



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number: CPS 3578/1
Permit Holder: Shire of Northam
Duration of Permit: 30 April 2010 – 30 April 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 maintaining drainage infrastructure within road reserves.
- 2. Land on which clearing is to be done**
Drainage lines within Road Reserves vested in Shire of Northam
- 3. Area of Clearing**
The Permit Holder must not clear more than 5 hectares of native vegetation within the boundaries of the Shire of Northam.
- 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. Weed control

- (a) 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*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. 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 rare flora listed in the *Wildlife Conservation (Rare Flora) Notice 2010* and *priority flora*.
- (b) Where rare flora or *priority flora* are identified in relation to condition 9(a) of this Permit, the Permit Holder shall ensure that:
 - (i) all records of rare flora and *priority flora* 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 with 10 metres of identified *priority flora*, unless approved by the CEO.

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

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

- (a) In relation to the clearing of native vegetation undertaken pursuant to the purpose of clearing:
 - (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 9:
 - (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 of each Rare Flora or *Priority Flora* taxa identified.

11. 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 10 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 25 January 2010, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

Definitions

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

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;

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;

priority flora means those plant taxa 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 Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

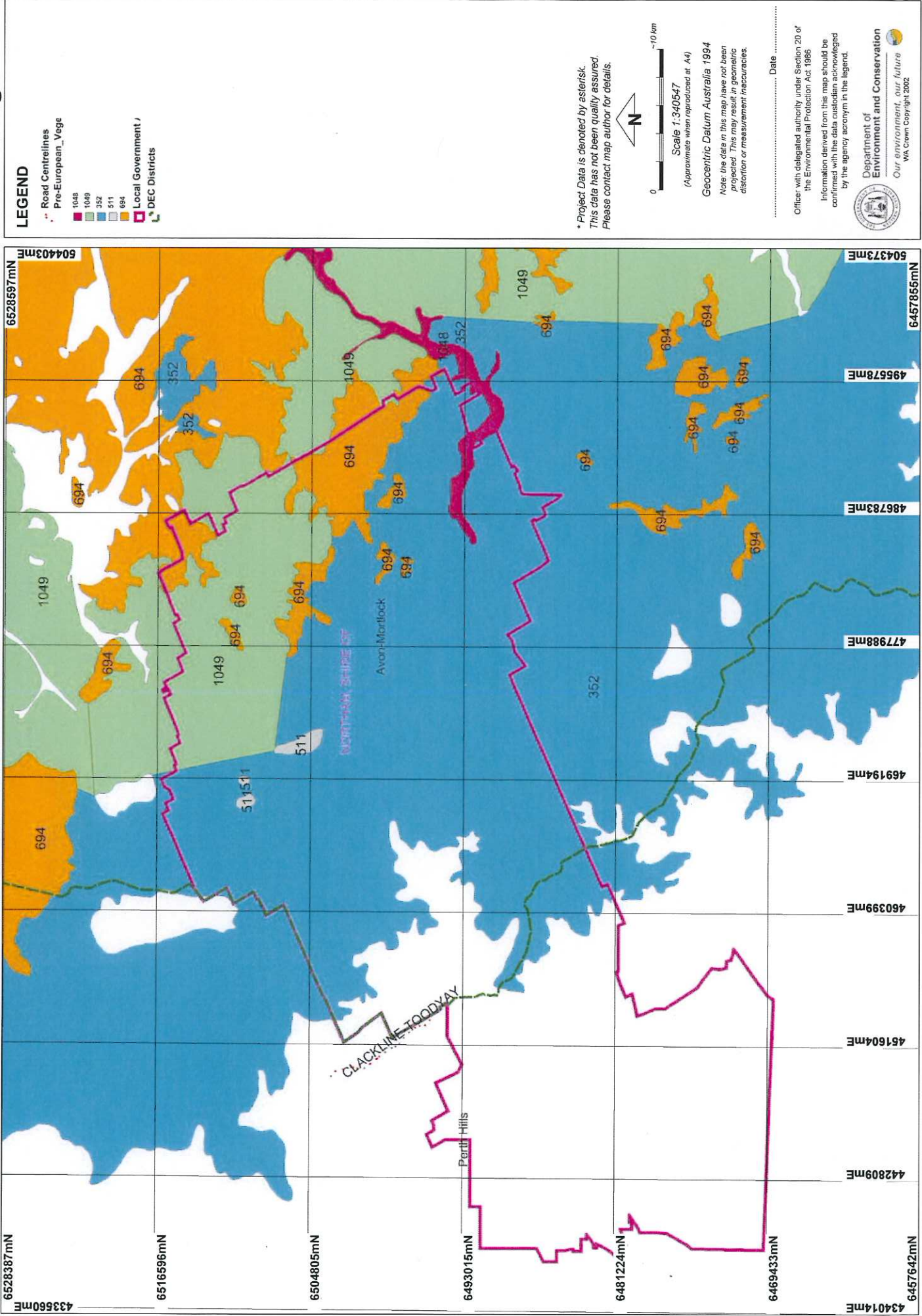


Robert Atkins
DEPUTY DIRECTOR GENERAL, ENVIRONMENT

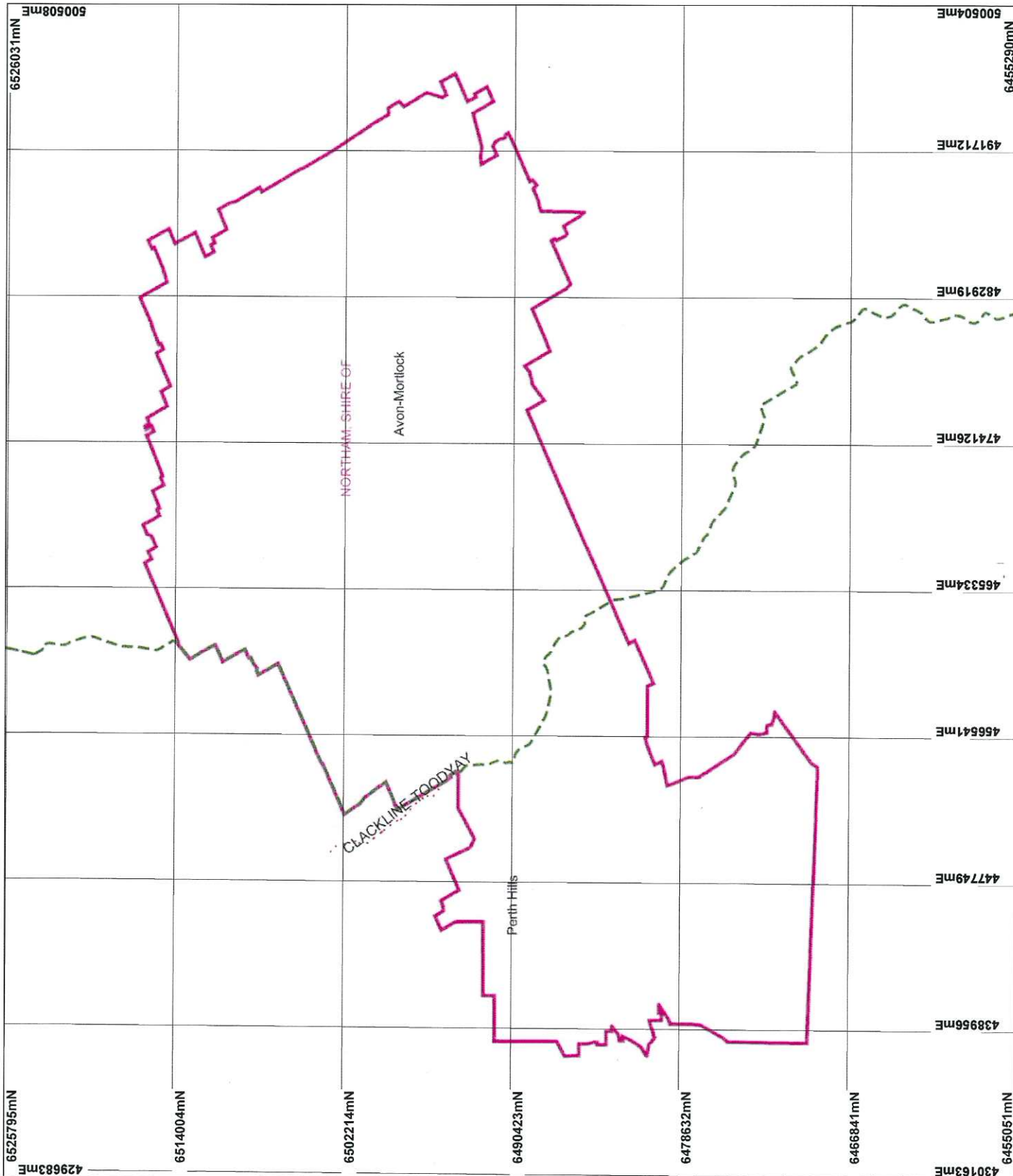
*Officer delegated under Section 20
of the Environmental Protection Act 1986*

