



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 2306 / 2  
File Number: DEC6148  
Duration of Permit: From 30 September 2009 to 30 September 2014

### PERMIT HOLDER

Patrick Bernard Dawson  
Maxine Millicent Dawson

### LAND ON WHICH CLEARING IS TO BE DONE

LOT 11604 ON PLAN 203450  
LOT 11688 ON PLAN 157315  
LOT 11605 ON PLAN 203449

### AUTHORISED ACTIVITY

Clearing of up to 89 hectares of native vegetation within the area cross-hatched yellow on attached Plan 2306/2.

### CONDITIONS

#### 1 Type of clearing authorised

- (a) The Permit Holder may undertake the following activities:
- (i) clearing of *understorey* within the areas cross-hatched yellow on Plan 2306/2;
  - (ii) clearing for the establishment of *log landing/s*, each being no larger than 0.3 hectares in size;
  - (iii) *thinning* of Jarrah (*Eucalyptus marginata*), Marri (*Corymbia calophylla*) and Karri (*Eucalyptus diversicolor*) trees;
  - (iv) *culling* of unsaleable trees; and
  - (v) burning of cleared *understorey* and *culled* trees.
- (b) The Permit Holder shall not clear the following flora;
- (i) *Eucalyptus guilfoylei* (Yellow Tingle);
  - (ii) *Eucalyptus jacksonii* (Red Tingle); and
  - (iii) *Eucalyptus brevistylis* (Rates tingle).
- (c) Clearing authorised under this Permit must be completed by 30 September 2012 being three years from the date this Permit becomes valid.

#### 2. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared for the purpose of timber harvesting and fire breaks, 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.

#### 3. Dieback and Weed Management

- (a) 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 *dieback*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
  - (ii) avoid the movement of soil in wet conditions;
  - (iii) ensure that no *dieback*-affected *mulch*, *fill* or other material are brought into an area that is not affected by *dieback*; and
  - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) When undertaking any clearing, or other activity pursuant to 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 *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.
4. Buffer Management
- The Permit Holder shall not clear within 50 meters of a *watercourse* within and/ or adjacent to the area cross-hatched yellow on attached Plan 2306/2.
5. Vegetation Management
- (a) Prior to undertaking any clearing authorised under this Permit, an *environmental specialist* must determine the species composition, structure and density of the *understorey* of areas proposed to be *thinned*.
- (b) The Permit Holder must retain a minimum of 5 *habitat trees* within the area of clearing authorised under this Permit in each hectare authorised under this Permit.
- (c) The Permit Holder must retain a minimum *basal area* in:
- (i) Jarrah (*Eucalyptus marginata*) stands of 15m<sup>2</sup>/ha;
  - (ii) Mixed Jarrah (*Eucalyptus marginata*), Marri (*Corymbia calophylla*) and Karri (*Eucalyptus diversicolor*) stands of 18m<sup>2</sup>/ha; and
  - (iii) Karri (*Eucalyptus diversicolor*) stands of 18m<sup>2</sup>/ha.
- (d) Within one month of completing clearing, the Permit Holder must *rehabilitate* any *log landings* established within native vegetation by scarifying the soil surface to reduce compaction and facilitate natural regeneration.
- (e) Within two years of completing clearing of native vegetation authorised under this Permit, the Permit Holder must:
- (i) determine the species composition, structure and density of the *understorey* of areas subject to *thinning*; and
  - (ii) where, in the opinion of an *environmental specialist*, there is evidence that *understorey* will not recover and develop towards its pre-clearing composition, structure and density determined under condition 5(e)(i), the Permit Holder must undertake *remedial action* at an *optimal time* within the next 12 months to ensure re-establishment of *understorey* prior to expiry of this Permit.
6. 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 vegetation management pursuant to condition 5 of this Permit:

- (i) prior to clearing native vegetation authorised under this Permit, the species composition, structure and density of *understorey*;
- (ii) the species and number per hectare of *habitat trees* retained;
- (iii) the location of *habitat trees* retained, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (iv) monitoring undertaken to ensure that the specified minimum *basal area* is retained;
- (v) number of *log landings* established;
- (vi) the location of *log landings*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (vii) photographs of the *understorey* taken at one year, two years and three years after completing clearing authorised under this Permit; and
- (viii) a detailed description of the nature and extent of any *remedial actions* undertaken.

## 7. 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 6 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 30 June 2014, the Permit Holder must provide to the CEO a written report of records required under condition 6 of this Permit where these records have not already been provided under condition 7(a) of this Permit.

