



## CLEARING PERMIT

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

<b>Purpose permit number:</b>	CPS 3342/1
<b>Permit holder:</b>	Shire of Trayning
<b>Duration of permit:</b>	19 December 2009 – 19 December 2014

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 safety and realignment.

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

CONDOR ROAD RESERVE (NEMBUDDING 6485)  
BENCUBBIN – KELLERBERRIN ROAD RESERVE (SOUTH TRAYNING 6488)  
BENCUBBIN – KELLERBERRIN ROAD RESERVE (NORTH TRAYNING 6488)  
BENCUBBIN – KELLERBERRIN ROAD RESERVE (TRAYNING 6488)

#### 3. Area of Clearing

The permit holder must not clear more than 8 hectares of native vegetation within the area solid filled yellow on attached Plans 3342/1a, 3342/1b and 3342/1c.

#### 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:

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

#### 8. Flora management

- Prior to undertaking any clearing authorised under this Permit, the site shall be inspected by a *flora specialist* for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice (2008)* and *priority flora taxa*.

- (b) Where rare flora or *priority flora taxa* are identified in relation to condition 8(a) of this Permit, the Permit Holder shall ensure that:
  - (i) all records of rare flora and *priority flora taxa* are submitted to the CEO;
  - (ii) no clearing occurs within 50 metres of identified rare flora, unless approved by the CEO; and
  - (iii) no clearing occurs within 10 metres of identified *priority flora taxa*, unless approved by the CEO.

#### 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) Tree-stem Trapdoor Spider (*Aganippe castellum*); and
  - (ii) Shield-backed Trapdoor Spider (*Idiosoma nigrum*).
- (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. Weed control

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

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall not move soil in wet conditions;
- (c) ensure that no *weed*-affected soil, *mulch* or *fill* or other material are brought into the area to be cleared
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

#### 11. Offsets

As the clearing to be done is or may be at variance with one or more of the clearing principles, then 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 shall 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 III - RECORD KEEPING AND REPORTING**

#### **12. Records to 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 flora management pursuant to condition 8 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.
- (c) In relation to fauna management pursuant to condition 9 of this Permit:
  - (i) the location of each Tree-stem Trapdoor Spider (*Aganippe castellum*) and Shield-backed Trapdoor Spider (*Idiosoma nigrum*) 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 fauna species identified.
- (d) In relation to the *offset* of areas pursuant to condition 11 of this Permit:
  - (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 19 September 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 offset/s* has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

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

*ecological community/ies* means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999);

*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, in this instance, trees that are likely to provide habitat for native fauna species *Aganippe castellum* (Tree-stem Trapdoor Spider);

*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;

*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);

*term* means the duration of this Permit, including as amended or renewed;

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



Keith Claymore  
A/ ASSISTANT DIRECTOR  
NATURE CONSERVATION DIVISION

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

19 November 2009

# Plan 3342/1a



## LEGEND

Clearing Instrument  
Cadastre  
Tracing 50cm Grid  
2004



0 300 m

Scale 1:11455  
(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.