31 March 2010

- Vegetation Associations underrepresented (less than 30%) within Avon Wheatbelt bioregion



CPS3578/1 - DEC District Boundaries



LEGEND

- Road Centrelines
- Local Government
- DEC Districts

* Project Data is denoted by asterisk.
This data has not been quality assured.
Please contact map author for details.



0 10 km

Scale 1:340501

(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

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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1. Application details

1.1. Permit application details

Permit application No.: 3578/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Northam

1.3. Property details

Property: DOLA_LAND_DESCRIPTION
Local Government Area: LGA
Colloquial name: COLLOQUIAL_NAME

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Drainage 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 Association: 4 - Medium woodland; marri & wandoo 352 - Medium woodland; York gum 511 - Medium woodland; salmon gum & morrel 694 - Shrublands; scrub-heath on yellow sandplain banksia-xylomelum alliance in the Geraldton Sandplain & Avon-Wheatbelt Regions 1006 - Medium woodland; jarrah, wandoo & powderbark 1048 - Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire 1049 - Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet 3003 - Medium forest; jarrah & marri on laterite with wandoo in valleys, sandy swamps with teatree and Banksia	The proposed clearing is for up to 5 hectares of vegetation over a five year period within the drainage lines of road reserves vested with the Shire of Northam for maintenance of drainage infrastructure.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation is likely to vary throughout the Shire from Excellent to Completely Degraded. The overall condition of the vegetation surrounding the drainage line, is unlikely to be compromised by the removal of vegetation within the drainage line.

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

Photographs and site inspections of the application areas show that the vegetation proposed to be cleared is predominately in a degraded (Keighery 1994, DEC 2010a) condition. The Shire of Northam has been highly cleared, resulting in areas of vegetation that is fragmented and poorly represented. Within a highly cleared landscape, the drainage regrowth vegetation under application may comprise a high level of biological diversity relevant to surrounding areas.

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

To mitigate any potential impacts from the clearing of drainage regrowth vegetation, the proposed clearing will be carried out in accordance with a condition imposed 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, offset conditions will be imposed on the permit.

Known populations of priority flora that occur along Shire managed road reserves include (DEC, 2010b):

* Three populations of *Eucalyptus loxophleba* x *wandoo* (Priority 4 species) occur along the Dumbarton Road verge

* One population of *Anigozanthus bicolor* subsp *exstans* occurs along Meenaar South road

Eucalyptus loxophleba x *wandoo* has been recorded within the Clackline township. The shire should contact the DEC Perth Hills District Office when proposing to clear in the township (DEC, 2010c).

The majority of neighbouring road verges within the Shire of Northam are weed infested. Weed conditions have been included in the permit to minimise the spread of identified weeds.

