



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4175/1
Permit Holder:	Rail Heritage Foundation of Western Australia Incorporated
Duration of Permit:	18 April 2011 – 18 April 2016

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 tourist railway and ancillary use.

2. Land on which clearing is to be done

Crown Reserve 42226, consisting of:
Lot 15717 on Deposited Plan 185273
Lot 15710 on Deposited Plan 215125
Lot 179 on Deposited Plan 33781
Lot 180 on Deposited Plan 33781
Lot 15892 on Deposited Plan 220174
unallocated Crown land, Boddington

3. Area of Clearing

The Permit Holder must not clear more than 2 hectares of native vegetation within the area hatched yellow on attached Plan 4175/1.

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 *Land Administration Act 1997* 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. Vegetation management

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse* or *wetland* within and/or adjacent to the area cross-hatched yellow on attached Plan 4175/1.

9. Dieback and 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* and *dieback*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall only move soils in *dry conditions*;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) 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.

10. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect that area for the presence of *priority flora*.
- (b) Where *priority flora* are identified in relation to condition 10(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of identified *priority flora* occurs and no clearing occurs within 10 metres of identified *priority flora*, unless approved by the CEO.

11. 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 tree(s) that contain hollows suitable to be utilised as *habitat tree(s)* by fauna species listed below:
 - (i) Carnaby's black cockatoo (*Calyptorhynchus latirostris*);
 - (ii) Baudin's black cockatoo (*Calyptorhynchus baudinii*); or
 - (iii) forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*).
- (b) Prior to clearing, any *habitat tree(s)* identified by condition 11(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 11(a).
- (c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 11(b).

PART III - RECORD KEEPING AND REPORTING

12. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to flora management pursuant to condition 10 of this Permit:
 - (i) the location of each rare and/or priority flora species, or undescribed flora recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the species name of each rare and/or priority flora species identified; and
 - (iii) a copy of the botanists flora survey report.
- (c) In relation to fauna management pursuant to condition 11 of this Permit:
 - (i) the location of each tree that contains hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the trees that contain hollows;
 - (iii) the location of surrogate trees for relocation with vacant hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (iv) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees.

13. 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 12 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 18 January 2016, 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:

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

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

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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;

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

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);

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

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

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*; and

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.