## DEFINITIONS

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

***basal area*** is the method of expression of tree cover density in an area where the total area of tree trunk, measured at average adult human breast height, is expressed as square metres per hectares of land area;

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

***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;

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

***habitat trees*** means trees that have a diameter, at human chest height, of greater than 75cm and provide roosts or nests for native fauna;

***log landing/s*** means an area established for the purpose of stockpiling commercially harvested trees, to enable loading for collection;

***mulch*** means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

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

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

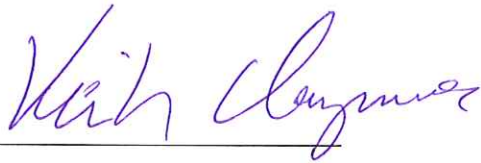
*remedial action/s* means for the purpose of this Permit, any activity that is required to ensure successful re-establishment of *understorey* to its pre-clearing composition, structure and density, and may include a combination of soil treatments and *revegetation*.

*thinned/ing* describes a silvicultural activity to promote the growth of selected trees by removing competing trees;

*understorey* means, for the purpose of this Permit, all native vegetation that does not include trees to be *culled* or subject to harvest;

*watercourse* has the meaning given to it in section 3 of the Rights in Water and Irrigation Act 1914;

*weed* 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.



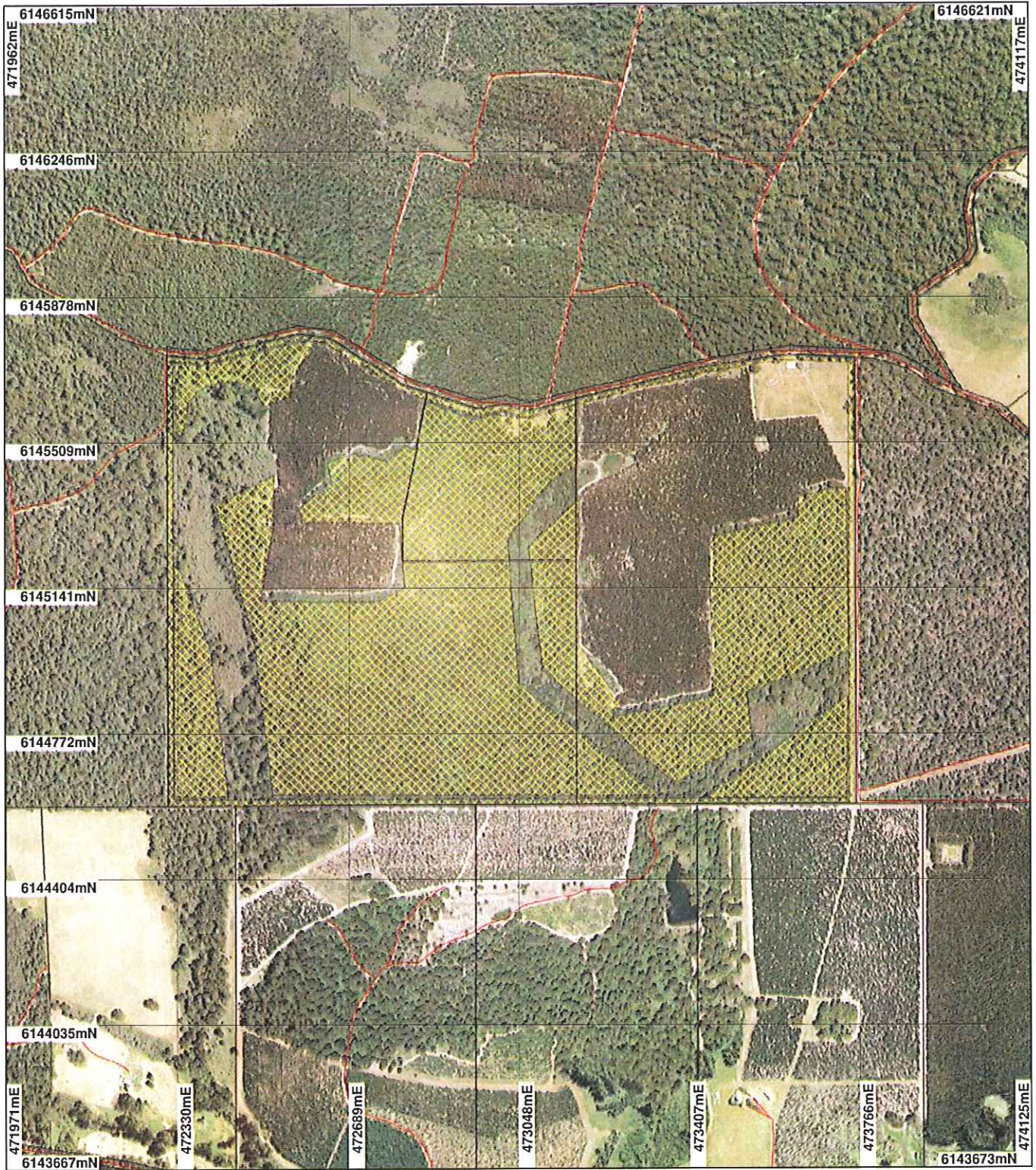
Keith Claymore  
A/ DIRECTOR  
NATURE CONSERVATION DIVISION

