



## CLEARING PERMIT

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

<b>Purpose Permit number:</b>	CPS 3425/1
<b>Permit holder:</b>	Shire of Donnybrook - Balingup
<b>Duration of Permit:</b>	23 January 2010 – 23 January 2015

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 construction and maintenance

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

Brookhampton Road Reserve (Brookhampton, 6239)  
Upper Capel Road Reserve (Upper Capel, 6239)  
Atherton Road Reserve (Lowden, 6240)

#### **3. Area of Clearing**

The Permit Holder must not clear more than 1 hectare of native vegetation within the area shaded yellow on attached Plans 3425/1a, 3425/1b, 3425/1c, 3425/1d and 3425/1e.

#### **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 activities to the extent that the permit holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

#### **6. Compliance with Assessment Sequence and Management Procedures**

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

## **PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES**

### **7. 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.

### **8. 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 not move soils in wet 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.

### **9. Fauna management**

(a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify habitat/*habitat tree(s)* suitable to be utilised by fauna species listed below:

- (i) Carnaby Black Cockatoo (*Calyptorhynchus latirostris*);
- (ii) Chuditch (*Dasyurus geoffroii*);
- (iii) Quenda (*Isodon obesulus fusciventer*);
- (iv) Brush-tailed Phascogale (*Phascogale tapoatafa* ssp.);
- (v) Forest Red Tailed Black Cockatoo (*Calyptorhynchus banksii naso*);
- (vi) Masked Owl (*Tyto novaehollandiae novae-hollandiae*)

(b) Prior to clearing, any habitat/*habitat tree(s)* identified by condition 9(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 9(a).

(c) Prior to clearing, the Permit Holder shall ensure that any fauna identified by condition 9(b) shall be removed and relocated by a *fauna clearing person*, in accordance with a licence issued by the Department.

### **10. Flora management**

(a) Prior to undertaking any clearing authorised under this Permit, the site shall be inspected by a *flora specialist* for the presence of the following *priority flora taxa*.

- (i) *Asplenium aethiopicum*
- (ii) *Acacia semutrullata*; and
- (iii) *Tetratheca parvifolia*

(b) Where *priority flora taxa* are identified in relation to condition 10(a) of this Permit, the Permit Holder shall ensure that:

- (i) all records of *priority flora taxa* are submitted to the CEO;
- (ii) no clearing occurs within 10 metres of identified *priority flora taxa*, unless approved by the CEO.

## **PART III – OFFSETS**

### **11. Offsets**

Where clearing authorised under this Permit impacts Beard vegetation associations 999 and 1182 as indicated on plan 3425/1f, the Permit Holder must implement an *offset* in accordance with conditions 11(a) and 11(b) of this Permit with respect to that clearing.

(a) Determination of *offsets*:

- (i) in determining the *offset* to be implemented with respect to a particular area of native vegetation proposed to be cleared under this Permit, the Permit Holder must have regard to the *offset* principles contained in condition 11(b) of this Permit;
- (ii) once the Permit Holder has developed an *offset proposal*, the Permit Holder must provide that *offset proposal* to the CEO for the CEO's approval prior to undertaking any clearing to which the *offset* relates, and prior to implementing the *offset*;
- (iii) clearing may not commence until and unless the CEO has approved the *offset proposal* to which the clearing relates;
- (iv) the Permit Holder shall implement the *offset proposal* approved under condition 11(a)(iii); and
- (v) each *offset proposal* shall include a *direct offset*, timing for implementation of the *offset proposal* and may additionally include *contributing offsets*.

(b) For the purpose of this condition, the *offset* principles are as follows:

- (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
- (ii) *contributing offsets* should complement and enhance the *direct offset*;
- (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
- (iv) the environmental values, habitat, species, *ecological community*, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
- (v) a ratio greater than 1:1 should be applied to the size of the area of native vegetation that is *offset* to compensate for the risk that the *offset* may fail;
- (vi) *offsets* must entail a robust and consistent assessment process;
- (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, vegetation *condition*, habitat quality and area of native vegetation cleared;
- (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the *condition* of the natural environment;
- (ix) *offsets* must satisfy all statutory requirements;
- (x) *offsets* must be clearly defined, documented and audited;
- (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
- (xii) an *environmental specialist* must be involved in the design, assessment and monitoring of *offsets*.

## **PART IV – RECORD KEEPING AND REPORTING**

### **12. 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 fauna management pursuant to condition 9 of this Permit:
  - (i) the location of each 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 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.
- (c) In relation to flora management pursuant to condition 10 of this Permit:
  - (i) the location of each rare flora and *priority flora taxa* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; and
  - (ii) the species name of each rare flora or *priority flora taxa* identified.
- (d) In relation to the *offset* of areas pursuant to condition 11:
  - (i) the location of any area of *offsets* 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 *offset* activities undertaken; and
  - (iii) the size of the *offset* area (in hectares).

### 13. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 12 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 23 October 2014, the Permit Holder must provide to the CEO a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(a) of this Permit.

### Definitions

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

***condition*** means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

***contributing offsets*** has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

***Department*** means the Department of Environment and Conservation (Western Australia);

***decision report*** means the decision report outlining the assessment of CPS 3066/1.

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

***direct offsets*** has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

***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;

***flora specialist*** means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

***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;

***Keighery scale*** means the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia;

***local provenance*** means native vegetation seeds and propagating material from natural sources within 10-40 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;

***offset/s*** means an offset required to be implemented under Condition 11 of this Permit;

***offset proposal*** means an *offset* determined by the Permit Holder in accordance with condition 11 of this Permit;

***optimal time*** means the period from April to May 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;

***priority flora taxa*** means those plant taxa that described as priority flora classes 1, 2, 3 or 4 in the *Department's Declared Rare and Priority Flora List for Western Australia* (as amended);

***remedial action/s*** means, for the purpose of this Permit, any activity that is required to ensure successful establishment of an approved *offset*, and may include a combination of soil treatments and *revegetation*.

