



## 1. Application details

### 1.1. Permit application details

Permit application No.: 6703/1  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: Shire of Quairading

### 1.3. Property details

Property: ROAD RESERVE - 1361962, BADJALING  
ROAD RESERVE - 1309396, BADJALING

Colloquial name:

Local Government Authority: QUAIRADING, SHIRE OF

DER Region: Greater Swan

DPaW District: CENTRAL WHEATBELT

LCDC: QUAIRADING

Localities: BADJALING

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Refusal

Decision Date: 30 June 2016

Reasons for Decision: The applicant applied to clear 1.5 hectares of native vegetation on 13 August 2015.

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*.

The Delegated Officer determined that the proposed clearing is at variance to Principles (a), (e) and (f), may be at variance to Principles (b) and (h), is not likely to be at variance to the remaining Principles. The Delegated Officer determined that the proposed clearing will impact approximately one hectare of vegetation in good to excellent condition, and two under-represented vegetation associations, within an extensively cleared landscape, and may impact the adjacent Badjaling Nature Reserve.

On 3 March 2016 and 30 May 2016, the applicant was invited to provide further advice in respect to avoiding, minimising and offsetting environmental impacts. As at the date of this decision, no response had been received.

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

##### Vegetation Description

Mapped Beard vegetation associations (Shepherd et al., 2001):

- 951, described as succulent steppe with sparse woodland and thicket; york gum and Kondinin blackbutt over teatree thicket and samphire (on the upper slope).
- 694, described as shrublands; scrub-heath on yellow sandplain banksia-xylomelum alliance in the Geraldton Sandplain and Avon-Wheatbelt Regions.

##### Clearing Description

The clearing of 1.5 hectares of native vegetation within Badjaling Road reserve (PIN 1309396 and PIN 1361962), Badjaling, for the purpose of road upgrades.

##### Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

To

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994)

##### Comment

The condition of the vegetation was determined by a site inspection undertaken by officers from the Department of Environment Regulation (DER, 2015).

### 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 at variance to this Principle**

The application is to clear 1.5 hectares of native vegetation within Badjaling Road reserve, Badjaling, for the purpose of road upgrades.

The application area extends along the road reserve for approximately 2.6 kilometres and consists of vegetation adjacent to, and on both sides, of Badjaling Road. Approximately the northern quarter is completely degraded (Keighery, 1994), bounded either side by broadacre agriculture. Further south, the application area is bounded either side by Badjaling Nature Reserve for approximately 1.6 kilometres of which the first kilometre consists of vegetation in a good to excellent (Keighery, 1994) condition. The remaining southern section of the application area consists of vegetation in a completely degraded to degraded (Keighery, 1994) condition and includes an area that is subject to inundation (DER, 2015).

Nine priority and six rare flora species have been mapped within the local area (10 kilometre radius). Some of the vegetation under application is in good to excellent (Keighery, 1994) condition (DER, 2015). Given the limited remnant vegetation in the local area and the fact that numerous threatened and priority flora have been recorded in the local area, there is the potential for these species to occur within the application area (Parks and Wildlife, 2015a).

A flora survey undertaken in October 2015 of the application area and immediate surrounds of the vegetation either side of the road did not identify any priority or rare flora within the proposed clearing area (Hort, 2015).

Two priority ecological communities (PECs) are mapped within the local area. Both are described as *Banksia prionotes* and *Xylomelum angustifolium* low woodlands on transported yellow sands. The closer one is approximately 35 metres east of the application area. This PEC is known from 11 occurrences totalling approximately 314 hectares. It occurs across a narrow distribution of about 110 kilometres from Ucarty in the north to Bruce Rock in the south east (Parks and Wildlife, 2015b).

A flora survey undertaken in October 2015 of the application area and immediate surrounds of the vegetation either side of the road identified *Banksia prionotes* and *Xylomelum angustifolium* which are indicative of the PEC (Hort, 2015) (Parks and Wildlife, 2015c). However, the depth of the yellow sand decreases towards the road, and the PEC is not likely to extend to the road and if it did it would not be a high quality occurrence of this community (Parks and Wildlife, 2015c).

The section of vegetation in good to excellent (Keighery, 1994) condition (DER, 2015) is immediately adjacent to a Class A nature reserve. Given the surrounding highly cleared landscape, this section is likely to contain significant habitat for indigenous fauna. It is also expected to contribute to the maintenance of significant habitat contained within Badjaling Nature Reserve.

Noting that approximately one hectare of the vegetation under application is located adjacent to a Class A nature reserve and is in a good to excellent (Keighery, 1994) condition (DEC, 2015), and that the application area includes under-represented vegetation associations within an extensively cleared landscape, it is considered that some of the vegetation under application comprises a high level of biodiversity.

