



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2848/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Wagin-Woodanilling Landcare Zone (Inc.)

### 1.3. Property details

Property: LOT 6 ON PLAN 56441 ( WEDGECARRUP 6315)  
 LOT 5033 ON PLAN 129213 ( WEDGECARRUP 6315)  
 LOT 1639 ON PLAN 107277 ( WEDGECARRUP 6315)  
 KOJONUP LOCATION 5220 ( BOYERINE 6316)  
 ROAD RESERVE ( WAGIN, SHIRE OF )  
 ROAD RESERVE ( WEDGECARRUP 6315)

Local Government Area: Shire Of Wagin & Shire Of Woodanilling  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6		Mechanical Removal	Building or Structure

## 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: 967, 1023 & 1083. Beard 967: Medium woodland; wandoo & yate Beard 1023: Medium woodland; York gum, wandoo & salmon gum (Eucalyptus salmonophloia) Beard 1083: Succulent steppe with open woodland & scrub; wandoo, salmon gum & Allocasuarina obesa over teatree & samphire (Hopkins et al. 2001; Shepherd et al. 2001)	Several areas of remnant vegetation will be impacted by this proposal, occurring on three land parcels and three road reserves. Within Chain Gully Catchment area. Samphire is the dominant species growing on these sites.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)  Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The area under application has been described from aerial imagery and DEC regional advice (2008).

## 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 proposed clearing involves the removal of up to 6 hectares of native vegetation along a linear corridor to undertake shallow surface water drainage. The area under application is considered to be in a degraded to completely degraded (Keighery, 1994) condition. Several areas of remnant vegetation will be impacted by this proposal.

Vegetation within the proposed clearing area is currently affected by salinity and water logging (DAFWA, 2009). This has impacted on the diversity of species present, those of a lower salt tolerance have died out leaving predominantly samphire (*Tecticornia* sp) and swamp sheoak (*Casuarina obesa*) vegetation. However, there are approximately 17 records of priority flora within the local area (10 km radius). The priority 3 species, *Blennospora phlegmatocarpa* and *Microseris scapigera* are known to be located approximately 230 metres south of the area under application.

The surrounding area is highly cleared for agricultural purposes, with approximately 6% of the native vegetation type remaining and 7% of native vegetation remaining in the Shire of Wagin.

Given that part of the area under application comprises an extensively cleared vegetation type, and that there is a possibility of priority flora species being present, it is surmised that the vegetation comprises a high level of biological diversity. The clearing as proposed may be at variance to this principle. An offset condition will be placed upon the permit to reduce the impact of clearing.

**Methodology** DAFWA (2009)  
Keighery (1994)  
GIS Database:  
- CALM Managed Lands and Waters - CALM 01/06/05  
- Wagin 50cm ORTHOMOSIAC - Landgate 06  
- DEFL, SAC Biodataset (12/12/08)

**(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**  
The area under application is part of the only contiguous area of remnant vegetation within the regional area (10km radius). This remnant acts as a significant ecological linkage, given that the surrounding region retains approximately 7% vegetation.

The proposed clearing is a corridor of 6 hectares within a linear corridor. This may have an impact on the ecological linkage between areas of remnant vegetation by causing fragmentation of habitats. Clearing within this corridor may prevent movement of small mammalian, avian and reptilian species, thereby altering ecological processes such as genetic flow and competition

It is considered that the proposed clearing may be at variance to this principle. An offset condition will be placed upon the permit to reduce the impact of clearing.

**Methodology** GIS Database:  
- CALM Managed Lands and Waters - CALM 01/06/05  
- Wagin 50cm ORTHOMOSIAC - Landgate 06  
- Threatened Fauna, SAC Bio Dataset (12/12/08)

**(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 two species of rare flora mapped within the local area (10km radius), *Caladenia dorrienii* and *Jacksonia velveta*. It is considered that these species are not likely to be impacted by the proposed clearing (DEC 2008).

