepidosperma* spp. The western section of the application area comprised of a dense mallet forest of *Eucalyptus platypus* over low sparse shrubland of *Melaleuca* spp. (Great Southern Bio Logic, 2017).

According to available databases, a total of twenty two priority (P) and four rare flora species have been recorded within the local area (10 kilometre radius). One population of the P4 species *Acrotriche dura* is known to occur within the application area. This population of approximately 60 individuals was detected during the flora and vegetation survey and formed a contiguous population into the adjacent Corackerup Nature Reserve (Great Southern Bio Logic, 2017). The Department of Parks and Wildlife (2016) advised that this population located within the application area has been noted to be locally common on both sides of the road reserve with at least several hundred individuals (Department of Parks and Wildlife, 2016). This was confirmed during the flora survey where a similar density and abundance of plants were observed within adjacent road side vegetation and the Corackerup Nature Reserve (Great Southern Bio Logic, 2017). Given the taxa is locally common, it is not likely the proposed clearing will impact on the conservation status of this species.

It was identified during the assessment that suitable habitat for P1 flora species *Rinzia longifolia* and *Trymalium myrtillus* subsp. *pungens* and P2 flora species *Eucalyptus sinuosa* and *Chamelaucium* sp. Cape Riche may occur within the application area based on the commonality of the soil and vegetation types between these flora and the area proposed to be cleared and the proximity of records to the application area (Department of Parks and Wildlife, 2016). With the exception of *Chamelaucium* sp. Cape Riche, all species were targeted during the flora survey undertaken by Great Southern Bio Logic (2017) on 10 October 2016. The above mentioned priority flora taxa were not identified within the application area. *Chamelaucium* sp. Cape Riche was not targeted during the flora survey after further advice was sought from the Department of Parks and Wildlife South Coast Region by the author of the survey on the preferable habitat for this species which is not likely to occur within the application area. In addition, this species is a non-cryptic species and would have been easily identifiable during the flora survey. Given this, it is not likely the proposed clearing will impact upon the

conservation status of these priority flora taxa.

As assessed under principle (c), noting the rare flora habitat requirements, suitable habitat for three of the four species recorded may occur within the application area based on their proximity to the application area and suitable habitat being present (Department of Parks and Wildlife, 2016). The flora survey undertaken by Great Southern Bio Logic (2017) did not identify any rare flora taxa within the application area. The survey is considered to be adequate in timing and intensity to identify the rare flora species identified as having the potential to occur within the application area.

The vegetation within the application area may provide suitable habitat for three conservation significant fauna including the malleefowl (*Leipoa ocellata*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), both listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* and the western whipbird (western mallee) (*Psophodes nigrogularis* subsp. *oberon*) listed as P5 by the Department of Parks and Wildlife. Noting the long, linear shape of the application area and that the proposed clearing is adjacent to the Corackerup Nature Reserve, the application area is not likely to provide significant habitat for these species.

The flora survey did not identify any priority ecological communities or threatened ecological communities (TEC) that are consistent with the vegetation within the application area.

The disturbance caused by the proposed clearing may introduce or spread weeds and dieback into adjacent areas of remnant vegetation. Weed and dieback management practices will assist to minimise this risk.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

#### Methodology

##### References:

Department of Parks and Wildlife (2016)  
DER (2016)  
EPA and Parks and Wildlife (2015)  
Great Southern Bio Logic (2017)  
Keighery (1994)  
Shire of Jerramungup (2016)

##### GIS Databases:

SAC Bio Datasets (Accessed January 2017)  
Parks and Wildlife Tenure  
NLWRA, Current Extent of Native Vegetation

#### **(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

##### **Proposed clearing is not likely to be at variance to this Principle**

A search of the Naturemap database (Department of Parks and Wildlife, 2007-) returned six records of conservation significant fauna species within the local area (10 kilometre radius).

