



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4042/1
Permit Holder:	Shire of Chapman Valley
Duration of Permit:	10 January 2011 – 10 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 reconstruction.

2. Land on which clearing is to be done

Lot 300 on Plan 47656, Nabawa 6532
Lot 83 on Plan 231961 Mount Erin 6532
Durawah Road Reserve, Mount Erin 6532

3. Area of Clearing

The Permit Holder must not clear more than 0.81 hectares of native vegetation within the area cross hatched yellow on attached Plan 4042/1a and Plan 4042/1b.

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. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 3 months following clearing authorised under this permit, *revegetate* and *rehabilitate* within the areas cross-hatched red on attached Plan 4042/1a and Plan 4042/1b by:
 - (i) ripping the ground on the contour to remove soil compaction; and
 - (ii) laying the vegetative material and topsoil retained under condition 8(a)
- (c) within 18 months of undertaking *revegetation* and *rehabilitation* in accordance with condition 8(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 8(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 8 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

10. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 9 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 10 October 2015 the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit.

Definitions

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

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

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;

local provenance means native vegetation seeds and propagating material from natural sources within 50kms 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;

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

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

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

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

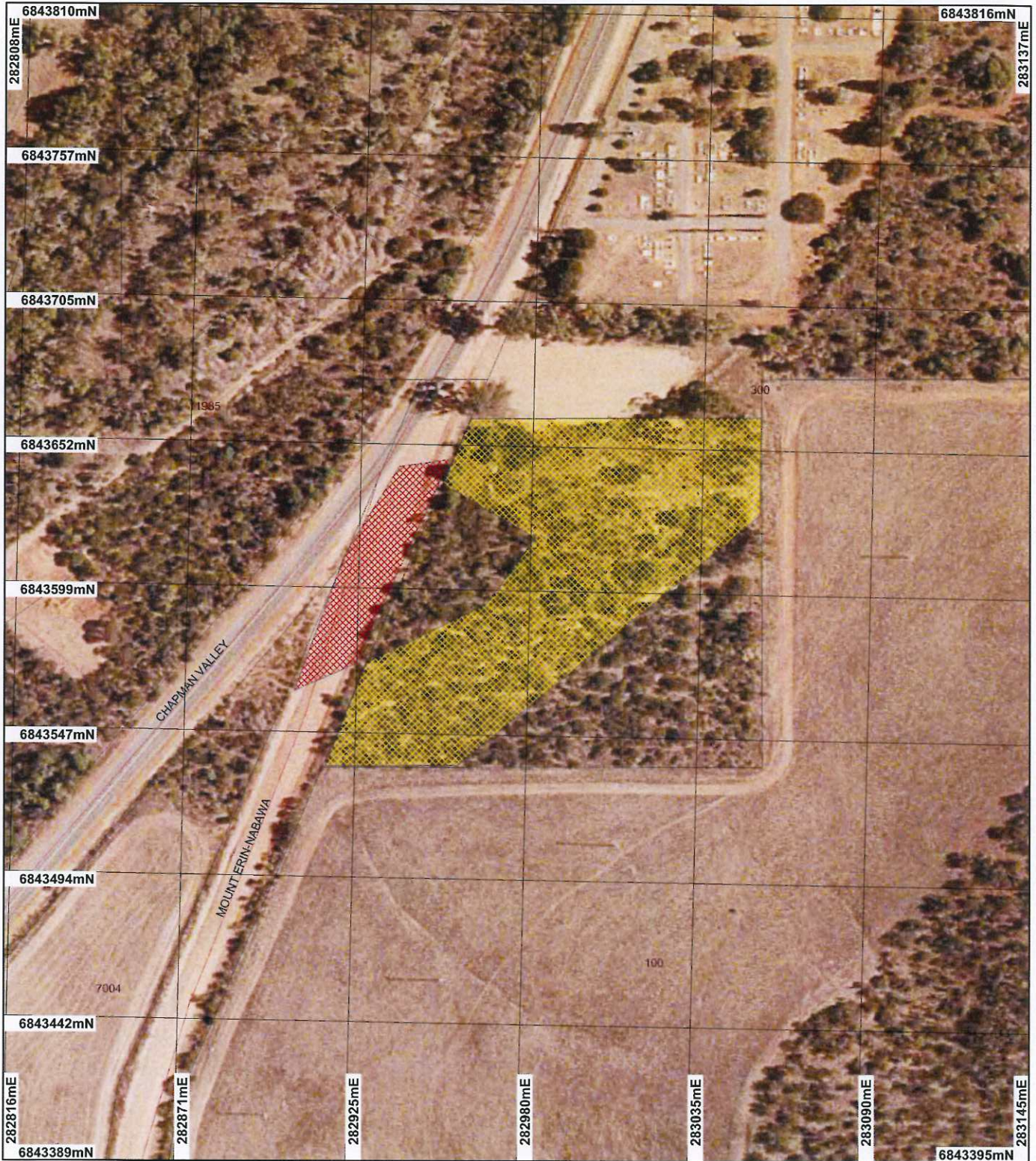


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

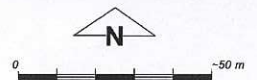
15 December 2010

Plan 4042/1a



LEGEND

- | | | |
|----------------------------------|--|---|
| Road Centrelines | <input type="checkbox"/> Freehold | <input type="checkbox"/> Lease on State Forest / Timber Reserve |
| Clearing Instruments | <input type="checkbox"/> Crown Reserve | <input type="checkbox"/> Public Roads |
| Areas Subject to Conditions | <input type="checkbox"/> State Forest / Timber Reserve | <input type="checkbox"/> Unallocated Crown Land |
| Areas Approved to Clear | <input type="checkbox"/> Marine Park | <input type="checkbox"/> Water |
| Cadastre for labelling
(cont) | <input type="checkbox"/> Crown Lease | Geraldton 50cm Orthomosaic -
Landgate 2006 |
| | <input type="checkbox"/> Lease / Reserve
(cont) | |



Scale 1:1886
(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 15/12/10
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.