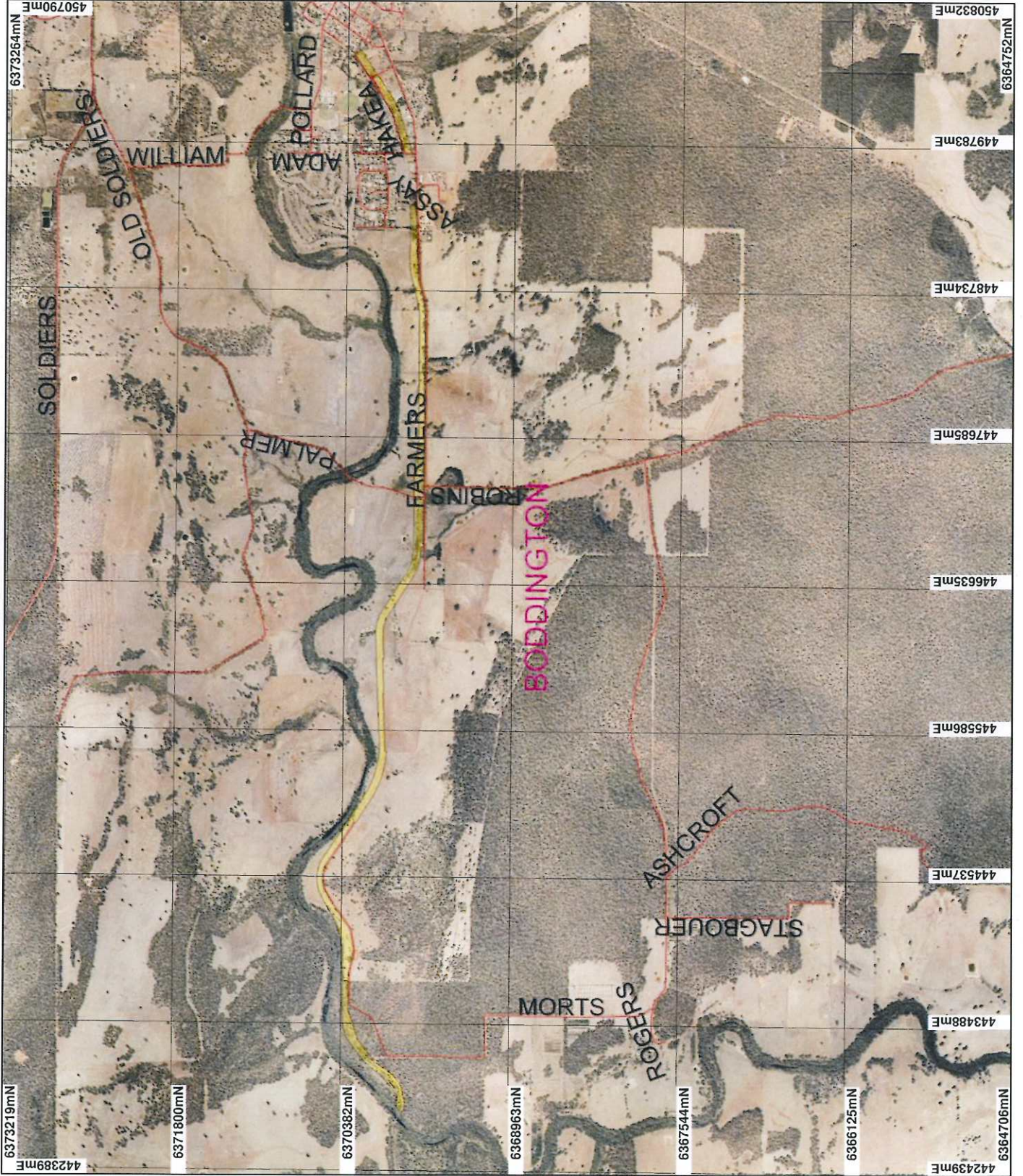


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

23 March 2011

Plan 4175/1



LEGEND

- Cadastral
- Clearing Instruments
- Areas Approved to Clear
- Local Government Authorities
- Road Centrelines
- Dwellingup 50cm Orthomosaic - Landgate 2006



Scale 1:40746
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: checkings in this map have not been corrected. This may result in geometric distortion or measurement inaccuracies.

[Signature] Date 23/3/11

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.: 4175/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Rail Heritage Foundation of Western Australia Incorporated

1.3. Property details

Property: LOT 180 ON PLAN 33781 (House No. 1 STATION BODDINGTON 6390)
LOT 179 ON PLAN 33781 (House No. 1 COLIN BODDINGTON 6390)
UNALLOCATED CROWN LAND (House No. 40 FARMERS BODDINGTON 6390)
LOT 15717 ON PLAN 185273 (BODDINGTON 6390)
LOT 15710 ON PLAN 215125 (BODDINGTON 6390)
LOT 15892 ON PLAN 220174 (Lot No. 15892 MORTS BODDINGTON 6390)