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

**Methodology**

**References:**

DER (2015)  
Hort (2015)  
Keighery (1994)  
Parks and Wildlife (2015a)  
Parks and Wildlife (2015b)  
Parks and Wildlife (2015c)

**GIS Databases:**

- Wheatbelt Remnant Vegetation  
- SAC Bio datasets - accessed October 2015

#### (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 may be at variance to this Principle**

The application area is located within a highly cleared landscape. The section of the application area containing vegetation in a good to excellent (Keighery, 1994) condition (DER, 2015) is likely to contain significant habitat for other ground-dwelling fauna. The clearing of this vegetation will not only result in the direct loss of habitat but is also likely to contribute to the degradation of the habitat within Badjaling Nature Reserve.

According to available databases, the shield-backed trapdoor spider (*Idiosoma nigrum*), listed as rare or likely

to become extinct under the *Wildlife Conservation Act 1950*, has been recorded within the local area (10 kilometre radius) (Parks and Wildlife, 2007-). Noting the preferred habitat of this species and the vegetation and soil types found within the application area, it is considered that this species is unlikely to occur within the application area (Avon Catchment Council, 2007).

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

**Methodology** References:  
Avon Catchment Council (2007)  
DER (2015)  
Keighery (1994)  
Parks and Wildlife (2007-)

**(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**  
Six rare flora species are mapped within the local area (10 kilometre radius). One of these species is mapped within the same vegetation association and soil type as the application area, approximately 15 metres from the application area. The Department of Parks and Wildlife Species and Communities Branch (2015) advised that a further four rare flora species may be present within the application area and impacted by the proposed clearing.

A flora survey undertaken in October 2015 of the application area and immediate surrounds of the vegetation either side of the road did not identify any rare flora within the proposed clearing area (Hort, 2015).

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

**Methodology** References:  
Hort (2015)  
Parks and Wildlife (2015a)

GIS Database:  
- SAC Bio datasets - accessed October 2015

**(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, no threatened ecological communities (TEC) are mapped within the local area (10 kilometre radius). On this basis, it is considered that TECs are unlikely to be impacted by the proposed clearing.

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

**Methodology** GIS Database:  
- SAC Bio datasets - accessed October 2015

**(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 at variance to this Principle**  
The area under application is located within the Avon Wheatbelt interim biogeographic regionalisation of Australia (IBRA) bioregion. This IBRA bioregion retains approximately 19 per cent of its pre-European vegetation extent (Government of Western Australia, 2014).

The Shire of Quairading retains approximately nine per cent of its pre-European vegetation. The vegetation under application is mapped as Beard vegetation associations 694 and 951, which have approximately seven and three per cent, respectively, of their pre-European vegetation extents remaining within the Avon Wheatbelt bioregion (Government of Western Australia, 2014).

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).

Aerial imagery indicates that the local area (10 kilometre radius) surrounding the area under application retains approximately 12 per cent vegetation cover.

Noting that the above extents of remaining native vegetation are all below 30 per cent, and that a section

(approximately one hectare) of the vegetation is in good to excellent (Keighery, 1994) condition (DER, 2015), the vegetation under application is considered to be significant as a remnant of native vegetation in an area that has been extensively cleared.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
<b>IBRA Bioregion*</b>				
Avon Wheatbelt	9,517,110	1,778,407	19	10
<b>Local government*</b>				
Shire of Quairading	201,651	18,905	9	8
<b>Beard Vegetation Association in Bioregion*</b>				
694	781	54	7	0
951	4,370	135	3	0

**Methodology** References:  
Commonwealth of Australia (2001)  
DER (2015)  
\*Government of Western Australia (2014)  
Keighery (1994)

GIS Database:  
- Wheatbelt Remnant 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 at variance to this Principle**

The application area intersects an area that is mapped as subject to inundation, and includes riparian vegetation.

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

Noting the extent of clearing proposed and the degraded (Keighery, 1994) condition of the riparian vegetation, it is considered that the proposed clearing is unlikely to have a significant impact on riparian vegetation.

**Methodology** References:  
Keighery (1994)

GIS Database:  
- Wheatbelt Minor Hydrology

**(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 mapped soil type within the application area consists of lateritic clays and ironstone gravels (Northcote et al., 1960-68), and the landscape is gently undulating. Annual local rainfall is approximately 500 millimetres per annum. Noting the extent of clearing proposed and the narrow, linear shape of the application area along an existing road, it is considered that the proposed clearing is unlikely to cause land degradation in the forms of water or wind erosion.

Groundwater is considered to be 'brine', mapped at greater than 35,000 total dissolved solids (milligrams per litres). The removal of deep-rooted perennial vegetation can contribute to the rise of groundwater thereby increasing the prospects of land degradation due to increased salinity at the surface. Noting that the majority of the vegetation under application is in degraded to completely degraded (Keighery, 1994) condition, and the narrow, linear shape of the application area along an existing road, it is considered that the proposed clearing is unlikely to cause significant changes to groundwater levels.

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

**Methodology** References:  
Keighery (1994)  
Northcote et al. (1960-68)

GIS Databases:  
- Groundwater Salinity, 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 Proposed clearing may be at variance to this Principle**

The application area is bordered either side by Badjaling Nature Reserve for approximately 1.6 kilometres, of which approximately the first kilometre consists of vegetation in good to excellent (Keighery, 1994) condition (DER, 2015).

