



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 3861/1

File Number: 2010/005535-1

Duration of Permit: From 14 November 2010 to 14 November 2015

### PERMIT HOLDER

Shire of West Arthur

### LAND ON WHICH CLEARING IS TO BE DONE

ROAD RESERVE (DELLYANINE ROAD, ARTHUR RIVER 6315)

ROAD RESERVE (DELLYANINE ROAD, WEDGECARRUP 6315)

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.48 hectares of native vegetation within the combined areas shaded yellow on attached Plan 3861/1a and Plan 3861/1b and Plan 3861/1c and Plan 3861/1d.

### CONDITIONS

#### 1. Avoid, minimise etc clearing

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

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

#### 2. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

#### 3. Revegetation and rehabilitation

- (a) Prior to 31 December 2012 the Permit Holder shall *revegetate* and *rehabilitate* at least 1 hectare of native vegetation within the area cross-hatched red on attached Plan 3861/1e by:
  - (i) ripping the ground on the contour to remove soil compaction prior to undertaking works pursuant to condition 3(a)(ii); and
  - (ii) at an *optimal time*, deliberately *planting* and/or *direct seeding* native vegetation within the area cross-hatched red on attached Plan 3861/1e that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and

- (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) Within 2 years of undertaking *revegetation* and *rehabilitation* in accordance with condition 3(a) of this Permit:
- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 3(b)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 3(a)(ii) and (iii) of this Permit.

#### 4. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a *fauna specialist* who shall identify habitat/*habitat tree(s)* suitable to be utilised as habitat by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.
- (b) Prior to clearing, any habitat/*habitat tree(s)* identified by condition 4(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.
- (c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 4(b).

#### 5. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
- (i) the species composition, structure and density of the cleared area;
  - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (iii) the date that the area was cleared; and
  - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 3 of this Permit:
- (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
  - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.
- (c) In relation to fauna management pursuant to condition 4 of this Permit:
- (i) the location of each habitat/*habitat tree* identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the habitat/*habitat tree(s)*; and
  - (iii) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings.

#### 6. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 5 of this Permit; and



- (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 14 August 2015, the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 6(a) of this Permit.

### **Definitions**

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

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

**direct seeding** means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

**dry conditions** means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

**environmental specialist** means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

**fauna clearing person** means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

**fauna specialist** means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

**fill** means material used to increase the ground level, or fill a hollow;

**habitat tree(s)** means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

**local provenance** means native vegetation seeds and propagating material from natural sources within 20 kilometres of the area cleared;

**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;

**optimal time** means the period from April to June for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

**planting** means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

**regenerate/ed/ion** means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

**rehabilitate/ed/ion** means actively managing an area containing native vegetation in order to improve the ecological function of that area;

