



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1553/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Ashburton

### 1.3. Property details

Property:

Local Government Area: Shire Of Ashburton  
 Colloquial name: Old Onslow Rd

### 1.4. Application

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

## 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
Pre-European Vegetation: 670 - Hummock grasslands, shrub steppe; scattered shrubs over <i>Triodia basedowii</i> ; 589 - Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex; 608 - Mosaic: Shrublands; <i>Acacia victoriae</i> & snakewood scrub patches / Short bunch grassland - savanna / grass plain (Pilbara); 98 - Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>Triodia basedowii</i> ; 39 - Shrublands; mulga scrub; 588 - Shrublands; <i>Acacia victoriae</i> scrub; 160 - Shrublands; snakewood & <i>Acacia victoriae</i> scrub; 163 - Shrublands; <i>eremophila</i> and <i>cassia</i> dwarf scrub; 162 - Shrublands; snakewood scrub; 181 - Shrublands; mulga & snakewood scrub; 567 - Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex &	The vegetation under application ranges in condition. The areas under application are for the purpose of widening roads and gravel pits. The vegetation proposed to be cleared consist of thin linear strips of vegetation within road reserves and degraded vegetation around existing gravel pits.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Across the Shire the native vegetation condition is likely to range from 'degraded' to 'good' (Keighery, 1994). Depending on the intensity of grazing however, vegetation structure may be significantly altered with possible weed invasion within the road reserves, where vegetation may be 'degraded' and not easily regenerated (Keighery, 1994)

Triodia basedowii; 157 - Hummock grasslands, grass steppe; hard spinifex, Triodia wiseana; 82 - Hummock grasslands, low tree steppe; snappy gum over Triodia wiseana; 18 - Low woodland; mulga (Acacia aneura); 603 - Hummock grasslands, sparse shrub steppe; Acacia bivenosa over hard spinifex; 609 - Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over Triodia wiseana on a lateritic crust; 607 - Hummock grasslands, low tree steppe; snappy gum & bloodwood over soft spinifex & Triodia wiseana; 646 - Hummock grasslands, shrub steppe; snakewood over Triodia basedowii; 175 - Short bunch grassland - savanna/grass plain (Pilbara)

### 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 Shire of Ashburton has submitted a clearing application to clear up to 144 hectares of native vegetation for the next five years for road widening and gravel extraction. The proposal includes minor clearing works within existing table drains, and widening of gravel pits and the road pavement in areas of increased traffic.

The vegetation under application is comprised of nineteen Beard vegetation types and is in a degraded condition (Keighery, 1994). The vegetation proposed to be cleared consists of thin linear strips of vegetation within road reserves and degraded vegetation around existing gravel pits. In addition the areas under application are mapped within the Carnarvon, Gascoyne and Pilbara IBRA regions and all have greater than 99% of native vegetation remaining (Shepherd, 2006)

The vegetation types in which the proposed clearing is to occur are common and widespread. However, some of the roads to be widened are within national parks which are classified as an environmentally sensitive areas.

Given the above, the proposal may be at variance to this principle.

To mitigate any potential impacts on the clearing of vegetation, the proposed clearing will be carried out in accordance with a condition that may be imposed on the permit requiring that clearing of vegetation be avoided, and where this is not possible, minimised. An offset condition may also be included on the permit for clearing done for road widening within the national parks.

Furthermore, some areas of the Shire of Ashburton are weed infested. A weed condition is recommended to minimise the spread of identified weeds to uninfested areas.

**Methodology** Shire of Ashburton (2006)  
Keighery (1994)

#### (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

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

A range of fauna species of conservation significance have been recorded from a variety of habitats within the Shire of Ashburton. The areas under application are mapped within the Carnarvon, Gascoyne and Pilbara IBRA regions. All regions have greater than 99% of native vegetation remaining (Shepherd, 2006). Due to the degraded condition of the vegetation, disturbance and the clearing occurring within road reserves and gravel pits previously, which consist of thin linear strips of vegetation, it is unlikely that the areas under application are necessary for the maintenance of significant habitat for fauna indigenous to Western Australia.