***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*.



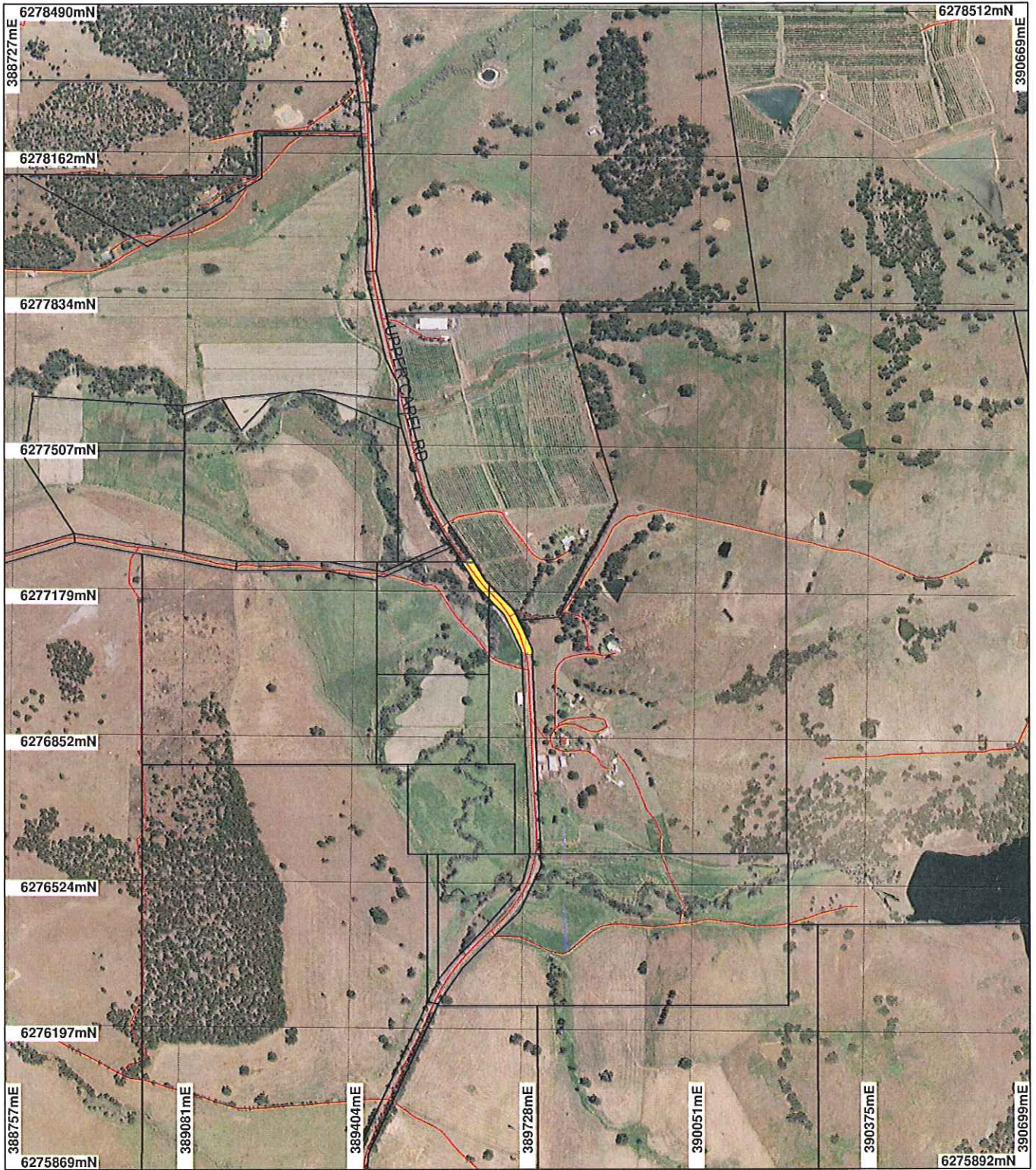
Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

23 December 2009

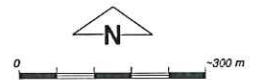
CPS 3425/1, 23 December 2009

# Plan 3425/1a



## LEGEND

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li> Clearing Instruments</li> <li> Areas Approved to Clear</li> <li> Road Centrelines</li> <li> Cadastre</li> <li> Towns</li> </ul> | <ul style="list-style-type: none"> <li>Bunbury 50cm Orthomosaic - Landgate 2008</li> <li>Donnybrook 50cm Orthomosaic - Landgate 2004</li> </ul> |
|---|---|



Scale 1:11513  
(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.