**revegetate/ed/ion** means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

*weed/s* means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



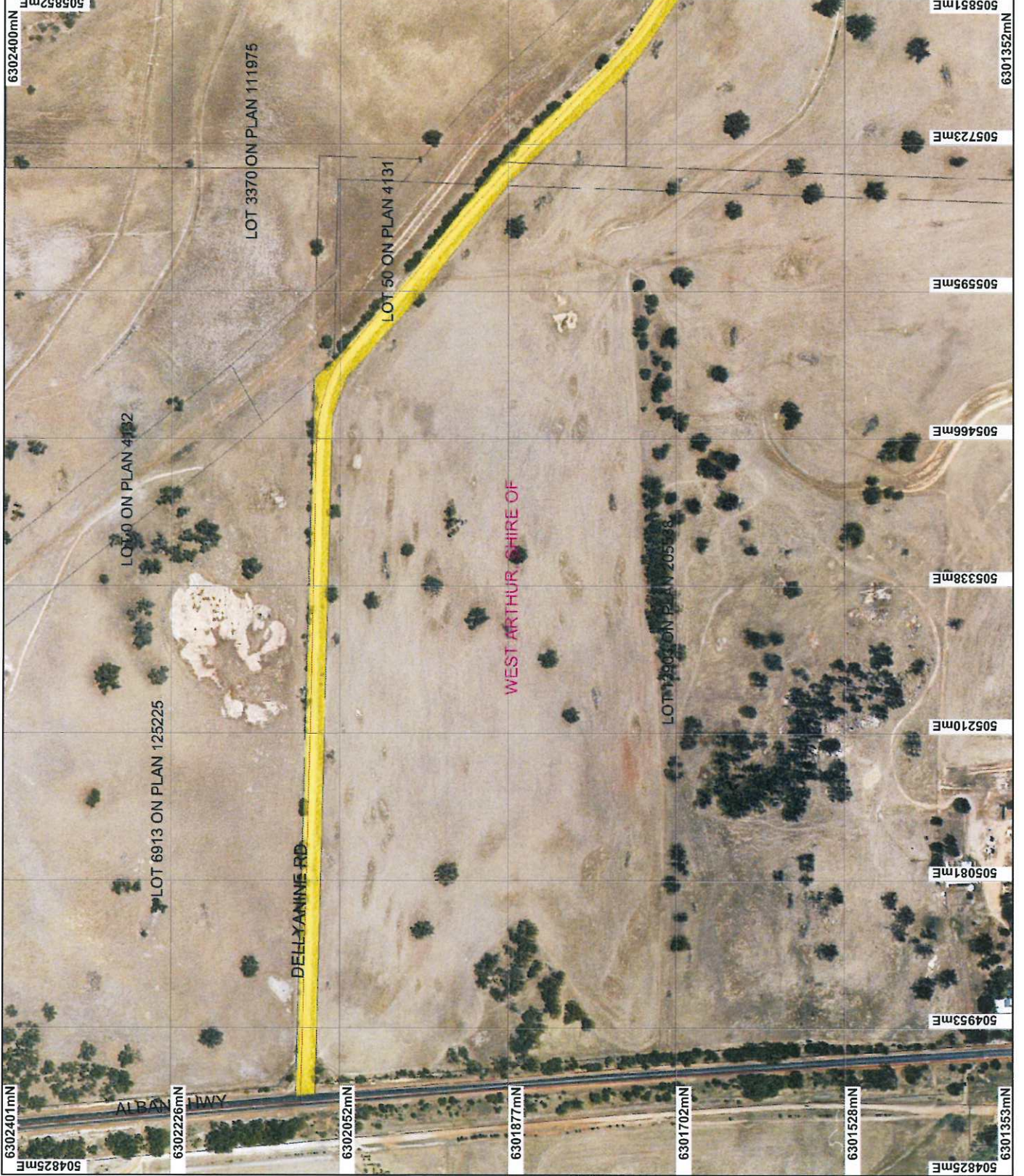
Matthew Warnock  
ACTING MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

14 October 2010



# Plan 3861/1a



## LEGEND

- Cadastral for labelling
- Clearing Instruments
- Areas Approved to Clear
- Road Controllines
- Cadastral\_1
- Local Government Authorities
- Wagin 50cm Orthomosaic - Landgate 2006