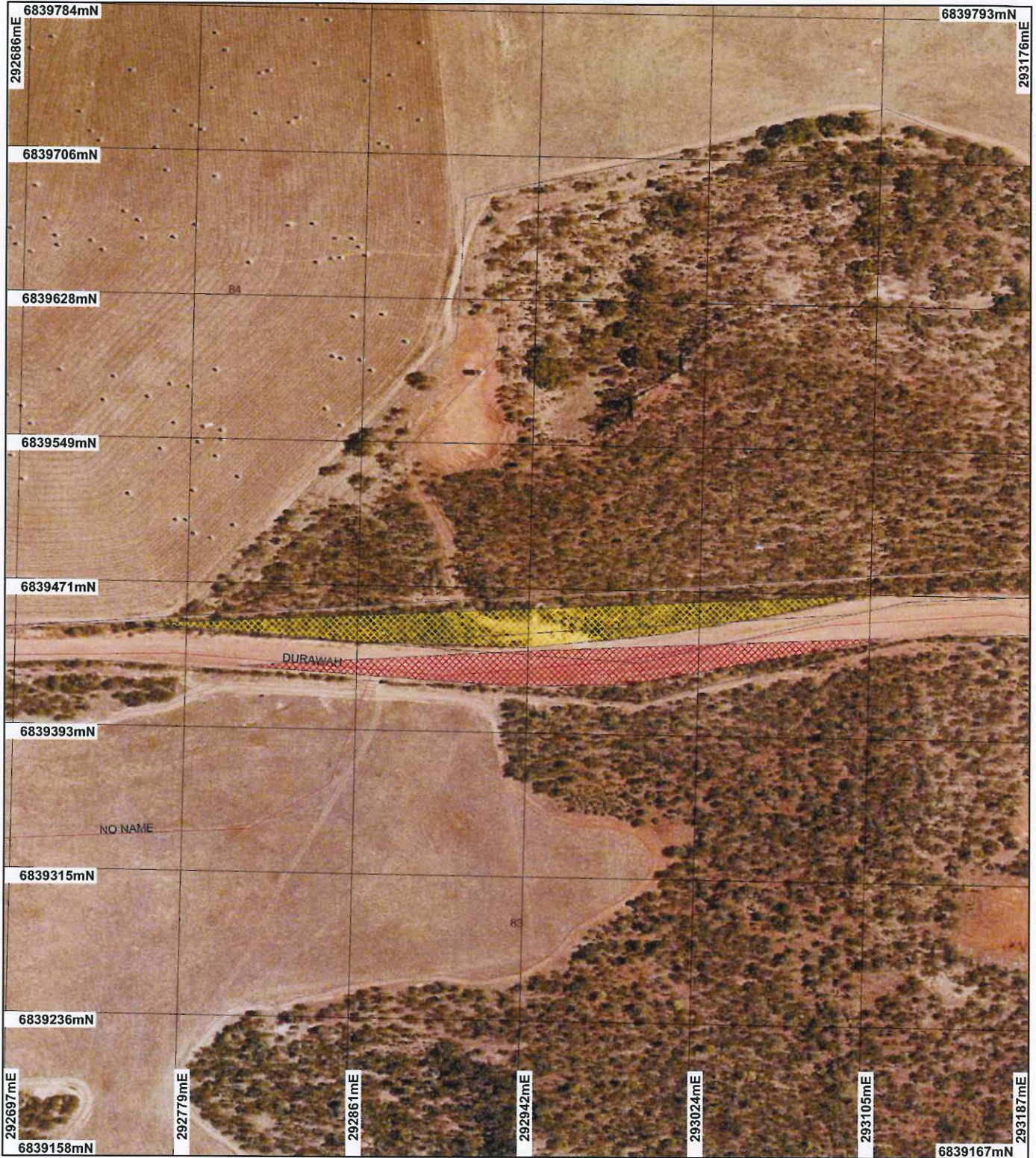


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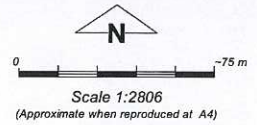
* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

Plan 4042/1b



LEGEND

- | | | |
|-------------------------------|--|---|
| Road Centrelines | <input type="checkbox"/> Freehold | <input type="checkbox"/> Lease on State Forest / Timber Reserve |
| Clearing Instruments | <input type="checkbox"/> Crown Reserve | <input type="checkbox"/> Public Roads |
| Areas Subject to Conditions | <input type="checkbox"/> State Forest / Timber Reserve | <input type="checkbox"/> Unallocated Crown Land |
| Areas Approved to Clear | <input type="checkbox"/> Marine Park | <input type="checkbox"/> Water |
| Cadastre for labelling (cont) | <input type="checkbox"/> Crown Lease | Geraldton 50cm Orthomosaic - Landgate 2006 |
| | <input type="checkbox"/> Lease / Reserve (cont) | |



Geocentric Datum Australia 1994

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

Date 15/12/10
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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1. Application details

1.1. Permit application details

Permit application No.: 4042/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Chapman Valley

1.3. Property details

Property: LOT 300 ON PLAN 47656 (NABAWA 6532)
LOT 83 ON PLAN 231961 (MOUNT ERIN 6532)
CLOSED ROAD (MOUNT ERIN 6532)

Local Government Area:

Colloquial name: Durawah Road

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 15 December 2010

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: 35 - Shrubland: Jam scrub with scattered York Gum	The proposed clearing of 0.81ha is for road realignment and entry into the Chapman Valley cemetery.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of the vegetation was established through site visit undertaken November 2010 (DEC 2010)