As assessed under principle (a), the flora survey undertaken by Great Southern Bio Logic (2017) identified three vegetation communities within the application area.

A total of seven fauna surveys have been conducted by Elson (2016) between July 2007 and June 2016 along the vegetated road verge within the Boxwood Hill-Ongerup Road which includes the application area. During this period, a total of 110 avian species, 33 reptile species, five frog species, five native mammal species and four introduced mammal species were recorded utilising the survey area (Elson, 2016). Of the species recorded, three species of conservation significance were recorded utilising the survey area. These species include the malleefowl (*Leipoa ocellata*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), both listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* and the western whipbird (western mallee) (*Psophodes nigrogularis* subsp. *oberon*) listed as P5 by the Department of Parks and Wildlife.

The malleefowl mainly occurs in shrublands and low woodlands that are dominated by mallee vegetation (Department of the Environment and Energy, 2016a). Given the majority of the vegetation within the application area is consistent with this vegetation type, suitable habitat for this species may occur within the application area. The fauna survey observed on many occasions during the surveys with the majority of sightings concentrated at the intersection of Normans Road and Boxwood Hill-Ongerup Road. The survey did not identify any active or inactive Malleefowl mounds during the surveys (Elson, 2016). Although suitable habitat occurs within the application area, it is unlikely the application area contains significant habitat for this species given the long, linear nature of the clearing proposed and that there is suitable habitat in an equal or better condition within the adjacent roadside vegetation and Corackerup Nature Reserve located 80 metres north of the application area.

Carnaby's cockatoo forages on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea* and *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008). Given the flora species identified during the flora survey, and the observation of Carnaby's cockatoos during the fauna surveys conducted by Elson (2016), the application area contains suitable foraging habitat for this species. Although the application area contains

suitable foraging habitat for Carnaby's cockatoo the application area is not likely to be significant habitat, noting the size and as the local area contains approximately 50 per cent vegetation which includes a number of large remnants in conservation estate, including the Corackerup Nature Reserve located adjacent to the application area. This conservation area is likely to contain suitable habitat for Carnaby's cockatoo in equal or better condition than the application area.

The western whipbird (western mallee) has a preference for open mallee vegetation with a dense, tall shrub layer up to 1.5 metres tall, and dominated by such species as *Hakea*, *Lambertia*, or *Banksia* species (Department of the Environment and Energy, 2016b). However, the application area is not likely to provide significant habitat for this species, given the linear nature of the application area and the mobile nature of this species.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
Department of the Environment and Energy (2016a)  
Department of the Environment and Energy (2016b)  
Department of Parks and Wildlife (2007-)  
Elson (2016)  
Great Southern Bio Logic (2017)  
Valentine and Stock (2008)

GIS Databases:  
SAC Bio Datasets (Accessed January 2017)

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposed clearing is not likely to be at variance to this Principle**

A search of the Department of Parks and Wildlife's rare flora database revealed records of four rare flora species within the local area. Based on habitat preferences and the records of species recorded in the local area, three of the four rare flora species were identified to potentially occur within the application area (Department of Parks and Wildlife, 2016).

The closest known record of rare flora is located approximately 3.5 kilometres north of the application area. This species is a spindly erect shrub, 0.3 to 0.8 metres high with a preference for clay flats (Western Australian Herbarium, 1998-). This existing population was visited during the flora and vegetation survey in order to determine whether suitable habitat for this species was present within the application area (Great Southern Bio Logic, 2017). The population was observed to be lower in the profile with very silty, white clay soils of which were not present within the application area. Therefore, this species was not targeted during the flora survey as it was considered unlikely to occur within the application area based on the absence of suitable habitat. In addition, this species is a relatively conspicuous shrub that is familiar to the author of the survey. Therefore it is unlikely this species would have been overseen during the flora survey (Great Southern Bio Logic, 2017).