Local Government Area: Shire of Boddington
Colloquial name: Crown Reserve 42226

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 March 2011

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
<p>Beard Vegetation Association: 3 - Medium forest; jarrah-marri 4 - Medium woodland; marri & wandoo (Shepherd, 2009)</p> <p>Mattiske Vegetation Complex: Michibin (Mi) - Open woodland of Eucalyptus wandoo over Acacia acuminata with some Eucalyptus loxophleba on valley slopes, with low woodland of Allocasuarina huegeliana on or near shallow granite outcrops in arid and perarid zones. Williams (Wi) - Mixture of woodland of Eucalyptus rudis-Melaleuca raphiophylla, low forest of Casuarina obesa and tall shrubland of Melaleuca spp. on major valley systems in arid and perarid zones. (Mattiske and Havel, 1998)</p> <p>Hedde Vegetation Complex: Williams-Avon-Brockman-Mumballup/Complex (Hedde et al., 1980)</p>	<p>The proposal is to clear up to 2 hectares of native vegetation within Crown Reserve 42226 for the purpose of tourist railway and ancillary use.</p> <p>The clearing footprint is narrow and linear, extending over a distance of approximately 8.1 kilometres and covering an area of approximately 39.37 hectares.</p> <p>There is an existing, disused railway line in the application area. The vegetation under application is regeneration since the closure of the railway line, which the applicant advised was in 1968 (RHFWA, 2011).</p> <p>Clearing will be up to 5 metres in width for alignment over a distance of approximately 2650 metres, a 200 square metre security yard and approximately 20 trees.</p> <p>The majority of the application area is open, cleared land where vegetation is considered to be in completely degraded (Keighery, 1994) condition.</p> <p>The western end of the application area passes through approximately 1 kilometre of denser vegetation which is considered to be in degraded to good (Keighery, 1994) condition. This vegetation provides a direct link to the Hotham River from approximately 3000 hectares of remnant of vegetation. There appears to be an existing cleared track through the western half of this area. Approximately 0.5 hectare of native vegetation is proposed to be cleared in this area.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)</p> <p>To</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994)</p>	<p>Vegetation condition was determined using aerial imagery (Dwellingup 50cm Orthomosaic - Landgate 2006) and photographs supplied by the applicant (RHFWA, 2011).</p>

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal may be at variance to this Principle

The proposal is to clear up to 2 hectares of native vegetation within Crown Reserve 42226 for the purpose of tourist railway and ancillary use. The clearing footprint is narrow and linear, extending over a distance of approximately 8.1 kilometres and covering an area of approximately 39.37 hectares.

There is an existing, disused railway line in the application area. The vegetation under application is regeneration since the closure of the railway line.

The majority of the application area is open, cleared land where vegetation is considered to be in completely degraded (Keighery, 1994) condition.

The western end of the application area passes through approximately 1 kilometre of denser vegetation which is considered to be in degraded to good (Keighery, 1994) condition. This vegetation provides a direct link to the Hotham River from approximately 3000 hectares of remnant of vegetation. There appears to be an existing cleared track through the western half of this area. Approximately 0.5 hectare of native vegetation is proposed to be cleared within this area of denser vegetation. Clearing within this area may increase fragmentation of this vegetation and impact fauna access to the watercourse.

The vegetation under application may contain suitable habitat for three species of threatened black cockatoo, which have all been recorded in the local area.

The local area (10 kilometre radius) has approximately 30% vegetation remaining with approximately 4700 hectares in the Dwellingup State Forest, 1700 hectares in a DEC managed timber reserve and approximately 11400 hectares privately owned by gold mining companies.

A number of the vegetation units mapped for the application area are below the 30% threshold of the national objectives and targets for biodiversity conservation.

There are records of 8 priority flora species in the local area, seven of which are mapped within the same vegetation and soil types as the area under application. There is a known record of Priority 1 flora species *Gastrobium* sp. Prostrate Boddington (M. Hislop 2130) within the far western end of the application area and Priority 2 species *Banksia subpinnatifida* var. *imberbis* is mapped as occurring approximately 90 metres southeast of the eastern end of the application area. The proposed clearing may include flora of conservation significance.

The application area is adjacent to the Hotham River and at two locations is within 50 metres of the bank.

Soil disturbance and the removal of native vegetation increases the risk of weeds and pathogens, including dieback (*Phytophthora cinnamomi*), being introduced or spread to the application area and surrounding environment, which includes the Hotham River and a large tract of remnant vegetation. Weed and dieback management conditions will contribute to minimising this risk. Maintaining an adequate buffer of vegetation adjacent to the Hotham River would also contribute to lessening the risk of weed impact on riparian zone vegetation.