Date 23/12/09  
K. Faulkner

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

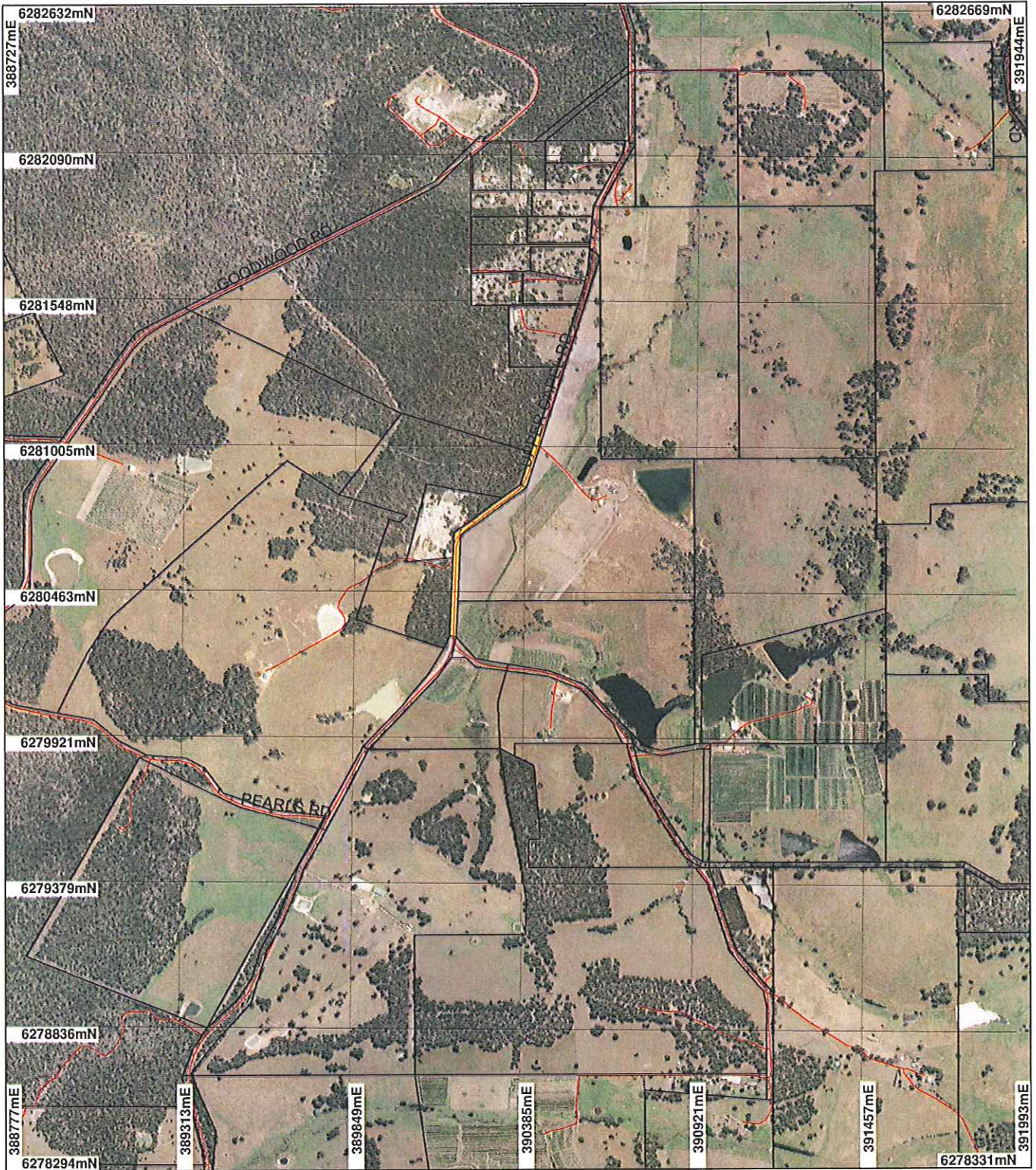
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# Plan 3425/1b



## LEGEND

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| <b>Clearing Instruments</b> | Bunbury 50cm Orthomosaic - Landgate 2008    |
| Areas Approved to Clear     | Donnybrook 50cm Orthomosaic - Landgate 2004 |
| Road Centrelines            |   |
| Cadastre                    |   |
| Towns                       |   |



0 ————— 500 m

Scale 1:19066

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Date 23/12/09

K Faulker

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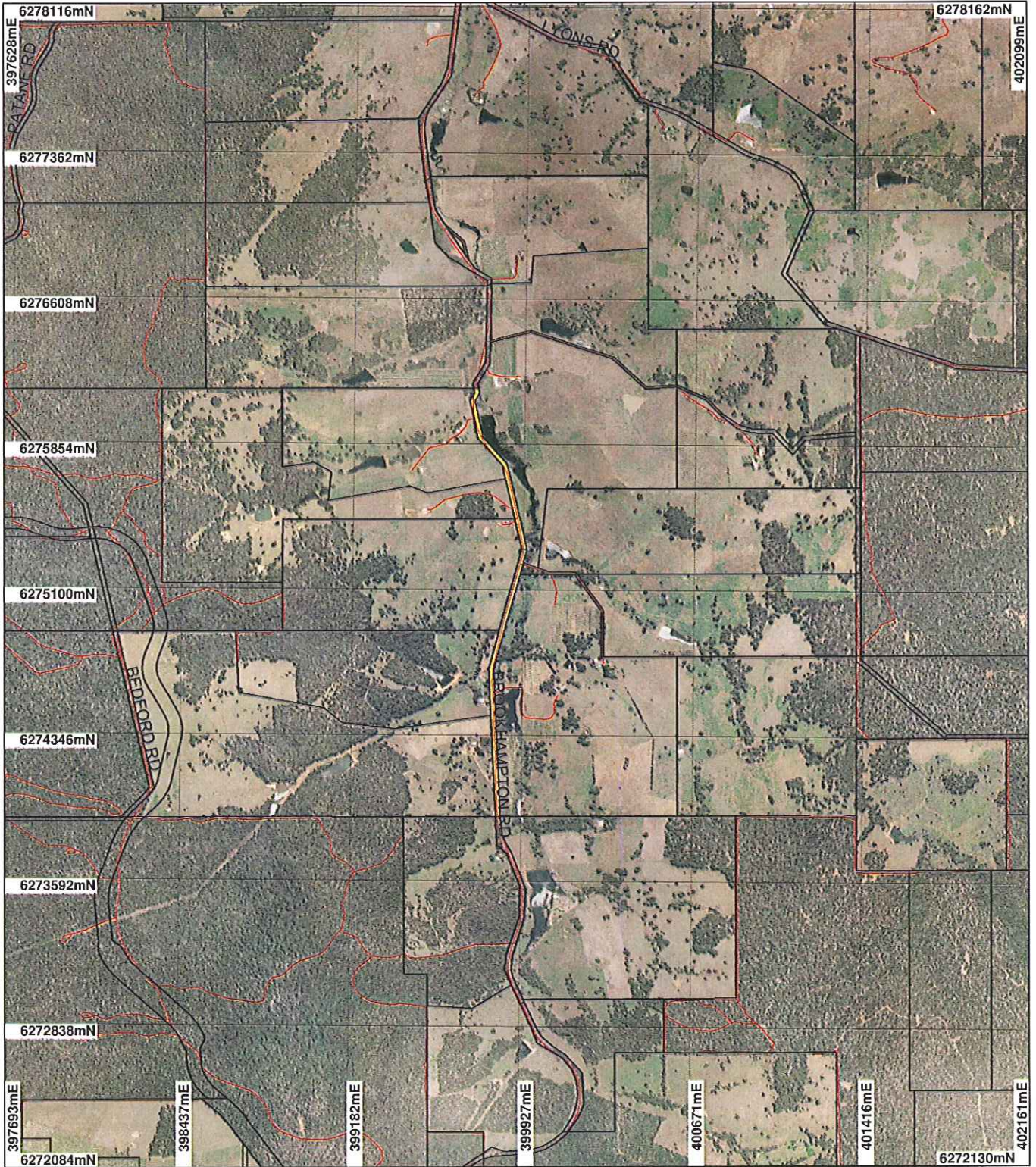
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# Plan 3425/1c