*K. Claymore* Date 19/10/07

K. Claymore

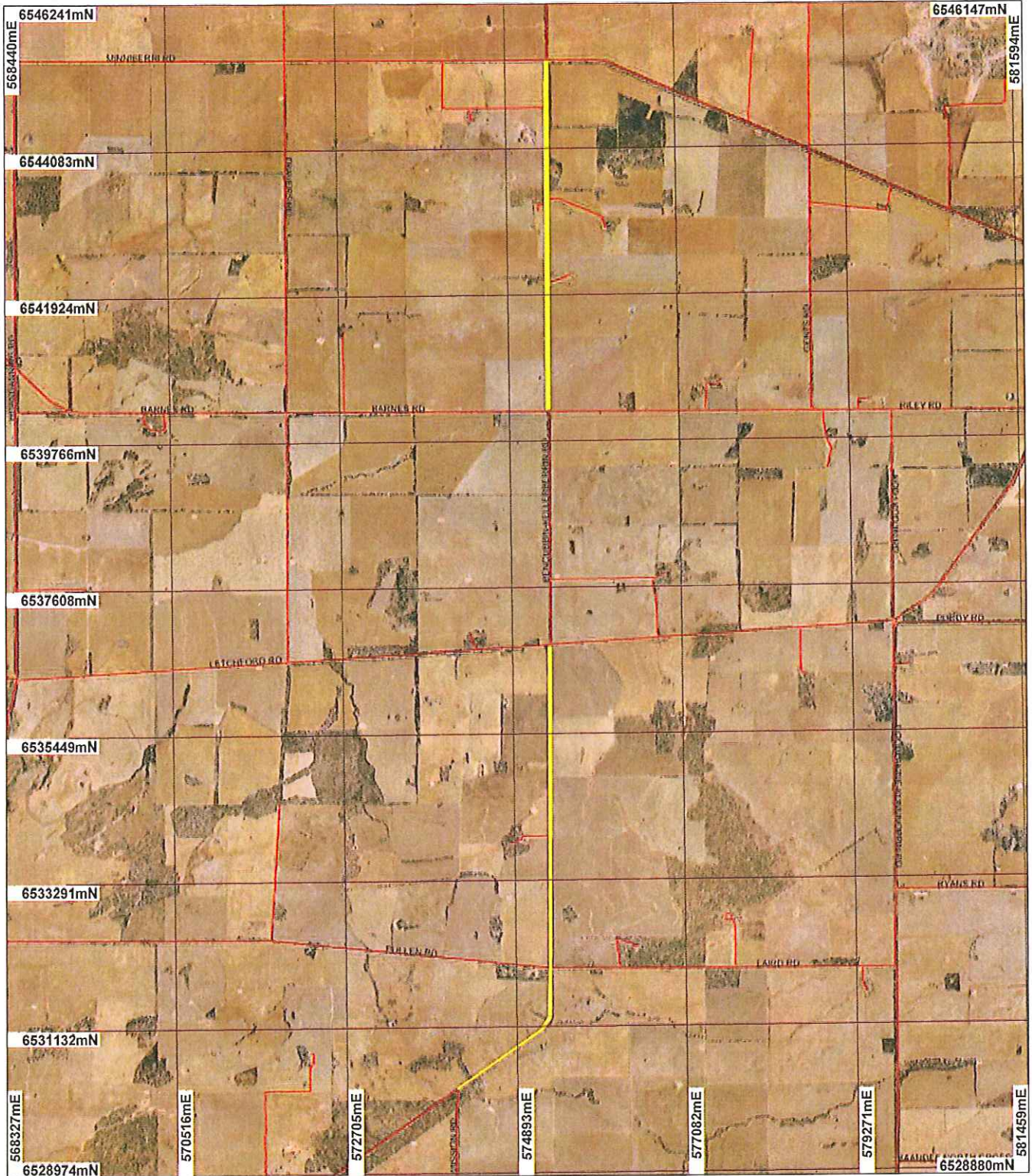
Officer with delegated authority under Section 20 of  
the Environmental Protection Act 1986

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 3342/1b



## LEGEND

Boundary Elements  
Cadastral

Bencubbin 50cm Orthomosaic  
- Landgate 2008



0 ————— 2 km

Scale 1:76602

(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.