0 150 m

Scale 1:5000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

*audulent* Daig 16/10/10

M Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1985

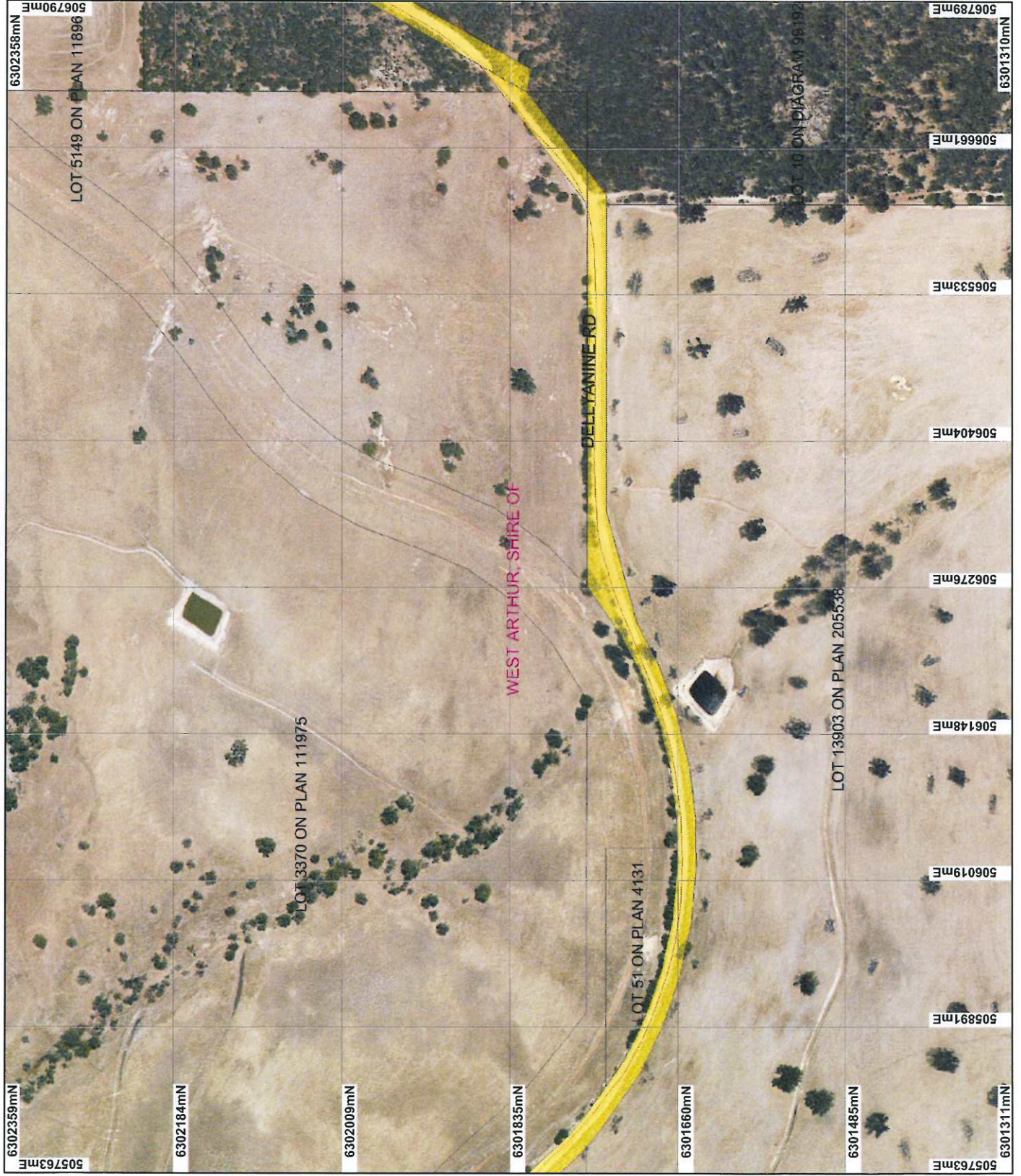
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation  
Our environment, our future  
WA Crown Copyright 2002



# Plan 3861/1b



## LEGEND

- Cadastral for labelling
- Clearing Instruments
- Areas Approved to Clear
- Road Centrelines
- Cadastral\_1
- Local Government Authorities
- Wagin 50cm Orthomosaic - Landgate 2006