## LEGEND

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| <b>Clearing Instruments</b> | Bunbury 50cm Orthomosaic - Landgate 2008    |
| Areas Approved to Clear     | Donnybrook 50cm Orthomosaic - Landgate 2004 |
| Road Centrelines            |   |
| Cadastre                    |   |
| Towns                       |   |



0 ~750 m

Scale 1:26504

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Date 23/12/07  
K Faulkner

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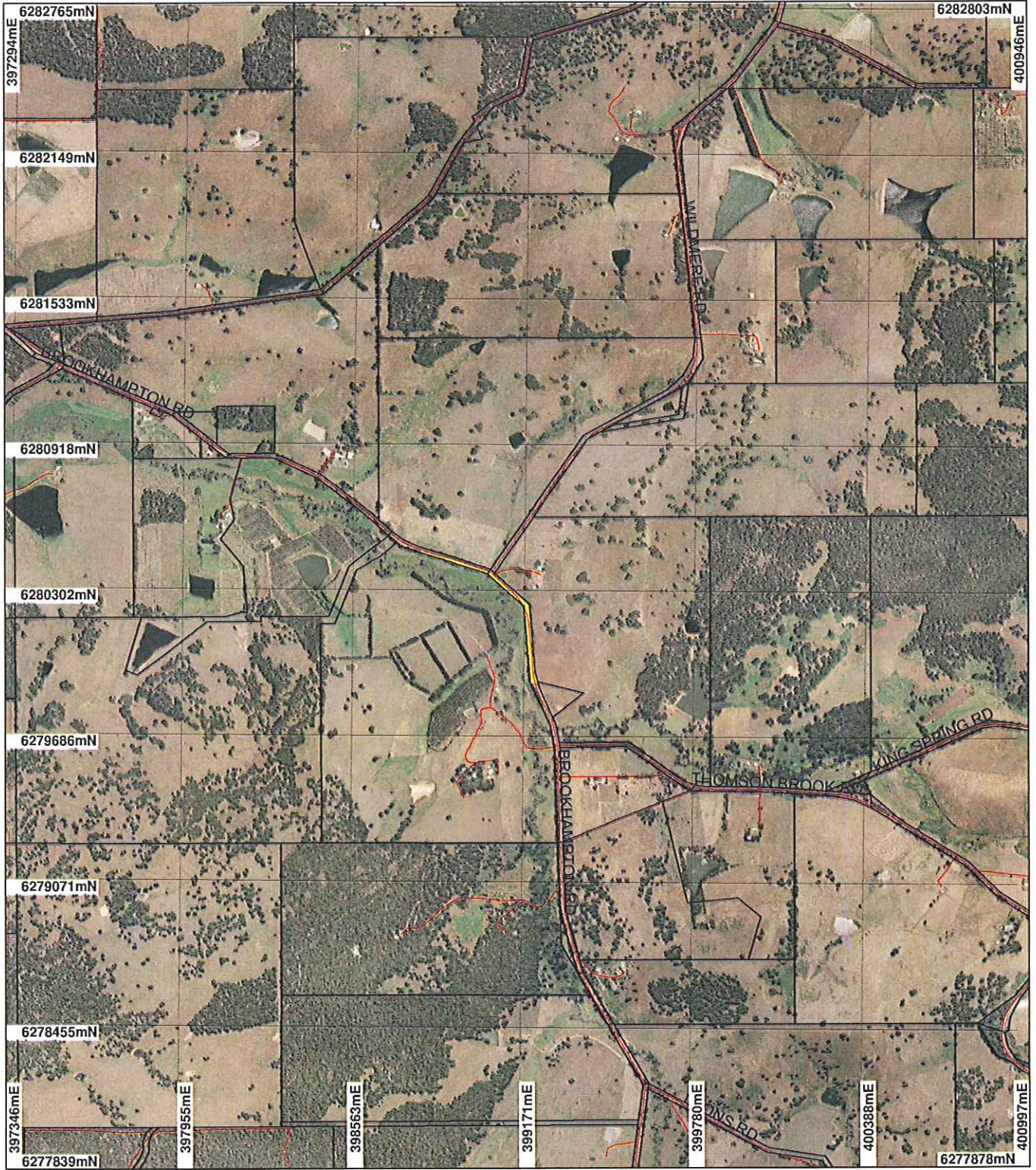


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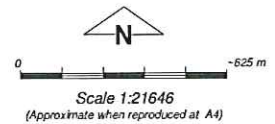


# Plan 3425/1d



## LEGEND

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Geocentric Datum Australia 1994