Methodology DEC (2010a)
DEC (2010b)
DEC (2010c)
Keighery (1994)

GIS Database:

- SAC Biodatasets - accessed 15 March 10
- Matiske Vegetation (01/03/1998)
- Heddle Vegetation Complexes - DEP 22/06/95
- Pre European Vegetation - DA 01/01
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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

Photographs and a site inspection of the application areas show that the drainage regrowth vegetation may contain habitat trees (DEC, 2010a). However the Shire of Northam has advised that mature trees will be retained and the removal of trees over 10 years will only occur where absolutely necessary (DEC, 2010b).

The Shire of Northam has been heavily cleared in parts, resulting in areas of vegetation that are highly fragmented and poorly represented. In these areas, drainage regrowth vegetation plays a significant role as habitat, refuge and as wildlife corridors for local fauna populations.

Given that much of the Shire of Northam has been highly cleared, the drainage regrowth vegetation may contain habitat trees and that some of the vegetation associations within the Shire are poorly represented, the proposal may be at variance to this Principle.

A condition has been placed on the permit requiring that the clearing of native vegetation be avoided, and where this is not possible, minimised.

Methodology DEC (2010a)
DEC (2010b)

GIS Database:

- CALM Managed Lands and Waters - CALM 01/06/05
- Matiske Vegetation (01/03/1998)
- SAC Biodatasets - accessed 15 March 10
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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

There are 2 known populations of rare flora that occur along Shire managed road reserves include (DEC, 2010b), being *Lechenaultia lacricina* (DRF - Vulnerable) occur along Clackline - Spencer Brook road verge.

Given the number of rare flora species within or in close proximity to the areas proposed to be cleared, the proposal may be at variance with this principle.

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

Methodology References:
DEC (2010b)
GIS Database:
- Mattiske Vegetation (01/03/1998)
- Heddle Vegetation Complexes - DEP 22/06/95
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 15 March 10
- 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 occurrences of threatened ecological communities within the shire of Northam. Given this, the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Database:
- SAC Biodatasets - accessed 15 March 10
- Mattiske Vegetation (01/03/1998)
- Heddle Vegetation Complexes - DEP 22/06/95
- Pre European Vegetation - DA 01/01
- 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 may be at variance to this Principle			
	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregions*				
Jarrah Forrest	4,506,655	2,440,940	54.16	N/A
Avon Wheatbelt^	9,517,109	1,443,690	15.17	N/A
Shire*				
Northam	141,554	30,989	21.89	N/A
Beard Vegetation Association with Jarrah Forrest Bioregion*				
4	1,022,712	247,941	24.24	17.78
352	31,606	5,316	16.82	19.52
1006	44,908	22,613	50.36	8.71
3003	66,451	40,721	61.28	12.83
Beard Vegetation Association with Avon Wheatbelt Bioregion*				
4	10,333	1,335	12.93	6.59
352	630,581	88,397	14.02	1.56
511	96,356	11,494	11.93	24.85
1049	173,921	6,917	3.98	21.09
694	13,814	2,372	17.17	1.24
1048	833,384	30,023	3.60	9.06

* (Shepherd et al. 2007)

^ Area within Intensive Land Use Zone

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). Given the highly cleared nature of the Shire of Northam, the vegetation contained within the drainage line of shire road reserves although considered degraded (Keighery, 1994), may hold significant habitat for flora or fauna, the vegetation under

application may be considered to be significant.

Beard vegetation associations 4, 352 and 1049 are all under represented and occur in valley floors (given priority for protection at a catchment scale). There is currently 7.7% (7,569 ha or 97,394 ha) of the pre-European vegetation remaining in the Wheatbelt portion of the Shire of Northam. 2.1% (161ha) of this remaining vegetation is on road reserves within the Shire. Therefore, the proposal is to clear 5ha, or less than 3% of 161ha. This should be taken into context as the percentages are contained within the Wheatbelt portion of the Shire of Northam (DEC, 2010b).

To mitigate any potential impacts of the clearing on remnant vegetation, while acknowledging the need to maintain roads, a condition will be imposed on the permit requiring that clearing of vegetation be avoided, and where this is not possible, minimised.