Scale 1:5000  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

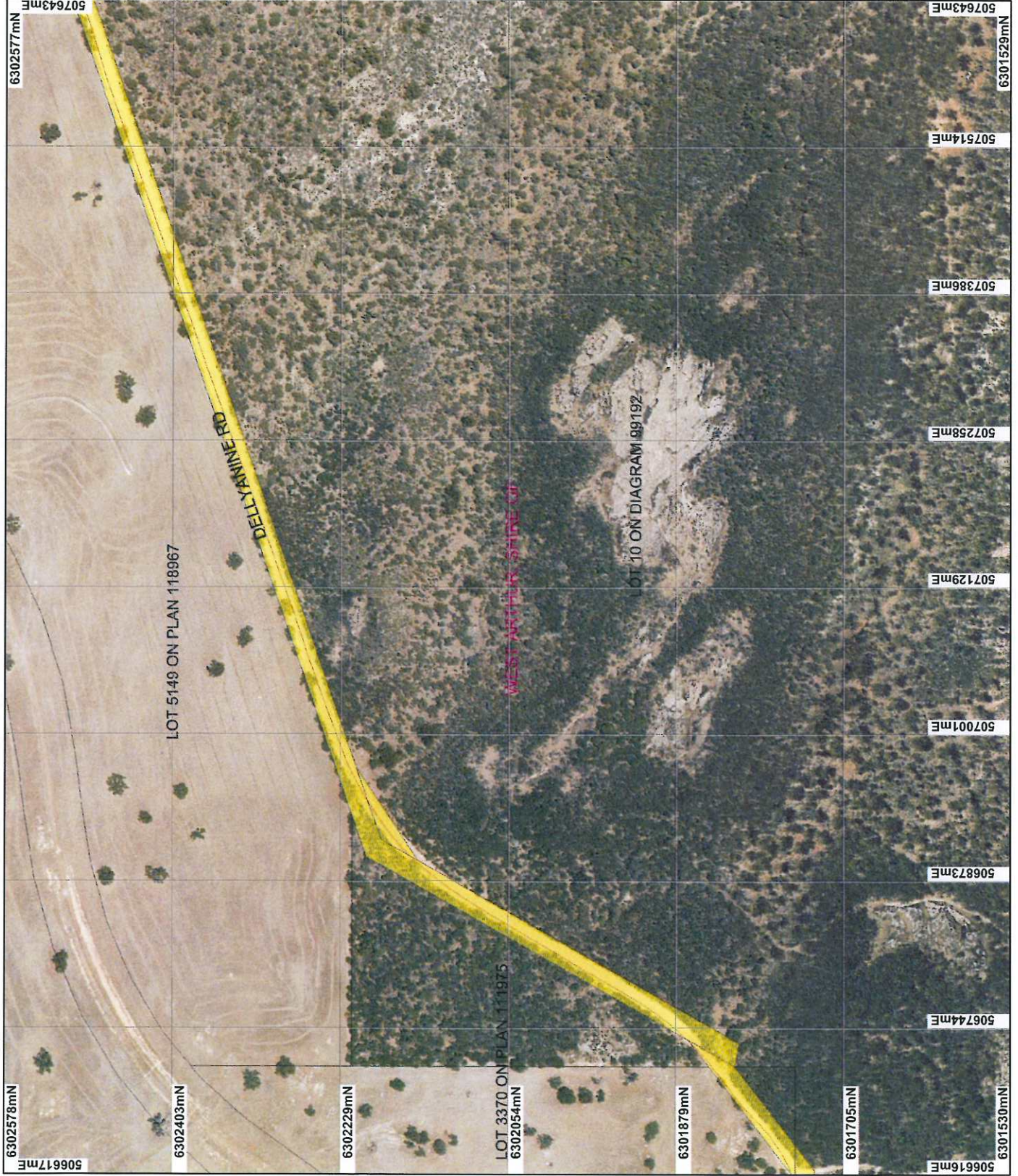
*M Warnock*  
M Warnock ..... Date 14/10/10

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986  
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.