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

*K Faulkner* 23/12/09  
 K Faulkner Date

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

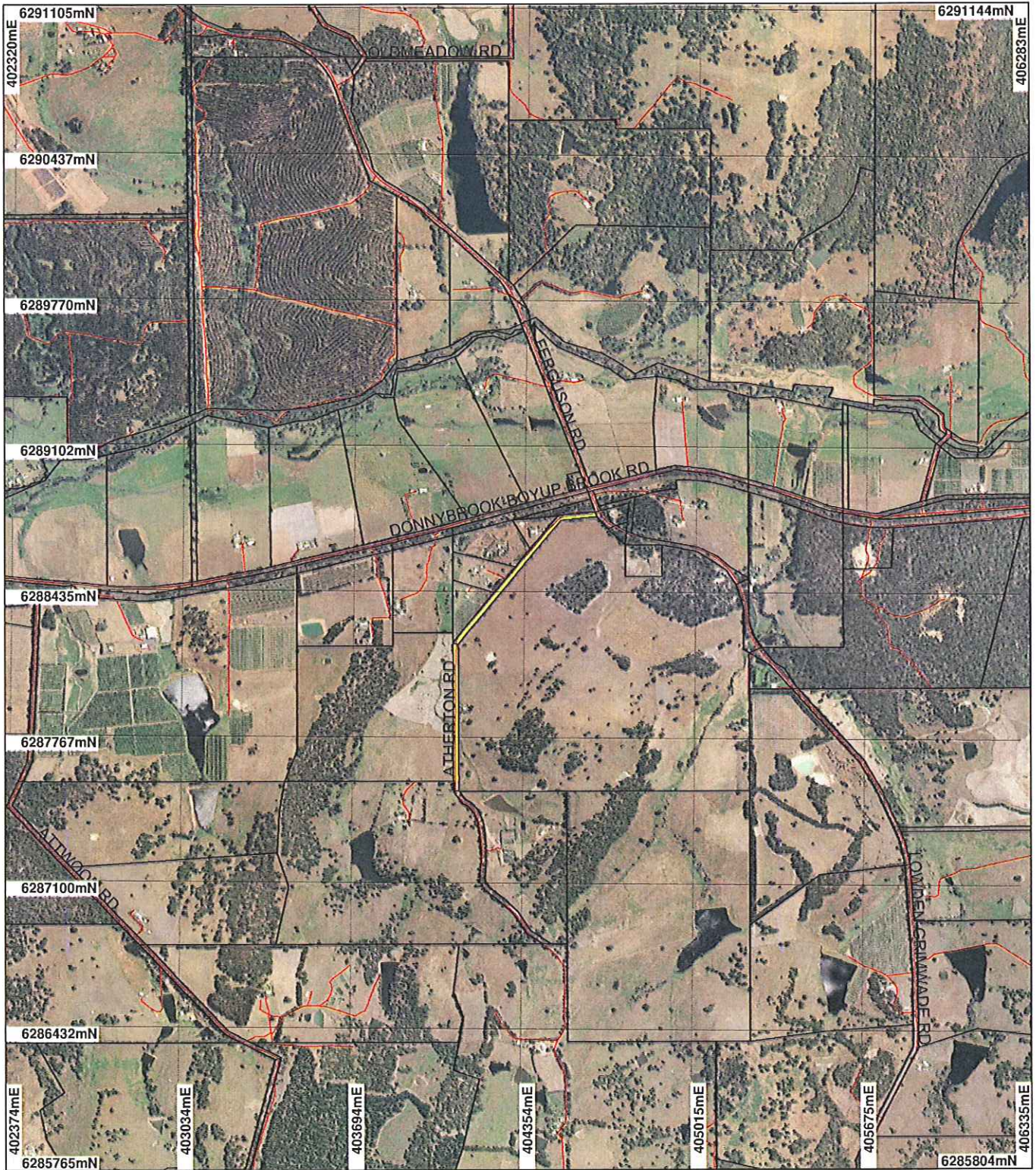
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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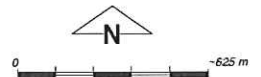
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# Plan 3425/1e



## LEGEND

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(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Date 23/12/07

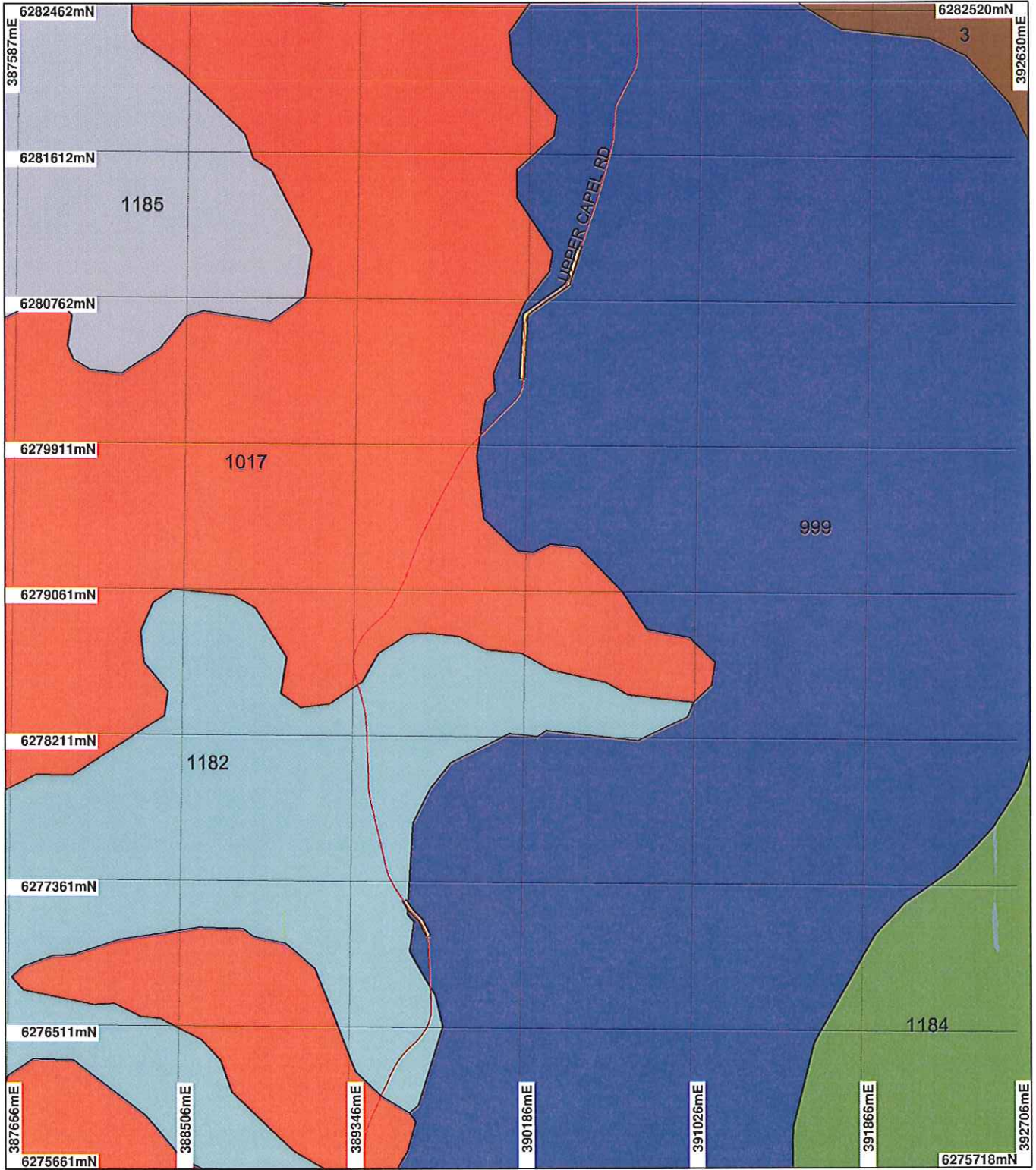
K Faulkner  
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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