There are two priority three species, *Blennospora phlegmatocarpa* and *Micoseris scapigera*, known to occur close to the application area. A site visit undertaken by DEC (2008) found that the clearing proposed was not likely to impact upon these species.

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

**Methodology** DEC (2008)  
Keighery (1994)  
Western Australian Herbarium (1998-)  
GIS Database:  
- Wagin 50cm ORTHOMOSIAC - Landgate 06  
- DEFL, SAC Bio Dataset (12/12/08)

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
There are no known threatened ecological communities (TECs) occurring within a 10km area. The application area does not contain habitat consist with likely TEC's and it is considered that the proposed clearing is not at



variance to this principle.

**Methodology** GIS Database:  
 - Wagin 50cm ORTHOMOSIAC - Landgate 06  
 - TEC Database, SAC Biodatasets - accessed 12/12/08

**(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 at variance to this Principle		
	Pre-European	Current Extent	Remaining
	(ha)	(ha)	%
<b>BIOREGION</b>			
Avon Wheatbelt (AW)			
- overall *	9 517 109	1 443 690	15.17
<b>LOCAL GOVERNMENT AUTHORITY</b>			
Shire of Wagin			
- overall	194,588.00	15,446.69	7.94
Shire of Woodanilling			
- overall 112,931.30	13,763.38	12.19	
<b>VEGETATION ASSOCIATIONS</b>			
Beard association: 1023			
- in AW bioregion	1,522,675.66	97,440.16	6.40
- in Shire of Wagin	169,768.77	11,036.66	6.50
Beard association: 1083			
- in AW bioregion	10,380.18	2,196.94	21.16
- in Shire of Wagin	8,636.61	1,477.78	17.11
Beard association: 967			
- in AW bioregion	76,083.92	8,328.51	10.95
- in Shire of Wagin	807.53	144.51	17.90

The local area (10 km radius) is highly cleared and fragmented, due to agricultural practices. The application area is part of a remaining remnant of vegetation within this cleared landscape. Clearing within the application area will reduce the size, and therefore the effectiveness of this remnant.

Native vegetation within the biogeographical region and Shire, is heavily under represented. Although vegetation within the area under application is degraded, it is part of a significant stand of remnant vegetation. Therefore the clearing is at variance to this principle. An offset condition will be imposed to reduce the impact of clearing.

**Methodology** EPA (2000)  
 Shepherd (2006)  
 Shepherd et al. (2001)  
 SAC Biodatasets, accessed 12 Dec 08  
 GIS Database:  
 - Wagin 50cm ORTHOMOSIAC - Landgate 06  
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00

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

**Comments** **Proposal is at variance to this Principle**  
 There are minor non-perennial watercourses within the application area. The site is considered to be in association with watercourses and the clearing may impact on the tributary banks and habitat for aquatic fauna. The proposal is therefore at variance to this principle.

**Methodology** GIS Database:  
 - Hydrography linear (hierarchy) - DoW 13/7/06

**(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 proposed clearing is within a gully with topography of 250 to 260m AHD (Australian Height Datum). The soil is described as hard neutral and acidic yellow mottled soils sometimes containing ironstone gravels. Associated are variable areas of hard acidic and neutral red soils on slopes, soils containing moderate to large amounts of ironstone gravels on ridges, crests of hills, and upper slopes; and many small areas of other soils (Northcote et al. 1960-68). The mean annual rainfall is approximately 450mm.

Groundwater salinity has been measured between 14000 to >35000mg/L (saline area). The application area is affected by salinity (DAFWA, 2009; DEC, 2008) with vegetation being in 'degraded' (Keighery, 1994) condition. Waterlogging is also occurring along the gully within the proposed clearing area. The proposed clearing is unlikely to add to the ongoing salinity and waterlogging problems due to the existing land degradation (DAFWA, 2009). DAFWA have also advised that water and wind erosion are unlikely.

The clearing under application is not considered to be at variance to this principle.