# Plan 3861/1c



## LEGEND

- Cadastral for labelling
- Clearing Instruments
- Areas Approved to Clear
- Road Centrelines
- Cadastral\_1
- Local Government Authorities
- Wagin 50cm Orthomosaic - Landgate 2006



Scale 1:5000  
 (Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

*assessed* Date 19/10/10

M Warnock

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

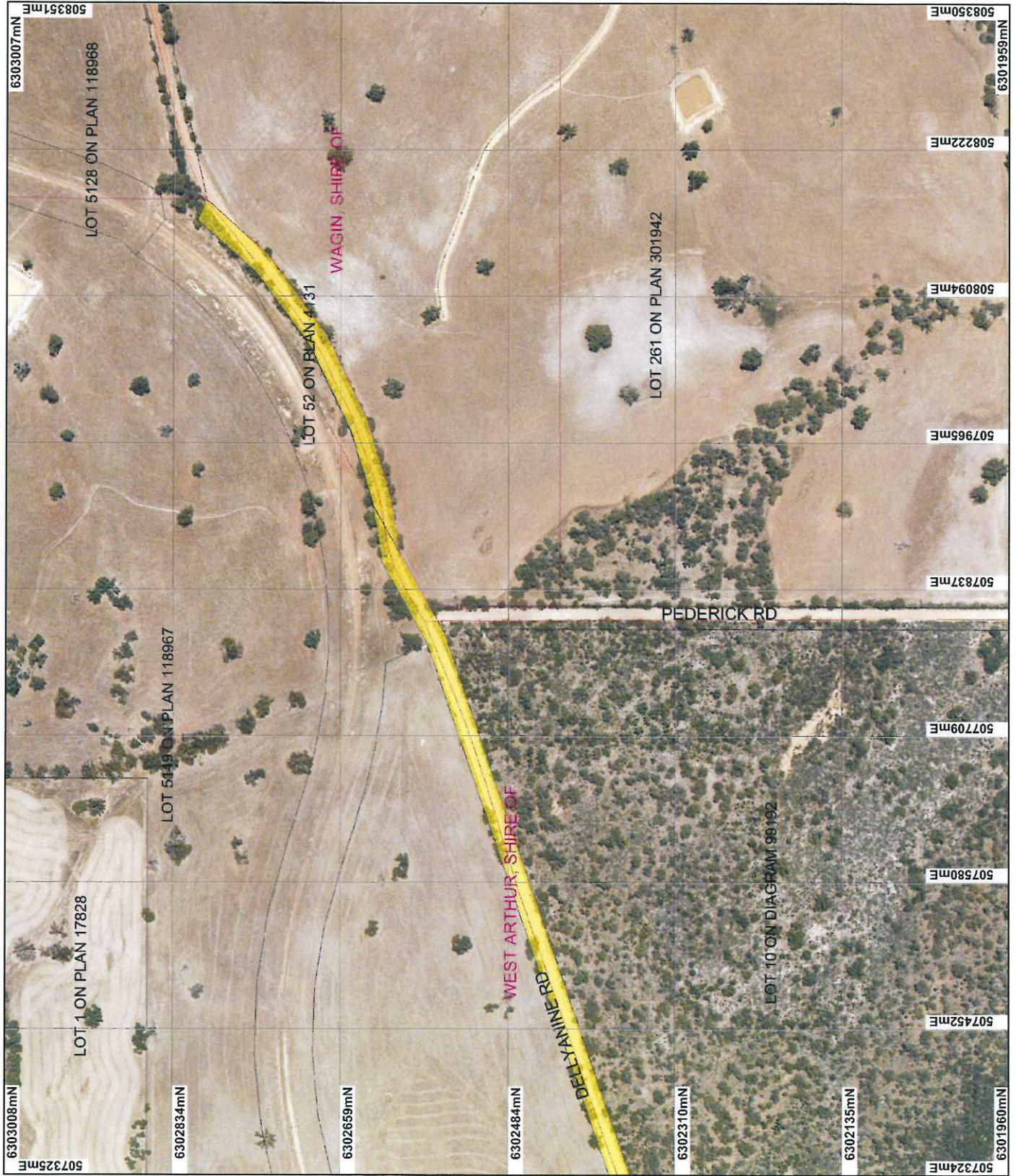
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation  
 Our environment, our future  
 WA Crown Copyright 2002