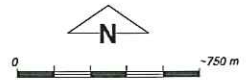
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# Plan 3425/1f



## LEGEND

- |  |  |
|--|--|
| Pre-European_Vegetation *  | Road Centrelines   |
| Clearing Instruments   | Towns_2  |
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Areas Applied to Clear</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> Areas Subject to Conditions</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Areas Approved to Clear</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin-right: 5px;"></span> A</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin-right: 5px;"></span> B</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin-right: 5px;"></span> C</li> </ul> |



Scale 1:29888  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994  
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*K Faulkner* Date 23/12/08

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

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 3425/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Donnybrook Balingup

### 1.3. Property details

Property:

- ROAD RESERVE ( THOMSON BROOK 6239)
- ROAD RESERVE ( BROOKHAMPTON 6239)
- ROAD RESERVE ( CHARLEY CREEK 6239)
- ROAD RESERVE ( BROOKHAMPTON 6239)
- ROAD RESERVE ( BROOKHAMPTON 6239)
- ROAD RESERVE ( BROOKHAMPTON 6239)
- ROAD RESERVE ( BROOKHAMPTON 6239)
- ROAD RESERVE ( UPPER CAPEL 6239)
- ROAD RESERVE ( UPPER CAPEL 6239)
- ROAD RESERVE ( LOWDEN 6240)
- ROAD RESERVE ( LOWDEN 6240)
- ROAD RESERVE ( UPPER CAPEL 6239)
- ROAD RESERVE ( UPPER CAPEL 6239)
- ROAD RESERVE ( UPPER CAPEL 6239)

Local Government Area:

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1		Mechanical Removal	Road construction and 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
Beard Vegetation Associations:	The proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup for the purpose of road construction and maintenance.	Completely Degraded: No longer intact; completely/almost completely without native species - Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation condition has been determined using aerial imagery site photos provided by the applicant and Roadside Conservation Committee mapping.
3 - Medium forest; jarrah-marri			
999 - Medium woodland; marri			
1182 - Medium woodland; Eucalyptus rudis & Melaleuca raphiophylla			
1182 - Medium woodland; Eucalyptus rudis & Melaleuca raphiophylla			
1184 - Medium woodland-fringing; jarrah, marri, Eucalyptus rudis & Agonis flexuosa			
Mattiske Vegetation Complex:			
Donnybrook - Open forest			

of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Agonis flexuosa* on slopes of the escarpment in the humid zone.

Balingup - Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on slopes and woodland of *Eucalyptus rudis* on the valley floor in the humid zone.

Mumballup - Open forest of *Eucalyptus patens*-*Corymbia calophylla* on slopes and woodland of *Eucalyptus rudis*-*Melaleuca raphiophylla* on lower valley floor in the humid zone.

Queenwood - Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on slopes in the humid zone.

Hedde Vegetation Complex:  
Lowdon - No Description

Williams Avon Brockman Mumballup - No Description

Darling Scarp - Vegetation ranges from low open woodland to lichens according to depth of soils. Woodland components chiefly *Eucalyptus wandoo* (Wandoo) with *Eucalyptus laeliae* (Darling Range Ghost Gum) in the north, *Corymbia haematoxylon* (Mountain Marri) in the south, and *Corymbia calophylla* (Marri) throughout the region. Dominant vegetation types R. R.

### 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 proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

The vegetation within the road reserves is predominantly Marri-Jarrah woodland, with an open understorey ranging in condition from completely degraded to very good condition (Keighery 1994).

All of the roads within the area proposed to be cleared were mapped by the Roadside Conservation Committee (RCC) in December 2008. The vegetation in the Upper Capel Road recorded conservation values of medium to high adjacent to the Boyanup State Forest. Medium to high conservation values were also recorded around the section of Atherton road near the intersection of Donnybrook-Boyup Road. All other sections of road recorded low conservation values. (Roadside Conservation Committee, 2008)

There are 9 threatened fauna species identified within the local area (10km radius). Several sections of the road

reserves under application border state forest and have been mapped as having areas of medium to high conservation value and the road reserves may contain a number of mature trees which may potentially provide habitat. There are 19 known occurrences of priority or declared rare flora occurring in the local area (10km radius). Of these the priority species *Asplenium aethiopicum*, *Acacia semitrullata* and *Tetratheca parvifolia* occur in the same vegetation and soil types as those which occur in the area under application. *Asplenium aethiopicum* occurs within 50 metres of Atherton Road.

Beard vegetation associations 999 and 1182 represented within the Upper Capel Road reserve have 12.69% and 27.9% of their Pre European vegetation extent remaining which is below the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA 2000). All of the road reserves under application lie within the Jarrah Forest IBRA Bioregion. In this bioregion Beard vegetation association 999 has 27.14% of its Pre European vegetation extent remaining.

Several sections of the road reserves under application have been mapped as having medium to high conservation values. Given that several of the vegetation associations represented within the area under application are below the recommended threshold level and considering that these road reserves may potentially contain priority flora and provide habitat for fauna in an extensively cleared landscape the areas proposed to be cleared may contain a high level of biodiversity in a local context and the clearing as proposed may be at variance to this principle.

A minimise clearing condition and a flora management condition will be placed on the permit to address the potential for priority flora to exist within the road reserves under application.

**Methodology** EPA (2000)  
Shepherd et al (2007)  
Keighery (1994)  
Roadside Conservation Committee (2008)  
GIS database:  
- Mattiske Vegetation (01/03/1998)  
- Heddle Vegetation Complexes - DEP 22/06/95  
- Pre European Vegetation - DA 01/01  
- Donnybrook 50cm Orthomosaic - Landgate 2004  
- Bunbury 50cm Orthomosaic - Landgate 2006  
- SAC Biodatasets - accessed 1 December 2009

**(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 following threatened fauna species are recorded within the local area (10 km radius):

- Western Brush Wallaby (*Macropus irma*) - P4
- Carnaby Black Cockatoo (*Calyptorhynchus latirostris*) - Endangered
- Chuditch (*Dasyurus geoffroi*) - Vulnerable
- Western Ringtail Possum (*Pseudocheirus occidentalis*) - Vulnerable
- Quenda (*Isodon obesulus fusciventer*) - P5
- Brush-tailed Phascogale (*Phascogale tapoatafa* ssp.) - Vulnerable
- Forest Red Tailed Black Cockatoo (*Calyptorhynchus banksii naso*) - Vulnerable
- Masked Owl (*Tyto novaehollandiae novae-hollandiae*) - P3
- Cricket (*Pachysaga strobila*) - P1

The proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton road reserves in the Shire of Donnybrook Balingup, for road upgrades.