(Shepherd et al 2009)	The proposed clearing occurs in two separate areas including 0.43ha within Crown Reserve 15203 and 0.38ha within Durawah road reserve.		
	The vegetation under application within Durawah road reserve consists of <i>Acacia acuminata</i> , <i>Acacia tetragonophylla</i> shrubland over <i>Hakea recurva</i> , <i>Grevillea pinaster</i> , <i>Acacia saligna</i> , <i>Grevillea biternata</i> , <i>Olearia dampieri</i> , <i>Hibbertia hypericoides</i> in good condition.		
As above	The vegetation under application within Crown Reserve 15203 consists of <i>Acacia acuminata</i> , <i>Acacia tetragonophylla</i> , <i>Hakea recurva</i> , <i>Acacia rostellifera</i> , <i>Banksia sessilis</i> , and <i>Banksia fraseri</i> over <i>Pittosporum angustifolium</i> , <i>Olearia dampieri</i> , <i>Acacia saligna</i> , <i>Grevillea pinaster</i> , <i>Allocasuarina campestris</i> in predominately excellent condition.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	As above

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 proposed clearing occurs in two separate areas including 0.43ha within Crown Reserve 15203 and 0.38ha within Durawah road reserve. The vegetation under application within Durawah road reserve consists of open tall *Acacia* shrubland to mixed scrub heath and occurs in good (Keighery 1994) condition (DEC 2010). The vegetation under application within Crown Reserve 15203 consists of Open tall *Acacia* shrubland in excellent

(Keighery 1994) condition (DEC 2010).

The areas under application occur within an extensively cleared and highly fragmented local landscape, and as such, it is considered that the remaining remnant vegetation under application is significant habitat for flora and fauna in the local area. In addition, the application areas may contain habitat for the Shield-back Trapdoor Spider (*Idiosoma nigrum*).