Methodology Commonwealth of Australia (2001)
DEC (2010b)
Keighery (1994)
Shepherd et al. (2007)

GIS Database:

- Heddle Vegetation Complexes - DEP 21/06/95
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Mattiske Vegetation - CALM 24/3/98
- Pre-European Vegetation - DA 10/01

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

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

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

Due to the vegetation under application being contained in drainage lines of existing road reserves, this proposal is not likely to be at variance to this principle.

Methodology GIS Database:
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Hydrography, Linear - DOE 1/2/04
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 11/04/07

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

Given the small and linear nature, the proposed clearing of native vegetation is not likely to cause appreciable land degradation.

Methodology GIS Database:
- Hydrogeology, statewide - DOW 13/07/06
- Soils, Statewide DA 11/99
- Topographic Contours, Statewide - DOLA 12/09/02

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

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

Given the small, linear nature of the application, the proposed clearing is not likely to significantly impact conservation areas. However, Weed conditions have been included in the permit to minimise the spread of identified weeds. The shire should contact the DEC Perth Hills District Office when proposing to clear near conservation reserves (DEC, 2010c).

Methodology DEC (2010c)
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

- Comments** **Proposal is not likely to be at variance to this Principle**
The proposed clearing sites fall within a number of catchment areas. The region is of low relief with an annual rainfall ranging from 500mm - 800mm. Groundwater salinity is mapped at 1000mg/L to 35000 mg/L TDS (Total Dissolved Solids).
- The proposed clearing may cause some short term water quality issues in terms of localised surface water sedimentation during works. However, these issues should be minimised as roadside infrastructure is in place to prevent water quality issues associated with roads (ie table drains and culverts).
- Due to the small and linear nature of the areas proposed to be cleared, the clearing of native vegetation is not likely to cause deterioration in the quality of surface water or groundwater within the local area.
- Methodology** GIS Database:
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Topographic Contours, Statewide - DOLA 12/09/02
- Rainfall, Mean Annual - BOM 30/09/01

(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 purpose of clearing is for road drainage infrastructure maintenance. Some of the roads cross over areas subject to inundation, rivers, perennial watercourses and drains. The proposed clearing is within road reserves that already exist and as such, issues relating to flooding have been previously addressed by diverting water bodies through culverts or under bridges.
- Given the above, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.
- Methodology** GIS Database:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 11/04/07
- Hydrography, Linear - DOE 1/2/04
- Rivers, DOW

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

- Comments**
- The proposed clearing is for trees within the drainage line that are over 10 years old and to cover any drainage regrowth vegetation that is within an Environmentally Sensitive Area. This application does not include the widening of roads.
- No submissions from the public have been received.
- There are Aboriginal Sites of Significance within the Shire of Northam. The DEC recommends consulting with local indigenous groups about the impact of the proposed clearing on these registered sites. Aboriginal Sites of Significance will need to be managed in accordance with requirements under the Aboriginal Heritage Act (1972) and with the Department of Indigenous Affairs.
- DEC (2010b) recommends that the Shire submit to it's district offices an annual works program which includes the road verges that they plan to target over the next 12 months for clearing. Additionally, DEC advises that the Shire road works team should undertake a rare flora training package, and liaise closely with the Roadside Conservation Committee for advice on the implementation of best management practice when clearing / pruning roadside vegetation.
- Methodology** References:
DEC (2010b)
GIS Database:
- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLI 07/11/05

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 may be at variance to Principle (a), (b), (c) and (e) and is not likely to be at

variance to the remaining clearing Principles.

5. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2010a) Site Inspection Report for Clearing Permit Application CPS 3578/1, Shire of Northam road reserves. Site inspection undertaken 23/02/2010. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC122238).
- DEC (2010b) Wheatbelt Regional Advice. Department of Environment and Conservation Trim Ref DOC122224.
- DEC (2010c) Perth Hills District Advice. Department of Environment and Conservation Trim Ref DOC124588.
- 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. (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)