The vegetation within the road reserves is predominantly Marri-Jarrah woodland, with an open understorey ranging in condition from completely degraded to very good condition (Keighery 1994).

All of the roads within the area proposed to be cleared were mapped by the Roadside Conservation Committee (RCC) in December 2008. The vegetation in the Upper Capel Road recorded conservation values of medium to high adjacent to the Boyanup State Forest. Medium to high conservation values were also recorded around the section of Atherton road near the intersection of Donnybrook-Boyup Road. All other sections of road recorded low conservation values. (Roadside Conservation Committee, 2008)

Given that several sections of the roads under application border state forest and have been mapped as having areas of medium to high conservation value the road reserves may contain a number of mature trees which may potentially provide habitat.

Beard vegetation associations 999 and 1182 represented within the Upper Capel Road reserve have 12.69%

and 27.9% of their Pre European vegetation extent remaining which is below the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA 2000). Given the above it is considered that this remaining vegetation may comprise the whole or a part of, or be necessary for the maintenance of, a significant habitat for fauna in a local context and as such the clearing may be at variance to this principle.

A minimise clearing condition to mitigate the loss of remnant vegetation and a fauna management condition to minimise the potential for clearing to impact upon threatened fauna will be placed on the permit .

**Methodology** Roadside Conservation Committee (2008)  
Keighery (1994)  
GIS database:  
- Donnybrook 50cm Orthomosaic - Landgate 2004  
- Bunbury 50cm Orthomosaic - Landgate 2006  
- SAC Biodatasets - accessed 1 December 2009

**(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 2 records of DRF recorded in the local area (10km Radius).

- Goodenia arthrotricha
- Banksia squarrosa subsp. argillacea

The proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

The vegetation within the road reserves is predominantly Marri-Jarrah woodland, with an open understorey ranging in condition from completely degraded to very good condition (Keighery 1994).

All of the roads within the area proposed to be cleared were mapped by the Roadside Conservation Committee (RCC) in December 2008. The vegetation in the Upper Capel Road recorded conservation values of medium to high adjacent to the Boyanup State Forest. Medium to high conservation values were also recorded around the section of Atherton road near the intersection of Donnybrook-Boyup Road. All other sections of road recorded low conservation values. (Roadside Conservation Committee, 2008)

Of the DRF recorded in the local area Goodenia arthrotricha occurs in the same mapped vegetation and soil types as those which occur within the southern section of Atherton Road. Given that this section of Atherton Road has been mapped by the RCC as having low conservation values it is unlikely that the areas proposed to be cleared will include or be necessary for the continued existence of rare flora and the clearing as proposed is not likely to be at variance to this principle.

**Methodology** Keighery (1994)  
Roadside Conservation Committee (2008)  
WA Herbarium (1998)  
GIS database:  
- Mattiske Vegetation (01/03/1998)  
- Heddle Vegetation Complexes - DEP 22/06/95  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 1 December 2009  
- Soils, Statewide DA 11/99

**(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 records of Threatened Ecological Communities (TECs) within the local area (10km radius) and the clearing is therefore not likely to be at variance to this principle.

**Methodology** Keighery (1994)  
GIS database:  
- Mattiske Vegetation (01/03/1998)  
- Heddle Vegetation Complexes - DEP 22/06/95  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 1 December 2009  
- Soils, Statewide DA 11/99

**(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 (ha)	Current extent (ha)	Remaining (%)	Remaining (%) Bioregion
IBRA Bioregions*				
Jarrah Forest <sup>^</sup>	4671 007	2601026	55.6	
Shire*				
Donnybrook - Balingup	155949	92318	59.2	
Mattiske Vegetation Complex**				
DB3	1833	596	32.53	
BL	59446	18822	31	
ML	2581	373	14.45	
QW	1417	590	41.64	
Heddle Vegetation Complex***				
Lowdon	No Data			
Williams Avon Brockman Mumballup	No Data			
Darling Scarp	No Data			
Beard Vegetation Association*				
3	2661405	1863719	70	70
999	115706	14686	12	27
1182	23437	6548	27	46
1184	63562	26971	42	42

\* (Shepherd et al. 2007)

\*\* (Mattiske Consulting 1998)

\*\*\* (Heddle 1980)

<sup>^</sup> Area within Intensive Land Use Zone

The proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

The vegetation within the road reserves is predominantly Marri-Jarrah woodland, with an open understorey ranging in condition from completely degraded to very good condition (Keighery 1994).

All of the roads within the area proposed to be cleared were mapped by the Roadside Conservation Committee (RCC) in December 2008. The vegetation in the Upper Capel Road recorded conservation values of medium to high adjacent to the Boyanup State Forest. Medium to high conservation values were also recorded around the section of Atherton road near the intersection of Donnybrook-Boyanup Road. All other sections of road recorded low conservation values. (Roadside Conservation Committee, 2008)

The Upper Capel Road Reserve has a border with the Boyanup State Forest which forms part of the South West Regional Ecological Linkage area which has a proximity value of 1a: a patch within an edge touching or <100m from a linkage (Molloy et al, 2009). Given that the clearing is for 1ha of clearing within 5km of road reserves the impacts on the linkage are considered unlikely to be significant.

The Environmental Protection Authority (EPA) supports the retention of remnant native vegetation to a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA 2000).

Beard vegetation associations 999 and 1182 which occur on Upper Capel Road have 12.69% and 27.9% of their Pre European vegetation extent remaining which is below the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA 2000). All of the road reserves under application lie within the Jarrah Forest IBRA Bioregion. In this bioregion Beard vegetation association 999 has 27.14% of its Pre European vegetation extent remaining.