The native vegetation under application consists of a Beard vegetation association that is under represented within the Geraldton Sandplains Bioregion, with Beard vegetation association 35 having 17.02% of pre-European extent remaining (Shepherd 2009). In addition, less than 10% of native vegetation remains in within a 10 km radius of the application areas.

The closest Priority Ecological Community (PEC) is the plant assemblages of the Moresby Range System (P1). Both of the application areas occur on slopes associated with the Moresby Range and therefore the areas under application may consist of the Moresby Range PEC (DEC 2010).

Given the extensively cleared and highly fragmented nature of native vegetation within the landscape, the area under application is of considerable importance, provides significant habitat for fauna and flora in the local area and comprises of a high level of biological diversity. Therefore the proposed clearing is at variance to this Principle.

Methodology References
-DEC (2010)
-Keighery (1994)
-Shepherd (2009)
GIS Databases
-SAC Bio datasets (17 November 2010)
-Pre-European Vegetation
-NLWRA, Current Extent of Native Vegetation

(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

Seven conservation significant fauna species were identified within the local area (30 km radius) of the application areas including Shield-backed Trapdoor Spider (*Idiosoma nigrum*), White-browed Babbler (*Pomatostomus superciliosus ashbyi*), Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*), Masked Owl (*Tyto novae-hollandiae novaehollandiae*), *Cyclodomorphus branchialis* and *Lerista yuna*.

The vegetation under application consists of Acacia shrubland in an excellent (Keighery 1994) condition within Crown reserve 15203 and in good (Keighery 1994) condition within Durawah road reserve. Crown reserve 15203 also includes banksia and hakea heath (DEC 2010).

Aerial photography indicates that the vegetation which is proposed to be cleared within Crown reserve 15203 occurs within a fragmented remnant of native vegetation bordering the Chapman River and occurs within in a landscape that has been extensively cleared for agriculture (~ 10% of native vegetation remaining in a 10 km radius). The proposed clearing will further fragment the southern portion of this large remnant and will decrease vegetation extent in an area that is already extensively cleared. The proposed clearing within Durawah road reserve will also increase the fragmentation of a 29ha remnant.

Given the extensively cleared and highly fragmented nature of native vegetation within the landscape, it is considered that any remaining remnant vegetation in the local area is important as wildlife habitat and that the proposed clearing will impact on significant habitat for local and conservation significant fauna recorded in the local area.

Mature River Gums (*Eucalyptus camaldulensis*) with hollows were observed in the northeast and banksia heath in the east section of the Crown reserve 15203 (DEC 2010). This habitat may provide significant nesting and feeding habitat for Carnaby's Black Cockatoos.

In addition, *Idiosoma nigrum* (Shield-backed Trapdoor Spider - listed as vulnerable) is known to occur within open York gum (*Eucalyptus loxophleba*), salmon gum (*E. salmonophloia*), and wheatbelt Wandoo (*E. capillosa*) woodland, where Jam (*Acacia acuminata*) forms a sparse understorey. As the proposed clearing is of Acacia shrubland in good to excellent (Keighery 1994) condition, the vegetation under application may provide significant habitat for this species.

Given the above, it is considered for the proposed clearing to be at variance to this Principle.

Methodology References
-DEC (2010)
-Keighery (1994)
GIS Databases
-SAC Bio datasets (17 November 2010)

- NLWRA, Current Extent of Native Vegetation

(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

Five rare flora species including *Caladenia hoffmanii*, *Drummondita ericoides*, *Caladenia elegans*, *Grevillea phanerophlebia* and *Wurmbea tubulosa* has been recorded within the local area (30km radius) of the area under application and falls within the same vegetation and soil complex as the application area.

No Rare flora species were observed during the site inspection and the application areas do not contain suitable habitat for the rare flora listed above (DEC 2010).

Given this, the application is not at variance to this principle.

Methodology References

- DEC (2010)
- GIS Databases
- SAC Bio datasets (17 November 2010)
- Pre-European Vegetation

(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 Threatened Ecological Communities (TEC) has been recorded within the local area (30 km radius) and therefore it is not considered for the proposed clearing to comprise the whole or part of or is necessary for the maintenance of a TEC.

The proposed clearing is not at variance to this Principle.

Methodology GIS Databases

- SAC Bio Datasets (17 November 2010)

(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

The vegetation under application is described as Beard vegetation association 35 of which there is 17.02% of pre-European extent remaining respectively within the Geraldton Sandplains Bioregion (Shepherd 2009).