The second and third rare flora species have been recorded approximately 4.8 kilometres and 5.8 kilometres from the application area respectively. The second species is a tuberous perennial herb, with yellow flowers, growing between 0.15 to 0.25 metres high (Western Australian Herbarium, 1998-). This species favours open conditions amongst low shrubs and sedges, often in sandy clay soil, which becomes saturated during the winter months (Brown et al., 1998). The third rare flora species is also a tuberous perennial herb, with green-yellow flowers that grows between 0.03 to 0.08 metres high (Western Australian Herbarium, 1998-). In order to ensure adequate timing of the flora survey, a field assessment was conducted whereby the existing populations of both species were visited to confirm emergence and to compare habitat types prior to the survey being conducted. The field assessment determined that suitable habitat for both species is not likely to occur within the application area, and neither species was identified within the application area during the flora survey (Great Southern Bio Logic, 2017).

The flora and vegetation survey did not identify any rare flora species (Great Southern Bio Logic, 2017). It is considered that the survey of the application area undertaken on 10 October 2016 was adequate in timing and intensity to identify the above mentioned rare flora species within the application area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
Brown et al. (1998-)  
Department of Parks and Wildlife (2016)  
Great Southern Bio Logic (2017)  
Western Australian Herbarium (1998-)

GIS Databases:  
SAC Bio Datasets (Accessed January 2017)

**(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**      **Proposed clearing is not likely to be at variance to this Principle**  
According to available databases, there are no TEC's mapped within the application area.

Numerous occurrences of the Commonwealth listed TEC 'Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia' (Kwongkan Shrublands) have been mapped within the local area, with the closest occurrence mapped 1.3 kilometres north west of the application area. A flora and vegetation survey conducted within the application area in October 2016 mapped the vegetation at a community level based on floristics and land systems and did not identify the mapped vegetation communities as being consistent with any TEC's (Great Southern Bio Logic, 2017).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**    References:  
Great Southern Bio Logic (2017)

GIS Databases:  
SAC Bio Datasets (Accessed January 2017)

**(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**      **Proposed clearing is not likely to be at variance to this Principle**  
The application area is located within the Esperance Plains Interim Biogeographic Regionalisation of Australia (IBRA) bioregion which retains approximately 52 per cent of its pre-European vegetation extent of native vegetation cover (Government of Western Australia, 2015).

According to a flora and vegetation survey undertaken by Great Southern Bio Logic (2017), the floristic composition within the application area is consistent with Beard vegetation association 940, which retains approximately 43 per cent of its pre-European extent within the Esperance Plains IBRA bioregion (Government of Western Australia, 2015).

The application area is located within the Shire of Jerramungup, within which there is approximately 44 per cent pre-European vegetation extent remaining (Government of Western Australia, 2015).

The local area (10 kilometre radius) retains approximately 50 per cent native vegetation cover (15,960.3 hectares).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). On the basis that the native vegetation present within the application area, the local area, the Shire and the IBRA bioregion retains more than 30 per cent representation, the application area is unlikely to be significant as a remnant.

Given the above, the proposed clearing is not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
<b>IBRA Bioregion*</b>				
Esperance Plains	2,899,941	1,495,049	52	55
<b>Local government authority*</b>				
Shire of Jerramungup	648,534	286,515	44	48
<b>Beard Vegetation Association in Bioregion*</b>				
940	260,761	111,546	43	47

**Methodology**    References:  
Commonwealth of Australia (2001)  
Government of Western Australia (2015)  
Great Southern Bio Logic (2017)

GIS Databases:  
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 Proposed clearing is not likely to be at variance to this Principle**

According to available databases, there are no watercourses or wetlands mapped within the application area. The closest hydrological feature is a minor non-perennial watercourse mapped approximately 10 metres south of the application area and approximately 800 metres north of the Normans Road and Boxwood Hill-Ongerup Road intersection.