The following vulnerable, critically endangered, endangered and other specially protected fauna have been recorded within a 50km radius of the roads under application:

- \* *Pezoporus occidentalis* (Night Parrot) - Critically Endangered
- \* *Dasyercus cristicauda* (Mulgara) - Vulnerable
- \* *Falco peregrinus* (Peregrine Falcon)
- \* *Dasyuius hallucatus* (Northern Quoll)
- \* *Rhinonictoris aurantius* (Orange leaf-nosed Bat)

**Methodology** Shepherd (2006)  
GIS Database:  
- Sac Biodatasets 190308

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

**Comments** **Proposal may be at variance to this Principle**

A considerable number of known records of Declared Rare and Priority Flora are associated with the proposed clearing for gravel pit and road widening. Roads with possible impacts on protected flora are listed below:

Hamersley Gorge Rd (SLK 4.00 - 4.90)  
Nameless Valley Dr (SLK 1.45 - 2.00)  
Knox Gorge Rd (SLK 0.00 - 5.54)  
Weano Gorge Rd (SLK 5.00 - 6.00; SLK 10.00 - 14.00)  
Snappy Gum Dr (SLK 0.00 - 9.00)  
Kanjennie-Millstream (SLK 4.00 - 8.50)

Given the number of Declared Rare and Priority Flora within or in close proximity to the areas proposed to be cleared, the proposal may be at variance with this principle.

To ensure all DRF and priority species are identified and managed accordingly, a condition should be placed on the permit to ensure surveys are undertaken by a flora specialist to identify the presence of any DRF or priority species within proposed clearing sites associated with the roads listed above. Where DRF species are identified the City will be required to submit the records to the Department of Environment and Conservation ensuring no species are removed unless approved by the CEO.

**Methodology** GIS Database:  
- SAC Bio Datasets 190308  
- Clearing Regulations - Environmentally Sensitive Areas - DOE 08/03/05

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

A number of known records of Threatened Ecological Communities (TEC) occur within close proximity to Hamersley Gorge Road (SLK 0.00 - 4.90)

- \* Themeda grasslands on cracking clays (Hamersley Station, Pilbara)

The TEC listed above occurs on the same vegetation type as located on Hamersley Gorge Road.

Given the proximity of the TECs to Hamersley Gorge Road, the proposal may be at variance to this principle.

To ensure all TECs are identified and managed accordingly, a condition should be placed on the permit to ensure surveys are undertaken by an environmental specialist prior to clearing. The Shire will be required to submit a report to the Department of Environment and Conservation and is not permitted to clear this area unless approved by the CEO.

**Methodology** GIS Database:  
- SAC Bio Datasets 190308  
- Environmentally Sensitive Areas - DOE 30/5/05

**(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 at variance to this Principle**

The proposed clearing occurs within the Carnarvon, Gascoyne and Pilbara IBRA Regions, where the area of vegetation remaining is 99.8%, 100%, and 99.9% respectively (Shepherd, 2006). All the Beard vegetation types that fall within the application areas are higher than the National Objectives Targets for Biodiversity Conservation,

which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (EPA 2000).

Given that all of the vegetation representations are above 98%, the application areas are not at variance to this principle.

**Methodology** Shepherd (2006)  
EPA (2000)  
GIS Database:  
- Pre-European Vegetation  
- 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 not likely to be at variance to this Principle**

Some of the works proposed by the Shire of Ashburton are within and adjacent to watercourses. All of the areas under application are within road reserves of roads that already exist. All watercourses have previously been diverted through culverts or under bridges.

Due to the vegetation under application being contained in road reserves where existing roads exist and nearby existing gravel pits, this proposal is not likely to be at variance to this principle.