*Karl Claymore* Date 12/1/08  
K Claymore

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

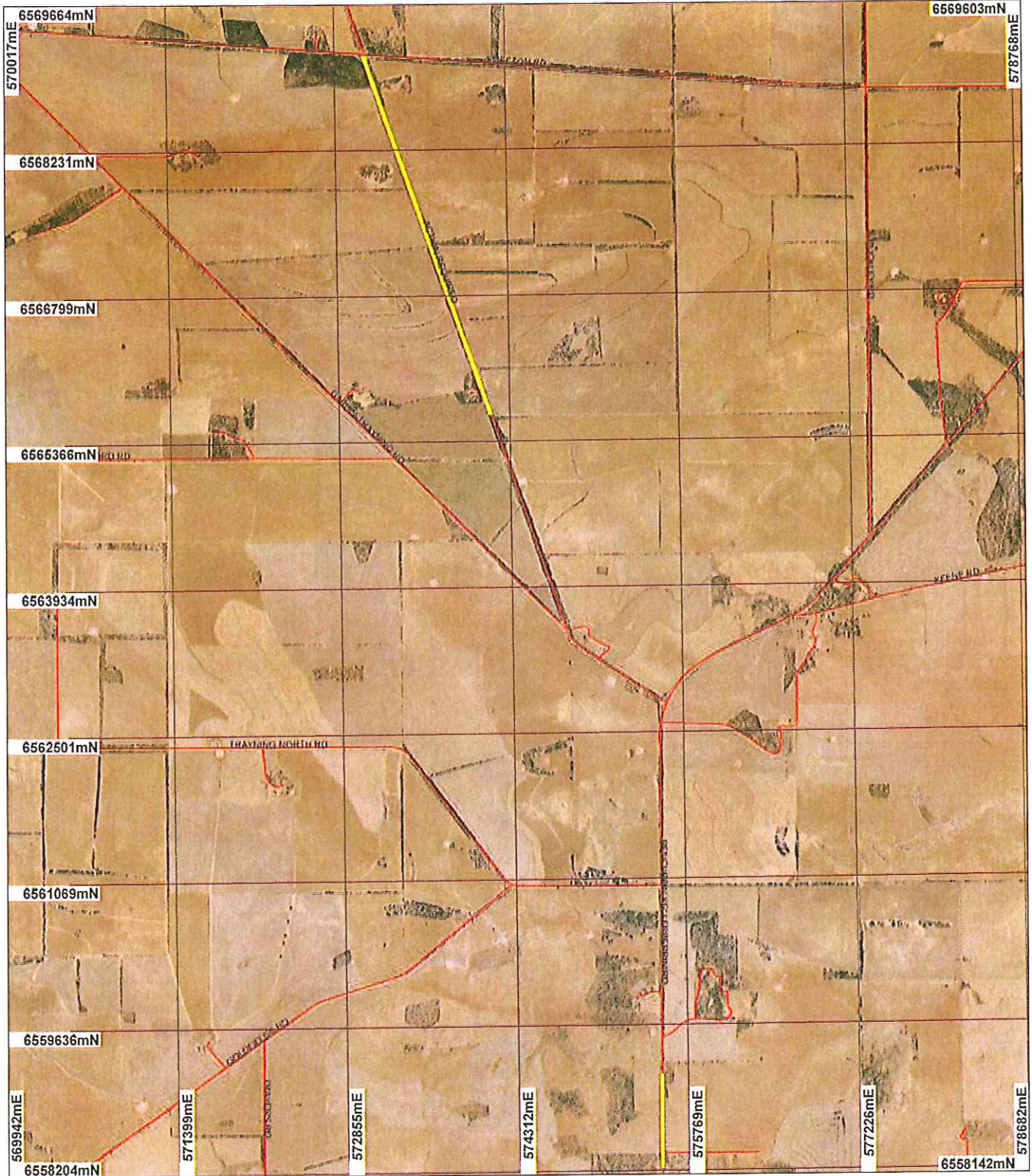
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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# Plan 3342/1c



## LEGEND

Boundary  
Cadastral

Bencubbin 50cm Orthomosaic  
Landgate 2006



Scale 1:50889

(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.

*K. Claymore* Date 19/10/09

K Claymore

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.: 3342/1  
 Permit type: Purpose Permit

**1.2. Proponent details**

Proponent's name: Shire of Trayning

**1.3. Property details**

Property: ROAD RESERVE (NEMBUDDING 6485)  
 ROAD RESERVE (SOUTH TRAYNING 6488)  
 ROAD RESERVE (NORTH TRAYNING 6488)  
 ROAD RESERVE (TRAYNING 6488)

Local Government Area:

Colloquial name:

**1.4. Application**

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8		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
Beard Vegetation Unit:  8: Medium woodland; salmon gum & gimlet	The proposal is to clear 8 ha of roadside vegetation within Condor and Bencubbin-Kellerberrin Road Reserves for the purpose of road safety and realignment.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was determined through an on site inspection by DEC and Shire Officers on the 10 November 2009 (DEC, 2009a).
955: Mosaic: Shrublands; scrub-heath (South East Avon) / Shrublands; Allocasuarina campestris thicket	The vegetation ranged from degraded to good (Keighery, 1994) condition through out the proposed clearing area.		
1049: Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet	The original application was for 40ha of clearing however a site inspection determined that approximately 32ha of the original application was likely to be an exempt activity of was not considered to be clearing under the Environmental Protection Act 1986 (pruning).		
1061: Mosaic: Medium sparse woodland; salmon gum & yorrell / Succulent steppe; saltbush & samphire			
1413: Shrublands; acacia, casuarina & melaleuca thicket			

(Shepherd, 2007)

**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 is at variance to this Principle**  
 The proposal is to clear 8 hectares of native vegetation in degraded to good (Keighery, 1994) condition (DEC, 2009) for the purpose of road safety and realignment. The local area (10km radius) is extensively cleared and the Shire of Trayning retains 8.31% of its pre European extent of native vegetation.