**Methodology** DAFWA (2009)  
DEC Site Visit (2008)  
Northcote et al. (1968)  
Refer to TRIM DOC71072  
GIS Database:  
- Evapotranspiration Isopleths - WRC 29/09/98  
- Groundwater Salinity Statewide DoW 13/07/06  
- Hydrographic catchments, catchments - DoW 01/06/07  
- Hydrogeology, statewide DOW 13/07/06  
- Mean Annual Rainfall Isohytes (1975 - 2003) DEC 02/08/05  
- Topographic Contours, Statewide - DOLA 12/09/02

**(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 at variance to this Principle**

The area under application is partially within the Flagstaff nature reserve. Flagstaff nature reserve is managed by DEC, for the purpose of flora and fauna conservation. It is located at the southern end of the Chain Gully Catchment and therefore the end point of the drain and likely discharge area for saline surface water is within the Flagstaff nature reserve. The reserve is degraded in sections, mainly due to altered hydrology and salinity (DEC, 2008).

Clearing of vegetation is likely to reduce habitat for fauna found within the reserve, decrease genetic diversity for flora and fauna species and increase the incidence of exotic flora and fauna species.

It is considered that the clearing is at variance to this principle. An offset condition will be imposed to reduce the impact of clearing.

**Methodology** DEC (2008)  
GIS Databases:  
- CALM Managed Lands and Waters - CALM 01/06/05  
- Wagin 50cm ORTHOMOSIAC - Landgate 06

**(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 region in which the clearing is proposed currently has high groundwater salinity levels. This has resulted in dryland salinity, impacting on soil and vegetation.

The proposed clearing is for a linear surface water drain throughout the landscape, clearing 6 hectares of vegetation. The end point of the drain and likely discharge area for saline surface water is within the Flagstaff nature reserve. DAFWA (2009) have advised that the proposed clearing is unlikely to further exacerbate groundwater quality issues due to the current land degradation present.

It is unlikely that the clearing proposed will be at variance to this principle.

**Methodology** DAFWA (2009)  
DEC (2008)  
GIS Database:  
- Evapotranspiration Isopleths - WRC 29/09/98



- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrogeology, statewide DOW 13/07/06
- Mean Annual Rainfall Isohytes (1975 - 2003) DEC 02/08/05

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

**Comments Proposal is not likely to be at variance to this Principle**

The proposed clearing falls within an area which is subject to inundation. The topography of the site is 250 to 260m AHD (Australian Height Datum), giving the landscape a low lying relief (Chain Gully Catchment).

DAFWA (2009) have advised that the proposed clearing is unlikely to increase surface water runoff, thereby increasing stream flow.

It is not likely that the clearing proposed would be at variance to this principle.

**Methodology GIS Database:**

- Evapotranspiration Isoleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrogeology, statewide DOW 13/07/06
- Mean Annual Rainfall Isohytes (1975 - 2003) DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The Town Planning Scheme for the area under application is zoned as Rural and no scheme zoning.

The area proposed to be cleared lies within areas notified under EPA position statement no.2.

DEC (Great Southern Region) recommends that approval of surface water works occurring in the Flagstaff Nature Reserve as part of a catchment project planned to be conducted by the Wagin-Woodanilling Landcare Zone be granted.

The drain proposes to improve the continuity and quality of the water flow, thereby reducing problems associated with waterlogging.

**Methodology**

**4. Assessor's comments**

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principles (e), (f) and (h), may be at variance to principle (a) and (b) and remaining principles are not likely to be at variance

**5. References**

- DAFWA (2009) Land Degradation Advice and Assessment Report for clearing permit application CPS 2848/1. Received 27/01/2009. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia (TRIM Ref. DOC74935).
- DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2848/1, Lot 6 on Plan 56441, Lot 5033 on Plan 129213, Lot 1639 on Plan 107277, Kojonup Location 5220, Flagstaff Road Reserve and Boddington Road Reserve, Woodanilling. Site inspection undertaken 12/12/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC71072).
- DEC, 2008, Regional advice, TRIM ref DOC 74924.
- 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.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes

## 6. 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)