A site inspection undertaken by DER officers identified that the application area does not include native vegetation growing in association with this watercourse (DER, 2016). The three vegetation communities identified during the flora and vegetation survey did not comprise of any wetland species, therefore the proposed clearing is not likely to impact on native vegetation growing in association with this watercourse (Great Southern Bio Logic, 2017).

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

**Methodology**

References:

DER (2016)  
Great Southern Bio Logic (2017)

GIS Databases:

Hydrography, linear  
Hydrography, hierarchy  
Geomorphic wetlands

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

**Comments Proposed clearing is not likely to be at variance to this Principle**

The soils within the application area have been mapped by the Department of Agriculture and Food Western Australia and are comprised of two soil landscape units, being the Middle Pallinup System (Map Unit 243Mp) and Middle Pallinup 7 Subsystem (Map Unit 243Mp\_7) (Schoknecht et al., 2004). The majority of the application area (approximately 70 per cent) is mapped as Middle Pallinup System and is described as gently undulating rises, in the Jerramungup Sandplain Zone, with alkaline grey shallow duplex (sandy and loamy), grey sandy duplex (shallow and deep) and red shallow loamy duplex (Schoknecht et al., 2004). Middle Pallinup 7 Subsystem comprises of approximately 30 per cent of the application area and is described as breakaways, similar to small mesas and buttes or cuestas in the landscape (Schoknecht et al., 2004).

The flora and vegetation survey identified the application area as occurring over a gently sloping hill on clay soils (Great Southern Bio Logic, 2017). The highest elevated part of the application area comprises of a small section of exposed outcropping granite where the vegetation is composed of open shrubland of *Calothamnus quadrifidus* and *Grevillea tetragonoloba* over a sparse low shrubland of *Hibbertia* spp. and a sedgeland of *Lepidosperma* spp. (Great Southern Bio Logic, 2017). The lower sections of the application area were potentially underlain by spongeolite or laterite (Great Southern Bio Logic, 2017).

The above mentioned soil types are not susceptible to wind erosion, however clearing within clay soils may increase the risk of water erosion and waterlogging. Considering the linear shape of the application area, that no hydrological features are present within the application area and the relatively low annual rainfall (500 millimetres per annum), the proposed clearing is unlikely to cause appreciable land degradation through water erosion or waterlogging.

Groundwater salinity within the application area has been mapped as saline to highly saline at between 7,000-14,000 milligrams per litre total dissolved solids. However, it not likely the proposed clearing will cause land degradation through salinity given the small size of the clearing area and the application area being adjacent to an extensive vegetated area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

References:

Great Southern Bio Logic (2017)  
Schoknecht et al. (2004)

GIS Databases:

Soils, Statewide  
Groundwater salinity  
Land Degradation datasets

**(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**

**Proposed clearing is not likely to be at variance to this Principle**

According to available databases, no conservation areas are mapped within the application area. One conservation area known as the Corackerup Nature Reserve (A class) occurs within the local area and is mapped approximately 80 metres north of the application area.

The application area forms part of a vegetated corridor that extends approximately 80 to 90 metres on either side of the existing back slopes of the Boxwood Hill-Ongerup Road. This corridor provides an ecological linkage between the Corackerup Nature Reserve and other remnants of native vegetation in the local area. Noting the linear shape and extent of the proposed clearing (up to one metre on either side of the existing backslope), it is considered that the proposed clearing is unlikely to impact this ecological linkage.

The 90 metre vegetated buffer separating the application to this conservation area will be sufficient to ensure that the proposed clearing will not impact on the environmental values of this reserve. However, the proposed clearing may increase the risk of weeds and dieback spreading into adjacent remnant vegetation within the road reserve. Weed and dieback management measures will assist in mitigating this risk.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

GIS Databases:  
Parks and Wildlife 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**

**Proposed clearing is not likely to be at variance to this Principle**

A number of watercourses have been recorded within a 10 kilometre radius of the application area, the closest of which is a minor non-perennial watercourse mapped 10 metres south of the application area.