# Plan 3861/1d



## LEGEND

- Cadastral for labelling
- Clearing Instruments
- Areas Approved to Clear
- Road Centrelines
- Cadastral\_1
- Local Government Authorities
- Wagin 50cm Orthomosaic - Landgate 2006



0 150 m

Scale 1:5000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

*M Waincock* Date 14/10/10

M Waincock

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

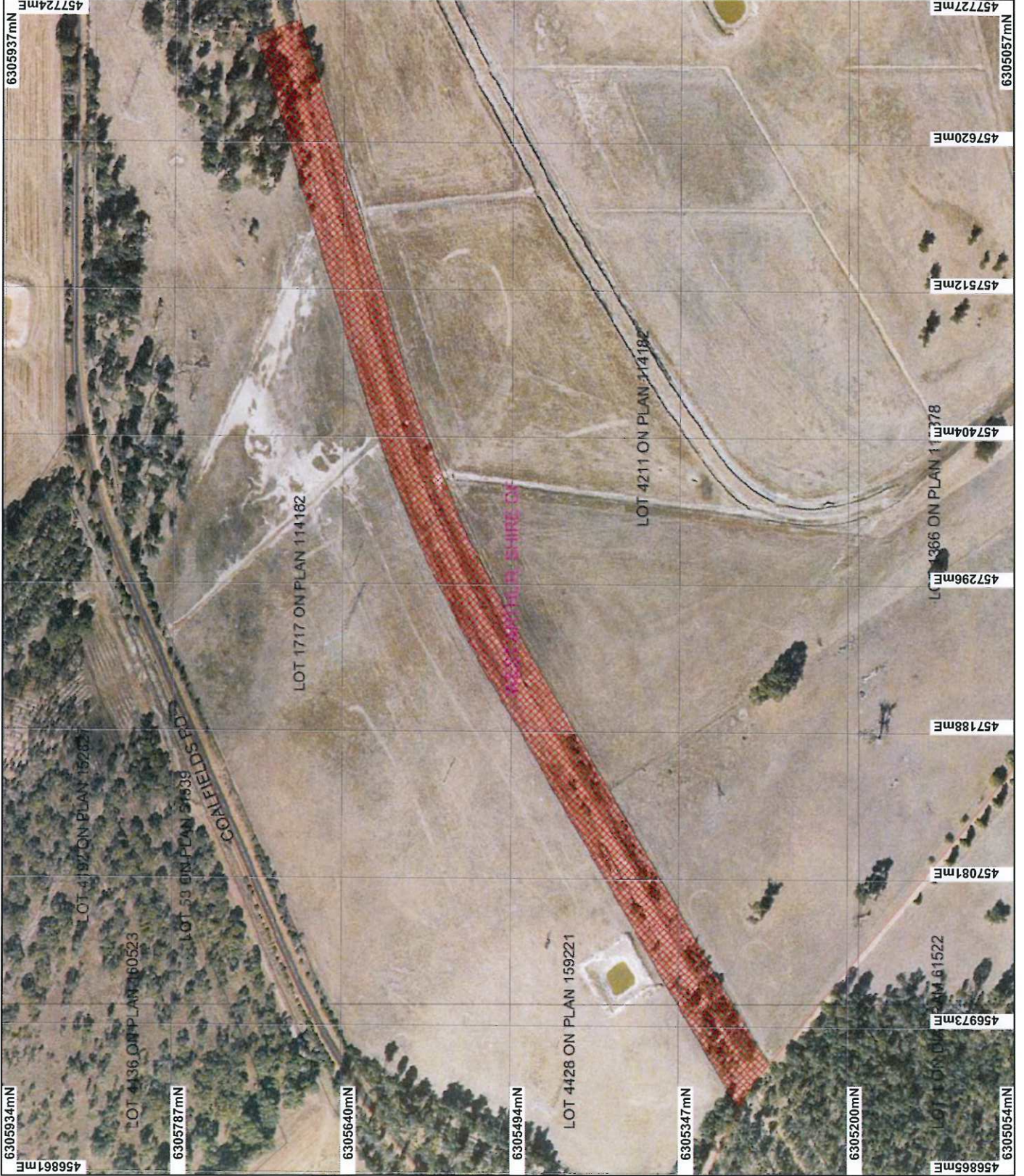
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation  
Our environment, our future  
WA Crown Copyright 2002