The vegetation under application includes mainly Eucalyptus sp and Acacia sp shrubs comprising an understorey of predominantly introduced weed species (DEC, 2009a). There are 27 known populations of priority flora species and 10 known declared rare flora within a 20 km radius of the applied area. No rare or priority flora were observed within the applied area during a site inspection however a comprehensive survey of the applied area was not conducted. Additionally it is considered unlikely that any rare or priority flora known to occur in the local area would occur within the applied roadside vegetation (DEC, 2009b)

Shield-backed Trapdoor spiders and Tree-stem Trapdoor spiders are recorded in close proximity to the applied area. A site inspection of the applied area confirmed that suitable habitat exists within the applied area for these conservation significant species (DEC, 2009a).

Given that the area proposed to be cleared is located in a Shire with less than 10% native vegetation remaining and the possibility of conservation significant fauna occurring within the vegetation under application, the area proposed to be cleared is representative of an area of high biodiversity when viewed in a local context. Therefore the clearing as proposed is at variance to this principle.

In order to minimise and mitigate any loss of biodiversity, offset conditions have been placed on the permit.

**Methodology** References:  
DEC (2009a)  
DEC (2009b)  
Keighery (1994)  
Shepherd (2007)

GIS Databases:  
- Trayning 50cm Orthomosaic - Landgate 2004  
- SAC Biodatasets - accessed 19 October 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 is at variance to this Principle**

The following conservation significant fauna species are recorded in close proximity to the applied area:

- Shield-backed Trapdoor spider (VU)
- Tree-stem Trapdoor spider (EN)
- Western Spiny Tailed Skink (VU)

Also recorded nearby (within 20km radius) are:  
- White Browed Babbler (western wheatbelt) (P4)  
- Crested Bellbird (P4)  
- Malleefowl (VU)  
- Australian Bustard (P4)

Of these species, a site inspection observed suitable habitat for Shield-backed Trapdoor spiders and Tree-stem Trapdoor Spiders (DEC, 2009a), however a survey for this species was not undertaken. In addition one mouse trapdoor burrow was observed along Condor Road in close proximity to areas to be cleared (DEC, 2009a).

The vegetation under application is contained within road reserves in a Shire that has been extensively cleared for agriculture and consists predominantly of Eucalyptus sp and Acacia sp shrubs with an understorey of mainly introduced weed species (DEC, 2009a).

Given the potential for the applied vegetation to provide ecological linkages for fauna, and given the location in a landscape that has had more than 90% of pre-European vegetation cleared, it is considered that all remaining vegetation is likely to be necessary for the maintenance of a significant habitat for indigenous fauna and the clearing as proposed is at variance to this principle.

To mitigate the loss of significant fauna habitat within the areas proposed to be cleared an offset condition will be placed on the permit. In addition, given the likely occurrence of Shield-backed Trapdoor spiders (VU) and Tree-stem Trapdoor spiders (EN) within the applied area a fauna management condition will be placed on the permit to ensure these spiders are surveyed for and relocated prior to clearing.

**Methodology** DEC (2009a)  
Keighery (1994)  
Shepherd (2007)

GIS Databases:  
- Trayning 50cm Orthomosaic - Landgate 2004  
- SAC Biodatasets - accessed 19 October 2009

**(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**

The vegetation under application includes mainly Eucalyptus sp and Acacia sp shrubs comprising an understorey of predominantly introduced weed species (DEC, 2009a).

There are 10 records of rare flora recorded in the local area (20km radius) namely:

- Acacia caesariata
- Boronia adamsiana
- Eremophila viscida
- Philotheca basistyla
- Pityrodia scabra
- Acacia denticulosa
- Acacia sciophanes
- Stylidium merralli
- Eremophila virens
- Eremophila resinosa

Of these the applied area is likely to contain suitable habitat types for A. caesariata, B. adamsiana, P. scabra and E. resinosa. During a site inspection conspicuous species B. adamsiana was not observed within the applied area.

Given the presence of suitable habitat it is likely that A. caesariata, P. scabra and E. resinosa could occur within the applied area. In addition as a comprehensive flora survey has not been conducted B. adamsiana may also occur within the applied area.

Given the above the clearing as proposed may be at variance to this principle.

A flora management condition will be placed on the permit to ensure clearing of rare flora species is avoided where possible and recorded and approved by the CEO where avoidance is not possible.

**Methodology References:**

- DEC (2009a)
- DEC (2009c)
- WA Herbarium (1998 -)

**GIS Databases:**

- SAC Biodatasets - accessed 19 October 2009

**(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**

No known records of Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) have been recorded within 20km of the applied area.