The local area (10 km radius) around the application area has ~ 10% of pre-European vegetation remaining with 33.99% of native vegetation remaining in the Shire of Chapman Valley. The Beard vegetation association of the vegetation under application retains significantly less than the threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

The area under application occurs within in the Geraldton Sandplains IBRA bioregion which has 44.99% of pre-European vegetation remaining.

Given the above, the vegetation under application is considered significant in an area that has been extensively cleared. Therefore the proposed clearing is at variance to this principle.

	Pre-European (ha)	Current extent (ha)	Remaining %
IBRA Bioregion Geraldton Sandplains*	3136025	1410755	44.99
Shire of Chapman Valley*	398022	135288	33.99
Beard type in Bioregion* 35	184501	31395	17.02

* (Shepherd 2009)

Methodology References

- Commonwealth of Australia (2001)
- Shepherd (2009)
- GIS Databases
- Pre-European Vegetation
- NLWRA, Current Extent of Native Vegetation

(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 tributary (Indialla Gully) occurs 270m east of the Durawah road reserve area and Chapman River occurs ~ 140 m north of Crown Reserve 15203.

No wetland dependent vegetation is apparent within the applied area and therefore, it is not considered for the proposed clearing to be at variance to this Principle.

Methodology GIS Databases
-Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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

The topography within the region is of medium relief. The chief soils within the areas under application area hard acidic red soils and neutral red soils (Northcote et al 1960-68). The road side vegetation under application is not considered to be in area associated with high salinity risk.

The proposal may cause some short term land degradation issues in terms of soil erosion during works. However, these issues should be minimal given the small size of the application area. The proposed clearing of native vegetation is not likely to cause appreciable land degradation.

Methodology References
-Northcote et al (1960-68)
GIS Databases
- Soils, statewide

(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

The closest conservation area to the application area is Protheroe Nature Reserve and Bella Vista Nature Reserve occurring 3.4km west and 10.5km west of the application areas.

Given the small size of the proposed clearing and the distances to these conservation areas, it is not considered that the proposed clearing is at variance to this Principle.

Methodology GIS Databases
-DEC Tenue

(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

A major tributary (Indialla Gully) occurs 270m east of the Durawah road reserve area and Chapman River occurs ~ 140 m north of Crown Reserve 15203 area.

Groundwater salinity within the application areas is 1000 -3000 mg/L.

Due to the small size 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 Databases
-Hydrography, linear
-Salinity Risk
-Groundwater salinity

(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

A major tributary (Indialla Gully) occurs 270m east of the Durawah road reserve area and Chapman River occurs ~ 140 m north of Crown Reserve 15203 area.

Due to the small size of the areas proposed to be cleared and the distance to the nearest watercourse, 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 Databases
-Hydrography, linear

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

Comments

The proposed clearing of 0.81ha is for road realignment and entry into the Chapman Valley cemetery.

The area under application within Crown reserve 15203 is zoned Community under the Shire of Chapman Town planning Scheme and is reserved for the purpose of Cemetery.

The Shire of Chapman wishes to realign Durawah road reserve as it is a windy gravel road with many crests and falls which is used by road trains during peak times. The junction between Chapman Valley Road and the Mount Erin - Nabawa Road is a 'blackspot' due to the current alignment of the two roads. The Shire of Chapman would like to turn this junction into a T-junction to increase safety.

The Shire of Chapman proposes to rehabilitate the section of the old road along Chapman Valley road with the cleared vegetation.

Roadside Conservation Committee (2010) recommends that due to the highly cleared landscape, the Shire of Chapman Valley should undertake seed and cutting collection to revegetate the old road corridors where the land is no longer required for the road formation.

Methodology References
-Roadside Conservation Committee (2010)
GIS Databases
-Town Planning Scheme Zones

4. References

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

DEC (2010) Site Inspection Report for Clearing Permit Application CPS 4042/1, Lot 300 on Plan 47656 nabawa and Durwah Road Reserve Mount Erin. Site inspection undertaken 8/12/2010. Department of Environment and Conservation, Western Australia (DEC Ref A354265).

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.

Roadside Conservation Committee (2010) Advice for CPS 4042/1 - Shire of Chapman Valley Lot 300 on Plan 47656 Nabawa and Durawah Road Reserve Mount Erin. DEC ref A354267

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System

ha Hectare (10,000 square metres)
TEC Threatened Ecological Community
WRC Water and Rivers Commission (now DEC)