# Plan 3861/1e



## LEGEND

### Existing Infrastructure

-  Areas Subject to Conditions
-  Road Centrelines
-  Cadastre\_1
-  Local Government Authorities
-  Darkan 50cm Orthomosaic - Landgate 2006



0 125m

Scale 1:4200

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

*M Warnock* Date 18/10/10

M Warnock

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

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



Department of Environment and Conservation

Our environment, our future  
WA Gov. Copyright 2002





## 1. Application details

### 1.1. Permit application details

Permit application No.: 3861/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Shire of West Arthur

### 1.3. Property details

Property: ROAD RESERVE (ARTHUR RIVER 6315)  
ROAD RESERVE (WEDGE CARRUP 6315)  
Local Government Area: SHIRE OF WEST ARTHUR  
Colloquial name: DELLYANINE ROAD RESERVE

### 1.4. Application

Clearing Area (ha)	Method of Clearing	For the purpose of:
0.48	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
The vegetation under application is mapped as the Beard vegetation association 4 - medium woodland; marri and wandoo and Beard vegetation association 1073 - medium woodland; wandoo and mallet.	The vegetation under application comprises 0.48ha of native vegetation within the Dellyanine Road reserve. The area consists of a few large mature Wandoo and some Sheoak trees along the existing road (DEC, 2010).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation condition was confirmed through aerial photography (Wagin 50cm Orthomosaic - Landgate 2006).
	The vegetation is in overall 'degraded' (Keighery, 1994) condition with some areas being 'completely degraded' (Keighery, 1994) while a small portion adjoining Land for Wildlife site 625 appears to be in 'good' to 'very good' (Keighery, 1994) condition.		
	The structure of the vegetation has been impacted through historic clearing and weed invasion (including veldt grass and wild oats) with the structure, particularly on the northern side of the road and the western end of the applied clearing area, being impacted with mainly just the upper storey remaining. The area directly adjacent to Land for Wildlife site 625 appears to be in a 'good' to 'very good' condition. Tree hollows were found in areas along the road and hollow logs have also been identified in the area neighbouring the Land for Wildlife site.		
As above.	As above.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As above.

## 3. Assessment of application against clearing principles

### Comments

The vegetation proposed to be cleared comprises 0.48ha of native vegetation for the purposes of upgrading the Dellyanine Road within the Shire of West Arthur. The vegetation is in overall 'degraded' (Keighery, 1994) condition with some areas being 'completely degraded' (Keighery, 1994) while a small portion adjoining Land for Wildlife site 625 appears to be in 'good' to 'very good' (Keighery, 1994) condition.



The vegetation under application comprises a few large mature wandoo and sheoak (DEC, 2010) and is part of the Beard vegetation associations 4 and 1073 of which there was 30.4% and 23.9% of their pre-European extents remaining within the Jarrah Forest Bioregion (Shepherd, 2009).

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). Less than 30% of the local area (10km radius) still retains native vegetation and therefore the proposed clearing is considered to be at variance to principle (e). The proponent has agreed to mitigate impacts by revegetating an area of 1ha of a rail walk trail within the Shire.

The vegetation under application, although small in scale, provides some connectivity between a larger bushland remnant to other road reserve native vegetation. However, this portion of the road lacks understorey and therefore without intensive management is unlikely to be considered significant as a corridor for ground-dwelling fauna movement. Tree hollows and hollow logs have however, been identified within the road reserve in the past, particularly in the portion of vegetation which directly adjoins Land for Wildlife site 625, which may provide habitat in this highly cleared landscape. The Land for Wildlife site 625 is considered significant as fauna habitat in this area and the removal of vegetation adjacent to it is likely to cause further degradation to this remnant through weed encroachment and removal of fauna habitat. Therefore the proposal may be at variance to principle (b). The Shire has advised that an assessment of the vegetation will be undertaken to identify fauna habitat within the applied clearing area.