Groundwater salinity mapped within the application area is between 7,000-14,000 milligrams per litre total dissolved solids (saline to highly saline). Given the small size of the clearing area and the application area being adjacent to an extensive vegetated area, it is unlikely the proposed clearing will lead to a perceptible rise in the water table and thus an increase in groundwater salinity levels.

The clay soils that occur within the application area are susceptible to water erosion. However, given the linear nature of the proposed clearing and the extent of native vegetation surrounding the application area and within the local area, it is not likely the proposed clearing will impact upon the quality of surface or groundwater.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

GIS Databases:  
Hydrography, linear  
Hydrography, hierachy  
Groundwater salinity

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments**

**Proposed clearing is not likely to be at variance to this Principle**

The proposed clearing is not likely to cause or exacerbate the incidence of flooding, given there are no watercourses or wetlands present within the application area and the relatively small and linear nature of the application area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

GIS Databases:  
Hydrography, linear  
Hydrography, hierarchy

## Planning instruments and other relevant matters.

Comments The application was advertised in *The West Australian* newspaper on 18 July 2016 for a 21-day submission period. Eight public submissions have been received from the public regarding the application. The main issues raised include:

- 1) The clearing of roadside vegetation within Country Western Australia;
- 2) Issuing a clearing permit over areas that have been unlawfully cleared;
- 3) The methodology and timing of the flora survey undertaken in May and June of 2016 was not adequate in determining the presence of conservation significant flora;
- 4) The flora survey was not undertaken by a suitably qualified botanist in accordance with Environmental Protection Authority and Department of Parks and Wildlife's (2015) '*Technical Guide – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment*' (formally the EPA Guidance Statement 51);
- 5) The presence of the Commonwealth listed TEC 'Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia' (Kwongkan Shrublands) within the application area;
- 6) The spread of exotic weed species and dieback into adjacent vegetation through the proposed clearing.

DER assesses the area applied for under the clearing permit application. The cumulative impacts of clearing native vegetation are addressed under principle (e).

On 21 June 2016 the applicant applied to clear 1.2 hectares of native vegetation within Boxwood Hill-Ongerup Road reserve (PINs 11642428 and 11381580), Boxwood Hill, for the purpose of road widening and improving sightlines for road safety. A site inspection undertaken by DER officers confirmed that part of the application area was partially cleared prior to a clearing permit application being submitted. The application area was amended to exclude the area that has already been cleared. The assessment is based on the amended application area, which comprises of approximately 0.21 hectares of native vegetation proposed for clearing.

On 7 June 2016, DER received a complaint into the clearing of native vegetation within the Boxwood Hill-Ongerup Road reserve. DER found the clearing to be partly exempt from the requirement of a clearing permit and partly non-compliant with the clearing provisions under the *Environmental Protection Act 1986* (EP Act). During the investigation, the Department was satisfied that the Shire will revegetate an area on the adjacent side of the road and that it had entered into a partnership with its local TAFE to propagate endemic species for the revegetation.

On 20 September 2016, the applicant was advised that the methodology and timing of the flora survey undertaken by Elson (2016) was not adequate in detecting conservation significant flora that may occur within the application area. An additional targeted flora and vegetation survey conducted by a suitably qualified botanist was undertaken in accordance with the Environmental Protection Authority and Department of Parks and Wildlife's (2015) '*Technical Guide – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment*'. It is considered this survey was adequately timed and to the sufficient intensity to target the conservation significant flora that had the potential to occur within the application area. The survey did not identify the presence of the Commonwealth listed 'Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia' TEC within the application area.

The concern raised regarding the spread of exotic weeds and dieback as a result of the proposed clearing has been addressed under principles (a) and (h).

No registered Aboriginal Sites of Significance occur within the application area.

Methodology GIS Databases:  
Aboriginal Sites of Significance

## 4. References

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