The vegetation under application includes mainly Eucalyptus sp and Acacia sp shrubs comprising an understorey of predominantly introduced weed species (DEC, 2009a). The vegetation under application is not likely to represent a TEC or PEC due to the condition and composition of the vegetation.

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

**Methodology References:**

- DEC (2009a)

**GIS Databases:**

- SAC Biodatasets - accessed 19 October 2009

**(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 area (ha)	Current extent (ha)	Remaining %	% in DEC tenure
IBRA Bioregion **				
Avon Wheatbelt	9,518,411	1,444,595	15.18	11.12

LGA

Shire of Trayning				
	165,120	13,729	8.31	5.50
Beard vegetation associations**				
8	694,638	329,614	47.45	13.89
955	139,324	10,683	7.67	15.10
1049	833,384	30,023	3.6	9.06
1061	42,747	12,495	29.23	46.32
1413	1,679,917	1,247,101	74.24	17.35
Beard Vegetation Association with Bioregion*				
8	356,571	34,017	9.54	9.12
955	120,564	8,848	7.34	10.91
1049	833,384	30,023	3.6	9.06
1061	42,747	12,495	29.23	46.32
1413	546,676	135,264	24.74	7.89

\*\* (Shepherd, 2007)

The Shire of Trayning retains 8.31% of native vegetation and all of the vegetation units within the applied area retain less than the EPA recommended 30% threshold of pre-European vegetation, beyond which biodiversity loss is exponential (EPA, 2000). Of the vegetation units under application 3 are considered to be critically endangered due to the remnants of these communities being below 10% of the pre-European extent, with one unit (Beard unit 1049) having 3.6% of the pre-European extent remaining within the bioregion and the state.

Given the extensively cleared landscape of which the vegetation under application is a part, and considering the extensively cleared vegetation units under application, the clearing as proposed is at variance to this principle.

To mitigate the impacts of clearing on significant remnant vegetation a condition will be placed on the permit requiring that clearing of vegetation be avoided, and where this is not possible, minimised. In addition, to address the loss of vegetation within a highly cleared landscape, an offset condition has been placed on the permit.

- Methodology**    References:
- Shepherd (2007)
  - GIS Database:
    - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
    - Local Government Authorities - DLI 8/07/04
    - Pre European Vegetation - DA 01/01
    - SAC Biodatasets - accessed 19 October 2009
    - NLWRA, Current Extent of Native Vegetation 20 Jan 2001

**(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 may be at variance to this Principle**  
 The applied area intersects 25 minor non-perennial watercourses and 3 flood limit areas.

A site inspection of the applied area noted some vegetation proposed to be cleared as occurring within water collection areas along the road side (DEC, 2009a).

While the applied area includes riparian vegetation the clearing of these few trees is unlikely to impact on the watercourses and damp areas or other vegetation growing in association with these surface water expression areas.

Given the above the clearing may be at variance to this principle as some vegetation under application is considered to be riparian however removal of this vegetation is not likely to have a significant impact on the environmental values of any wetland or watercourse.

- Methodology**    References:
- DEC (2009a)
  - GIS Database:
    - ANCA wetlands - Environment Australia 26/3/99
    - EPP Lakes Policy Area - DEP 14/05/97
    - Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
    - Hydrography linear - 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 may be at variance to this Principle**

The following soil types are found within the areas applied to clear:

Va66 - chief soils are hard alkaline yellow mottled soils and hard alkaline red soils either of which may be dominant locally.

Vb2 - chief soils are hard alkaline yellow mottled soils and leached yellow earths, both containing siliceous hardpans in the subsoil as well as variable amounts of ironstone gravels.

Ms8 - a wide range of loamy yellow earths and related soils, earth soils commonly contain a horizon of ironstone nodules. In the broad shallow drainage depressions loamy duplex soils occur together with some grey leached earths.

SI28 - chief soils are hard alkaline yellow soils underlain by acid lateritic clays below depths of from 2 to 4 ft.

Oc31 - chief soils are hard alkaline red soils with acid clay strata below about 5-6ft depth.

JJ16 - shallow and often stony or gritty sandy soils form a soil scree around the areas of bare rock.

SV1 - Saline valleys and salt lakes--salt-lake channels, mostly devoid of true soils, and their fringing areas; few freshwater lakes: common soils are gypseous and saline loams on riverine wash and usually underlain by clayey or sandy strata (Northcote et al, 1968)

Ground Water Salinity is mapped in the range of 7000mg/l to >35000 mg/l and therefore is highly saline in places. Further removal of vegetation from this highly cleared landscape will likely lead to an increase in secondary salinity of nearby lands.