Due to the fact that several sections of the road reserves under application have been mapped as having medium to high conservation values and given that the vegetation associations represented within the Upper Capel Road are below the recommended threshold level set by the EPA the clearing as proposed is at variance to this principle.



An offset condition will be placed on the permit to mitigate the loss of vegetation associations 999 and 1182 within the Upper Capel Road.

- Methodology**
- EPA (2000)
  - Heddle (1980)
  - Mattiske Consulting (1998)
  - Molloy et al. (2009)
  - Roadside Conservation Committee (2008)
  - Shepherd et al. (2007)
  - GIS Databases:
    - Donnybrook 50cm Orthomosaic - Landgate 2004
    - Bunbury 50cm Orthomosaic - Landgate 2006
    - Heddle Vegetation Complexes - DEP 22/06/95
    - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
    - Mattiske Vegetation - CALM 1/03/1998
    - Pre European Vegetation - DA 01/01
    - SAC Biodatasets - accessed 1 December 2009

**(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**

A major Preston River tributary, Thomson Brook, runs within 50 metres of the Brookhampton Road. A second major unnamed watercourse crosses Brookhampton Road and a major unnamed watercourse also runs within 800 metres of Upper Capel Road. There is one resource enhanced sumpland wetland within 6 km of Upper Capel Road.

The proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

The clearing will occur within road reserves which have existing infrastructure including culverts and bridges and therefore it is unlikely that vegetation will be cleared which is growing in association with watercourses and wetlands. The clearing as proposed is not likely to be at variance to this principle.

- Methodology**
- GIS Databases:
- Donnybrook 50cm Orthomosaic - Landgate 2004
  - Bunbury 50cm Orthomosaic - Landgate 2006
  - SAC Biodatasets - accessed 1 December 2009
  - ANCA wetlands - Environment Australia 26/3/99
  - CALM Managed Lands and Waters - CALM 01/06/05
  - EPP Lakes Policy Area - DEP 14/05/97
  - EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
  - Hydrography linear - DOW 13/7/06
  - Hydrography linear (hierarchy) - DoW 13/7/06
  - Ramsar wetlands - DEC 03

**(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 proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

Given the nature of the clearing application, localised land degradation may occur during the construction period however this will be short term and these issues should be minimal given the roadside infrastructure which is in place to prevent land degradation. The proposed clearing is not likely to be at variance to this principle.

- Methodology**
- GIS database:
- Average Annual Rainfall Isohyets - WRC 29/09/98
  - Annual Evaporation Contours (Isopleths) - WRC 29/09/98
  - Hydrogeology, statewide - DOW 13/07/06
  - Hydrographic catchments, catchments - DoW 01/06/07
  - Hydrography, linear - DOW 13/7/06
  - Salinity Risk LM 25m - DOLA 00
  - Soils, Statewide DA 11/99
  - Topographic contours statewide - DOLA and ARMY 12/09/02
  - Hydrogeology, Statewide 05 Feb 2002

**(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**

The Jarrahwood, Mullalyup, East Kirup and Wilga State Forests all lie within a 10 km radius of the road reserves under application. The Greater Preston National Park and the Wellington National Park are within 9km of the Atherton Road Reserve.

RCC advice highlights that several of the road reserves are subject to weed infestations of African Love Grass, Bridal Creeper, Watsonia, Wild Radish and tree weeds such as Pines, Black Wattle and Willows and that precautions should be taken not to increase these weed infestations or spread them to other roadsides (Roadside Conservation Committee, 2008).

The Boyanup State Forest borders Upper Capel Road to the west. The Boyanup State Forest is part of the South West Regional Ecological Linkage area which has a proximity value of 1a: a patch within an edge touching or <100m from a linkage (Molloy et al, 2009). Given the close proximity of the Boyanup State Forest the clearing may impact on the environmental values of this area through the increased potential for the intrusion of dieback or weed species and the proposed clearing maybe at variance to this principle.

To mitigate these environmental impacts weed and dieback management conditions will be placed on the permit.

**Methodology Molloy et al. (2009)**

Roadside Conservation Committee (2008)

GIS Databases:

- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02
- System 1 to 5 and 7 to 12 areas DEC 11/7/06
- CALM Managed Lands and Waters - CALM 01/06/05
- Donnybrook 50cm Orthomosaic - Landgate 2004
- Bunbury 50cm Orthomosaic - Landgate 2006

**(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 proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

Given the nature of the application, localised deterioration in surface water quality may occur during the construction period however this will be short term and these issues should be minimal given the presence of existing roadside infrastructure. It is not likely that the proposed clearing of native vegetation will cause deterioration in the quality of surface or underground water and the clearing as proposed is not likely to be at variance to this principle.

**Methodology GIS database:**

- Evapotranspiration Isoleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02

**(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 proposal is to clear 1 hectare of native vegetation within the Atherton, Upper Capel and Brookhampton Road Reserves in the Shire of Donnybrook Balingup, for road upgrades.

Given the nature of the application, and the presence of existing roadside infrastructure it is not likely that the proposed clearing of native vegetation will cause, or exacerbate, the incidence or intensity of flooding and the clearing as proposed is not likely to be at variance to this principle.

**Methodology GIS database:**

- Evaporation Isoleths - WRC 29/09/98
- Hydrographic catchments - DoW 01/06/07
- Hydrography, linear - DoW 13/7/06

- 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 proposed clearing is located within the Busselton and Capel RIWI groundwater area. The proponent is not proposing to take any groundwater, therefore, no RIWI licences are required.

### Methodology

GIS database:

- Native Title Claims - LA 2/5/07
- Aboriginal Sites of Significance 26 April 2007
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments 29/06/2006
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06

## 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 Principle (e), may be at variance to (a), (b), and (h) and is not likely to be at variance to the remaining clearing principles.

## 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, Western Australia.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
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- RCC (2008). Road Conservation Committee Value Mapping, Shire of Donnybrook - Ballingup. Roadside Conservation Committee 2008.
- Sac Bio Datasets (1/12/2009). Department of Environment and Conservation, Sac Bio Datasets, Kensington, Western Australia.
- 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 subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

## 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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)