**Methodology** GIS Database:  
- Hydrography, Linear - DOE 1/2/04

**(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 topography within the region is of low relief with very shallow gradients. The purpose of the clearing is for road upgrades, on roads that are already established and extension of existing gravel pits. The road side vegetations under application are not considered to be in areas associated with high salinity risk.

The proposal may cause some short term land degradation issues in terms of flooding and soil erosion during works. However these issues should be minimal as the existing roads already have road side infrastructure in place to prevent land degradation associated with roads, ie; table drains and culverts.

Given the linear nature of each application area, it is unlikely that the proposed clearing of native vegetation would cause appreciable land degradation.

**Methodology** GIS Database:  
- 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 may be at variance to this Principle**

Some of the application areas within areas set aside for conservation. Roads proposed to be widened that are associated with conservation areas are listed below:

Within Karijini National Park -

Banjima Dr  
Kalamina Gorge Rd  
Hamersley Gorge Rd  
Weano Gorge Rd  
Knox Gorge Rd

Within Millstream-Chichester National Park -

Kanjini - Millstream

Given the low topography of the region and the small, linear nature of the application areas, the proposed clearing for roadworks is unlikely to significantly impact these conservation areas. No gravel pit are allowed to be created within a national park.

**Methodology** GIS Database:

- CALM Managed Lands and Waters - CALM 1/07/05
- Topographic Contours, Statewide - DOLA 12/09/02

**(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 proposed clearing sites fall within a number of catchment areas including Ashburton River, Yarinarie River, Fortescue River and Robe River.

With an average annual rainfall varying between 300-500 mm and an annual evaporation rate of 200-400 mm, there is little surface flow or groundwater recharge during normal seasonal rains. Groundwater salinity (measured as Total Dissolved Solids) across the application area ranges between 1000 mg/L and 14,000 mg/L and is considered to be marginal to low saline.

The proposed clearing for road widening and gravel pits may cause some short term water quality issues in terms of localised surface water sedimentation during works. However these issues should be minimised as works on realignment of roads will include roadside infrastructure to prevent land degradation associated with roads i.e. table drains and culverts.

Due to the relatively linear areas proposed to be cleared for road widening it is unlikely the areas under application will exacerbate salinity issues or increase water levels within the shire boundary.

**Methodology**

- GIS Databases:
- WIN Groundwater Sites, Monitoring - DOW
  - Public Drinking Water Sources (PDWSAs) - DOE 09/08/05
  - Hydrographic Catchments - Catchments - DOE 23/03/05
  - Hydrography, linear - DoE 01/02/04
  - Rainfall, Mean Annual - BOM 30/09/01
  - Groundwater Salinity, Statewide - DOW
  - Evapotranspiration rate, annual

**(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**

With an average annual rainfall varying between 300-500 mm and an annual evapotranspiration rate of 300-400 mm, there is little surface flow during normal seasonal rains. However the Pilbara area is known for periods of flooding intensity during high rainfall events. Due to this history and the scale of the proposed clearing, impacts from clearing are not likely to exacerbate flooding in this region.

The proposed clearing and earthworks on the roadsides may cause some short term water pooling. However, the construction of table drains and culverts for road works are designed to remove the risk of water ponding on a sustained basis.

Given the above, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

**Methodology**

- GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
  - Topographic Contours, Statewide - DOLA 12/09/02
  - Evapotranspiration rate, annual

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

**Comments**

The area under application is within the Proclaimed Groundwater Area of Pilbara. Therefore any abstraction of groundwater would require a licence. However, considering this application is only for road widening and gravel extraction, no licence will be necessary.

There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

There are Title Claims over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

**Methodology**

- GIS Layers:
- Native Title Claims - DLI 7/11/05

#### 4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction or maintenance	Mechanical Removal	144	The proposal may be at variance to principles (a), (c), (d) and (h); is not likely to be at variance to (b), (f), (g), (i) and (j) and not at variance to principle (e).

#### 5. References

- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.

#### 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)