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

30 September 2009



# Plan 2306/2



## LEGEND

- Clearing Instruments
- Road Centrelines
- Cadastral
- Deep River 50cm Orthomosaic
- Landgate04



Scale 1:12892  
(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.

*Keith Payne* Date *30/9/09*

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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**1. Application details**

**1.1. Permit application details**

Permit application No.: 2306/2  
 Permit type: Area Permit

**1.2. Proponent details**

Proponent's name: Patrick Bernard & Maxine Millicent Dawson

**1.3. Property details**

Property: LOT 11604 ON PLAN 203450 (Lot No. 11604 NORTH WALPOLE NORTH WALPOLE 6398)  
 LOT 11688 ON PLAN 157315 (Lot No. 11688 NORTH WALPOLE NORTH WALPOLE 6398)  
 LOT 11605 ON PLAN 203449 (Lot No. 11605 NORTH WALPOLE NORTH WALPOLE 6398)

Local Government Area: Shire Of Manjimup

Colloquial name:

**1.4. Application**

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
89		Mechanical Removal	Timber Harvesting

**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
Mattiske Vegetation complex :Keystone (Kb) Mosaic of tall open forest of Eucalyptus guilfoylei-Eucalyptus jacksonii-Eucalyptus diversicolor on slopes of major hills rising above coastal plain with Allocasuarina decussata-Banksia grandis-Agonis flexuosa on slopes in hyperhumid and perhumid zones and tall open forest of Eucalyptus brevistylis-Eucalyptus marginata subsp. marginata-Corymbia calophylla and the occasional Eucalyptus megacarpa near rock outcrops in hyperhumid and perhumid zones.	The vegetation of the applied area is classified as very good to excellent (Keighery, 1994). The upland vegetation is described as a Tall Open Forest, comprised of Eucalyptus diversicolor, Corymbia calophylla, Eucalyptus marginata.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition from GIS aerial mapping Deep River 50cm Orthomosaic Landgate04

**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 not likely to be at variance to this Principle**  
 The vegetation of the applied area is classified as very good to excellent (Keighery, 1994). The vegetation is described as a Tall Open Forest, comprised of Eucalyptus diversicolor, Corymbia calophylla, Eucalyptus marginata. (Mattiske, 1998)

The vegetation structure has been altered through selective logging and a minor presence of Blackberry weeds fringing this block was noted in the Forest Management Plan (Management Plan, 2008).

The applied area is bordered to the East and West by Granite Peaks State Forest and to the North by Mt Frankland South National Park. While a large proportion of the State Forest within the local area has been harvested with a clear-felling silvicultural prescription since 2000 there aerial mapping shows no obvious signs of degradation of the conservation areas bordering the applied area.

On this basis, the proposed clearing of the applied area is not likely to be at variance to this Principle as the vegetation is well represented in the local area.

**Methodology** References:  
- Keighery (1994)  
- Mattiske (1998)  
- Management Plan (2008)

GIS Database:  
- Mattiske Vegetation Complexes  
- Pre-European Vegetation  
- Imagery Deep River 50cm ? Orthomosaic Landgate04

**(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 not likely to be at variance to this Principle**

There are eight recorded occurrences of different Declared Threatened or Priority Fauna within the local area (10km radius). The closest records included Quenda (1.6km SSE), Quokka (1.6km NE), Baudin's Black Cockatoo (2.1km E) and Black-Stripe Minnow (2.3km SE).

Aerial mapping indicates the vegetation within the applied area is in very good to excellent condition. The vegetation of the applied area could represent a viable habitat for Quokka, Quenda, Brush-tailed Phascogales, Baudin's Cockatoo and Black-Stripe Minnow.

However while there are several fauna species that may utilise the proposed area to be cleared, there are larger areas of similar vegetation within the surrounding area that can be utilised.