Three rare and three priority flora species have been recorded within the local area of the applied clearing areas within similar vegetation and/or soil types, with the closest being *Conostylis drummondii* (declared rare) approximately 1.3km away. During a site visit, undertaken in August 2010, there was no evidence of any declared rare or priority flora species within the 0.48ha proposed for clearing.

One minor, non perennial watercourse, a tributary of a significant stream and subsequently the Beaufort River, appears to have historically run through one of the areas under application, however, a dam, the existing road and clearing on adjoining farmland has already impacted this creek line and therefore the proposed road widening is unlikely to cause any further detrimental impact to the watercourse.

Given that the vegetation under application is poorly represented and potentially comprises habitat for fauna in a significantly cleared area, an offset is required in order to mitigate the loss of this vegetation. The Shire has committed to revegetating an area of 1ha within a rail walk trail within the Shire (Shire of West Arthur, 2010a) which will enhance connectivity between remnants of vegetation. Due to the adjoining Land for Wildlife site 625 being in 'very good' (Keighery, 1994) condition or better, measures to prevent the introduction and spread of weeds will be required to reduce the risk of weed encroachment to this remnant.

#### Methodology

##### References:

- DEC (2010)
- Keighery (1994)
- Shepherd (2009)
- Shire of West Arthur (2010a)

##### GIS Databases:

- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW
- Local Government Authorities - DOLA
- NLWRA, Current Extent of Native Vegetation - DA & CALM
- Pre-European Vegetation - DA
- SAC Biodatasets, DEC - Accessed 11 August 2010
- Soils, Statewide - DA
- Wagin 50cm Orthomosaic - Landgate 2006

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

##### Comments

The area under application lies within the Dellyanine Road reserve within the Shire of West Arthur and therefore is designated for the purpose of road. This road is part of a school bus route and requires an upgrade to improve safety (Shire of West Arthur, 2010b).

The area under application lies directly adjacent to Land for Wildlife site 625. It should be noted that Land for Wildlife is a voluntary scheme that aims to encourage and assist private landholders in Western Australia to provide habitats for wildlife on their property, even though the property may be managed primarily for other purposes. Despite it being a voluntary scheme, this site is likely to be significant for conservation in this location given the highly cleared landscape. The clearing of the road reserve is likely to cause further degradation to this remnant vegetation through weed encroachment and removal of fauna habitat.

One Aboriginal Site of Significance has been recorded covering an area proposed to be cleared (DIA, 2010). The applicant will be advised to contact the Department of Indigenous Affairs to determine their obligations and requirements under the Aboriginal Heritage Act 1972.



- Methodology**    **References:**
- Shire of West Arthur (2010b)
  - DIA (2010)
- GIS Databases:**
- Aboriginal Sites of Significance - DIA
  - Cadastre - Landgate
  - SAC Biodatasets, DEC - Accessed 11 August 2010

#### 4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2010) Regional advice for CPS 3861/1 - Application for a clearing permit (area permit) - Dellyanine Road Reserve, Arthur River and Wedgecarrup. Wheatbelt Region, Department of Environment and Conservation, Western Australia. DEC ref A330718.
- DIA (2010) Aboriginal Heritage Inquiry System, Report created 11 August 2010. Department of Indigenous Affairs, Western Australia. DEC ref A324702.
- 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.
- Shepherd, D.P. (2009) 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.
- Shire of West Arthur (2010a) Offset for Proposed Clearing CPS 3861/1 and CPS 3841/1 - Revegetation of Rail Walk Trail. Shire of West Arthur, Darkan, Western Australia. DEC ref A338458.
- Shire of West Arthur (2010b) Application for a clearing permit (area permit). Shire of West Arthur, Darkan, Western Australia. DEC ref A320317.

#### 5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)