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

Weed and dieback management practices will assist in mitigating the risk of weeds or dieback spreading into Badjaling Nature Reserve and impacting on the environmental values of the reserve.

**Methodology** References:  
DER (2015)  
Keighery (1994)

GIS Database:  
- 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**

Ground water salinity within the application area has been mapped as greater than 35,000 total dissolved solids (milligrams per litres). The proposed clearing is not expected to significantly change salinity levels given its small scale and the condition of the vegetation.

The proposed clearing may cause an increase in turbidity of the area subject to inundation that it intersects. However, this is likely to be minimal given the relatively small extent of vegetation to be cleared within the vicinity of this area.

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

**Methodology** GIS Databases:  
- Wheatbelt Minor Hydrology  
- Groundwater Salinity, 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 Proposed clearing is not likely to be at variance to this Principle**

The mapped soil type within the application area consists of lateritic clays and ironstone gravels (Northcote et al., 1960-68), and the landscape is gently undulating. Annual local rainfall is approximately 500 millimetres per annum. Noting the extent of clearing proposed and the narrow, linear shape of the application area along an existing road, it is considered that the proposed clearing is unlikely to significantly contribute to flooding.

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

**Methodology** GIS Databases:  
- Soils of WA  
- Topographic Contours, Statewide

## Planning instruments and other relevant matters.

**Comments** The application area is located within the Avon River Surface Water Area, proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). The applicant may be required to obtain a permit under the RIWI Act to interfere with the bed and banks of a watercourse. The applicant is advised to consult with the Department of Water in respect to this matter.

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

On 24 August 2015 the application was advertised in *The West Australian* newspaper for a 21-day submission period. No public submissions have been received.

On 19 October 2015 a Delegated Officer of the Department of Environment Regulation (DER) wrote to the applicant (DER ref. A991008), advising that an assessment of the application identified a number of environmental concerns in respect to potential impacts to rare and priority flora, a priority ecological community (PEC), under-represented vegetation associations in a highly cleared landscape, and to Badjaling Nature Reserve.

On 29 October 2015 the applicant provided information to address the concerns raised by DER in relation to the proposed impacts to rare and priority flora and a PEC, including a flora survey (DER ref. A1020948). The applicant's information in respect to these matters is considered under clearing principles (c) and (d) of this report.

Advice was sought from the Department of Parks and Wildlife Species and Communities Branch (Parks and Wildlife) in respect to the adequacy of the applicant's flora survey. Parks and Wildlife advised that the person who conducted the flora survey has excellent flora identification skills and is very experienced in surveying for rare and priority flora, and that Parks and Wildlife is satisfied with the additional advice (DER ref. A1052983).

On 3 March 2016 a Delegated Officer of DER wrote to the applicant, inviting the applicant to provide further advice in relation to avoiding, minimising and offsetting the impacts of the proposed clearing of approximately one hectare of vegetation in good to excellent condition, and two under-represented vegetation associations, within an extensively cleared landscape.

On 30 May 2016 a Delegated Officer of DER wrote to the applicant, inviting the applicant to provide further advice in respect to the issues raised in DER's letter of 3 March 2016, and advising of the intent to refuse the application within 30 days if no further advice is provided by the applicant. As at the date of this decision no formal response or offsets proposal has been received from the applicant.

**Methodology** GIS Databases:  
- Aboriginal Sites Register  
- RIWI Surface Water Areas

## 4. References

- Avon Catchment Council (2007) Shield - backed Trapdoor Spider (*Idiosoma nigrum*) Conservation Plan. Avon Catchment Council, Western Australia.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Environment Regulation (2015) Site visit report for clearing permit application CPS 6703/1, 4 September 2015. Department of Environment Regulation, Western Australia (DER Ref: A973250).
- Department of Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed October 2015.
- Department of Parks and Wildlife (2015a) Advice received in relation to clearing permit application CPS 6703/1, received 25 September 2015. Department of Parks and Wildlife, Western Australia (DER Ref: A987145).
- Department of Parks and Wildlife (2015b) Advice received in relation to clearing permit application CPS 6703/1, received 25 September 2015. Department of Parks and Wildlife, Western Australia (DER Ref: A987142).
- Department of Parks and Wildlife (2015c) Advice received in relation to clearing permit application CPS 6703/1, received 22 December 2015. Department of Parks and Wildlife, Western Australia (DER Ref: A1052983).
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Hort, B (2015) Flora survey 29 October 2015 – Badjaling Road CPS6703/1 (DER Ref:A1020948).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K.H. with Beckmann, G.G., Bettenay, E., Churchward, H.M., van Dijk, D.C., Dimmock, G.M., Hubble, G.D., Isbell, R.F., McArthur, W.M., Murtha, G.G., Nicolls, K.D., Paton, T.R., Thompson, C.H., Webb, A.A. and Wright, M.J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.