The proposed clearing is not likely to represent a significant habitat for indigenous fauna as the local area (10km radius) is not a heavily cleared area (Shepherd et al. 2001). Therefore the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
- Shepherd et al (2001)

GIS Database:  
- SAC Biodataasets (Fauna Feb 08)  
- Imagery Deep River 50cm Orthomosaic Landgate04  
- CALM Managed Lands and Waters

**(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**

Four Declared Rare Flora species have been identified within 10 kilometres of the clearing application area. These include Sphenotoma drummondii (6.9km E), Meziella trifida (6.7km NW), Drakaea micrantha (10km NNE) and Reedia spathacea (10km NNE).

D. micrantha and R. spathacea typically occur on different soils and vegetation that that of the applied area and thus are unlikely to occur within the proposed clearing area. M. trifida typically occurs on winter-wet flats and S. drummondii typically occurs on steep rocky slopes and crevices of rocks (DEC, 2008) and thus both are unlikely to occur within the applied area for clearing.

The proposal is not likely to be at variance to this Principle due to the applied area being unsuitable for locally identified Declared Rare Flora.

**Methodology** References:  
- DEC (2008)

GIS Database:  
- SAC Biodatsets (DEFL Feb 08)  
- Pre-European Vegetation  
- Mattiske Vegetation complexes  
- Soils, statewide



**(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 Threatened Ecological Community (TEC) within a 10km radius of the applied area.

There are three records of Priority Ecological Community (PEC) between 10km and 13km of the application area. All three PEC's are related to the presence of Reedia swamps however none occur within a similar vegetation type to that of the applied area.

The clearing as proposed is not likely to be at variance with this principle as there are no TEC's in the local area (10km radius).

- Methodology** GIS Database:
- SAC Biodatasets (Threatened Ecological Communities)
  - SAC Biodatasets (Priority Ecological Communities)

**(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 not likely to be at variance to this Principle**

The vegetation within the application area is a component of Beard Vegetation Association 3 (Hopkins et al. 2001) of which there is approximately 69.4% of the pre-European extent remaining (Shepherd, 2006). This vegetation type is therefore of "least concern" for biodiversity conservation (Department of Natural Resources and Environment, 2002).

The vegetation proposed to be cleared is also a component of Mattiske Vegetation Complex Keystone (Kb) of which 81.8% of Pre-European extent is remaining (Mattiske, 1998).

The local area (10km radius) is heavily vegetated as the property is bordered to the North, East and West by CALM Managed Lands (State Forest and National Park).

Given the pre-European extent remaining of the aforementioned vegetation association and Mattiske complex and the relatively high proportion of vegetation remaining within the local area, the vegetation of the clearing application area is unlikely to constitute a significant remnant of vegetation.

Therefore the clearing as proposed is not likely to be at variance with this Principle

- Methodology** References:
- Hopkins et al. (2001)
  - Shepherd (2006)
  - Department of Natural Resources and Environment (2002)
  - Mattiske (1998)

- GIS Database:
- Pre-European Vegetation
  - Mattiske Vegetation Complexes
  - CALM Managed Lands and Waters

**(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 clearing application area is located within the Nornalup Inlet and Frankland River Catchment. The application area includes two minor watercourses, with the Western watercourse (Frankland River) being an Aboriginal site of significance.

The Management Plan (2008) submitted as supporting information provided by the proponent, indicates that the proponent plans to retain buffering native vegetation of 50m for the western watercourse and 30m for the eastern watercourse.

There are no wetlands within a 10km radius of the area applied to clear.

The clearing as proposed may be at variance with this Principle as the area applied to be cleared comes within the buffer zone of the aforementioned watercourses. If granted conditions to prevent clearing within the designated buffer zones of both watercourses must be imposed.

- Methodology** References:



- Management Plan (2008)

GIS Database:

- Hydrogeographic Catchments (Catchment)
- Hydrology, linear
- Aboriginal Site of Significance
- ANCA wetlands
- RAMSAR Wetlands
- Geomorphic Wetlands (Classification) Swan Coastal Plain
- EPP, Lakes

**(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 clearing as proposed is for the purpose of Timber Harvesting.

Supporting documentation provided by the applicant (Management Plan, 2008) details that only trees of size category greater than 25cm will be harvested with a basal area of trees to be kept (thinning trees). The Management Plan (2008) also details that 2 'Habitat' trees (trees of greater than 70cm diameter) per hectare will be retained.

As a large portion of vegetation will remain on the applied area it is not likely that the clearing as proposed will cause appreciable land degradation.