Removal of deep rooted perennial vegetation will increase levels of secondary salinity in the immediate area, and may cause wind and water erosion however as the clearing is over large linear areas (roadsides) the intensity of land degradation is likely to be lessened. Therefore the clearing as proposed may be at variance to this principle.

**Methodology References:**

Northcote et al. (1968)

GIS database:

- Average Annual Rainfall Isohyets - WRC 29/09/98

- Annual Evaporation Contours (Isopleths) - WRC 29/09/98

- Hydrogeology, statewide DOW 13/07/06

- 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

**(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 Shire of Trayning retains 8.31% of the pre-European extent of native vegetation and as such any remaining roadside vegetation is acting as a corridor of vegetation through which flora and fauna may disperse and traverse this extensively cleared landscape.

The removal of the vegetation under application will reduce the effectiveness of these corridors to allow flora and fauna dispersal through the landscape which may result in the degradation of the environmental values of nearby conservation areas (DEC land, Heritage Sites and Land for Wildlife Sites). Therefore the clearing as proposed may be at variance to this principle.

**Methodology GIS Database:**

- DEC Tenure

- Hydrography, linear - DOW 13/7/06

- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02

- SAC Biodatasets accessed 19 October 2009

- System 1 to 5 and 7 to 12 areas DEC 11/7/06

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

Groundwater salinity of the applied area is mapped between 7000 and > 35000 mg/L, removal of deep rooted perennial vegetation from this highly cleared landscape will cause an increase in secondary salinity in the local area as well as potentially resulting in wind and water erosion of the soil A horizon.

The applied area intersects 25 minor non-perennial watercourses and 3 flood limit areas, degradation of nearby lands may result in deterioration of the quality of water within these surface water expression areas as well as the potential to increase sedimentation and turbidity of these watercourses.

Given the above the clearing as proposed may be at variance to this principle.

- Methodology** GIS Database:
- Evapotranspiration Isopleths - WRC 29/09/98
  - Groundwater Salinity Statewide DoW 13/07/06
  - Hydrographic catchments, 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 vegetation under application is associated with 3 flood limit areas one of which is part of a lake system.

Removal of 8 hectares of perennial vegetation over a large distance of roadside vegetation, in an area which receives an average of 400mm rainfall annually is not likely to notably increase the incidence or intensity of flooding in the local area.

- Methodology** GIS Database:
- Evapotranspiration Isopleths - WRC 29/09/98
  - Groundwater Salinity Statewide DoW 13/07/06
  - Hydrographic catchments, 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

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

**Comments**  
The proposal is to clear 8 hectares of native vegetation associated with existing road ways (Condor and Bencubbin-Kellerberrin Rd) for the purpose of realigning road bends to ensure safety and visibility.

Comments received from Road Conservation Committee advising of importance on roadside vegetation within the highly cleared Shire of Trayning boundary. In addition it was noted that vegetation adjoining significant areas of remnant vegetation should be conserved and where clearing could not be avoided the proponent should consider revegetation, weed control and rubbish control actions. A number of roads were identified as having high conservation value and where possible pruning should be conducted in preference to removing trees (DOC106056). This application has now been amended from 40 ha to 8 ha taking into account the advice provided above as much of the original clearing applied for will be primarily pruning.

The proposed clearing is located within the Avon River Catchment a RIWI area. The applied area intersect 25 minor non-perennial watercourses and 3 flood limit areas, however the existing road currently allows for the clearing to occur without impact to the beds and banks of these watercourses.

- Methodology** References:  
DEC (2009a)
- GIS Database:  
- RIWI Act Areas Department of Water 2002

**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 (a), (b) and (e), may be at variance to Principles (c), (f), (g), (h) and (i) and is not likely to be at variance to the remaining clearing Principles.

**5. References**

DEC (2009a) Site Inspection Report for Clearing Permit Application CPS 3342/1, Condor and Bencubbin-Kellerberrin Road

- Reserves, Shire of Trayning. Site inspection undertaken 10/11/09. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC106306).
- DEC (2009b) Northam Regional Advice. Department of Environment and Conservation Trim Ref DOC106292.
- DEC (2009c) Additional Northam Regional Advice (Flora). Department of Environment and Conservation Trim Ref DOC106365.
- 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.
- 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 subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Western Australian Herbarium (1998). FloraBase The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 12/11/09).

## 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)