**Methodology References:**

- Management Plan (2008)

GIS Database:

- Acid Sulfate Soil Risk Map, Swan Coastal Plain
- Salinity Risk Map
- Rainfall, Mean Annual
- Evapotranspiration, Areal Actual
- Topographic contours, statewide
- 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 may be at variance to this Principle**

There are several conservation areas within the local area (10km radius), with the Granite Peaks State Forest bordering the applied area to the West and East and Mt Frankland South National Park adjoining the Northern border of the applied area. Within the 10km radius Gladstone State Forest (1.1km SW), West Frankland State Forest (2.1km S) and Mt Frankland National Park (1.7km NE) also occur. Several of these conservation areas are also on the Register of National Estate.

Given the relatively consolidated nature of the surrounding conservation areas, the value of the applied area as an ecological linkage is reduced.

The area proposed to be cleared has been identified as having a Blackberry weed infestation (Management Plan, 2008). As the vegetation within the application area borders numerous CALM Managed Lands this vegetation may be providing some buffering capacity against the spread of such weeds into the managed areas.

The clearing as proposed may impact on the surrounding conservation areas due to the presence of Blackberry weed (Management Plan, 2008). Weed control conditions will be imposed if clearing is granted to mitigate the potential for spread into neighbouring forest.

**Methodology References:**

- Management Plan (2008)

GIS Database:

- CALM Managed Lands and Waters
- Register of National Estate
- EPP, Areas

**(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 clearing application area is located within the Normalup Inlet and Frankland River Catchment. The application area includes two minor watercourses, one also being an Aboriginal Site of Significance.

Supporting information provided by the proponent indicates that the proponent plans to maintain a buffer zone around both watercourses (Management Plan, 2008).

The land under application is supported by rock of low permeability and the applied area is 1.5 km East of a Public Drinking Water Source Area, classified as a Not Assigned Protection Area.

The area proposed to be cleared has an annual rainfall of 1200mm and the groundwater salinity has been mapped as 500-3000TDS/mg/L.

There is a low risk that the proposed clearing could result in water erosion; the retention of a 50 metre wide buffer of native vegetation along the streams within the applied area would reduce the transport of nutrients and sediments, and potential turbidity, down-stream.

Given that buffers are maintained around watercourses it is not likely that the clearing as proposed will cause or exacerbate a deterioration of surface or groundwater quality. Therefore if this permit is granted conditions to prevent clearing within 50m of a watercourse will be imposed.

**Methodology References:**

- Management Plan (2008)

**GIS Database:**

- Hydrography, linear
- Aboriginal Site of Significance
- Hydrogeographic Catchments (Catchment)
- Hydrogeology, statewide
- Public Drinking Water Source Areas (PDWSAs)
- Rainfall, Mean annual
- Groundwater Salinity, statewide

**(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 area of vegetation under application is located on soil type Ta10, and is associated with a hard acidic and neutral yellow mottled soils and hard acidic red soils (Northcote et al. 1968).

These soils are usually associated with steep hilly to hilly terrain with rock outcrops and steep-sided valleys which are considered to have a low risk of water logging. The applied area ranges in topography from 145 to 175 AHD which contributes to the low risk of water logging.

Given the type of clearing (selective thinning of vegetation) (Management Plan, 2008), associated topography and the high vegetation representation in the local area (10 km radius), the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding and is therefore not likely to be at variance to this clearing principle.

**Methodology References:**

- Northcote et al (1968)
- Management Plan (2008)

**GIS Database:**

- Soils, statewide
- Topographic contours, statewide

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

**Comments**

A Commercial Producers Licence, Owners ID Code and Management Plan were submitted by the applicant with the clearing application on the 14th January 2008.

There are currently two registered claims of native title over the applied area for the Southern Noongar and Wagyl Kaip peoples however as the land is under private ownership all native title claims are extinguished.



Clearing Permit CPS 2306/2 has been created as a result of an appeal and subsequent Ministerial determination on Clearing Permit CPS 2306/1 decision and conditions. As such, no changes to the assessment of the proposal CPS 2306/1 have occurred in the creation of clearing permit CPS 2306/2.

**Methodology**

- GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims

#### 4. Assessor's comments

**Comment**

Clearing has been assessed and is considered:

- Not to be at variance to Principle d);
- Not likely to be at variance to Principles b), c), e), g), i) and j);
- May be at variance to Principles a), f) and h)

#### 5. References

- Department of Environment and Conservation (2008). Florabase: Flora Descriptions. Accessed on 10/04/2008 from <http://florabase.dec.wa.gov.au>
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Management Plan (2008) Native Forest Management Plan, prepared by Forest Consultant for PB & MM Dawson in November 2007.
- 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.
- 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.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

#### 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)