Considering the above, the application may be at variance to this principle

Methodology

References:

Keighery, 1994

GIS Databases:

- DEC Managed Lands & Waters - DEC 28/10/09
- Dwellingup 50cm Orthomosaic - Landgate 2006
- Evapotranspiration, Area Actual - BOM 30/09/01
- Groundwater Salinity, statewide - DoW 13/07/06
- Hydrogeographic Catchments, Catchments - DoW 01/06/07
- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear - DoW 13/7/06
- Rainfall, Mean Annual - BOM 30/09/01
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 11/03/11
- Soils, Statewide - 30/11/99

(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

There are numerous records of indigenous fauna of conservation significance within the local area (10 kilometre radius) including 7 threatened species. The closest fauna record to the application area is the Priority 4 Water-rat, Rakali (*Hydromys chrysogaster*).

The majority of the application area is considered to be in completely degraded (Keighery, 1994) condition. The open, completely degraded (Keighery, 1994) areas of the application are unlikely to provide significant habitat for ground dwelling fauna.

There are areas of denser vegetation at the eastern and western ends of the application area and these areas may therefore be where the majority of the 2 hectares of clearing is to be concentrated. Vegetation in these areas is considered to be in degraded to good (Keighery, 1994) condition.

The vegetation under application may contain suitable habitat for the threatened black cockatoo species Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (Endangered, Wildlife Conservation Act 1950; Endangered, Environment Protection and Biodiversity Conservation Act 1999), Baudin's black cockatoo (*Calyptorhynchus baudinii*) (Endangered, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999) and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) (Vulnerable, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999), which have all been recorded in the local area.

The vegetation at the western end of the application area is part of a large remnant of vegetation and provides the only direct link from the approximately 3000 hectare remnant to the Hotham River. Removal of vegetation from this area may disrupt fauna access to the river.

The application area is adjacent to the Hotham River and at the closest point is within approximately 25 meters of the river bank. The vegetation under application may include riparian vegetation habitat.

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

Methodology References:
Keighery, 1994
GIS Databases:
- Dwellingup 50cm Orthomosaic - Landgate 2006
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 11/03/11
- Soils, Statewide - 30/11/99

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

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

There are no known records of rare flora within the local area (10 kilometre radius) and the proposed clearing is therefore unlikely to be at variance to this principle.

Methodology GIS Databases:
- Dwellingup 50cm Orthomosaic - Landgate 2006
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 11/03/11
- Soils, Statewide - 30/11/99

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

There are no known records of threatened ecological communities in the local area (10 kilometre radius) and the proposed clearing is considered unlikely to be at variance to this principle.

Methodology GIS Databases:
- Dwellingup 50cm Orthomosaic - Landgate 2006
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 11/03/11
- Soils, Statewide - 30/11/99

(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

There are two Beard Vegetation Associations mapped over the application area. Beard 3 retains 69% of the pre-European extent in Jarrah Forest IBRA bioregion (Shepherd, 2009) and covers the western quarter of the application area, which includes the area of most dense vegetation. Beard 4 retains 30% of the pre-European extent (Shepherd, 2009) and is mapped over the remainder of the application area.

The mapped Mattiske Vegetation Complexes for the application area, Michibin and Williams (Mattiske and Havel, 1998), are both currently below the national objectives and targets for biodiversity conservation of preventing clearance of ecological communities with an extent below 30% of that present pre-1750, with 26% and 20% remaining, respectively (Shepherd, 2007). Less than 1% (~97 hectares) of the remaining extent of Williams vegetation complex is held in DEC conservation reserves (Shepherd, 2007). The majority of the most heavily vegetated area at the western end of the application area is mapped as this vegetation unit.

The Williams-Avon-Brockman-Mumballup/Complex (Hedde et al., 1980) vegetation complex mapped over the application area is also under represented, retaining 22% of the pre-European, which equates to 3716 hectares remaining (Shepherd, 2007).

	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregion				
Jarrah Forest*	4,506,656	2,514,549	56%	67% (1,689,684.20ha)
Shire of Boddington*	190,760	130,510	68%	66% (86,051ha)
Beard Vegetation Association within Bioregion*				
3	2,390,591	1,657,963	69%	79% (1,316,249ha)
4	1,022,713	310,603	30%	21% (64,580ha)
Mattiske Vegetation Complex**				
Michibin (Mi)	134,546	35,477	26%	6% (8,386ha)
Williams (Wi)	23,486	4,620	20%	0.4% (97ha)
Hedde Vegetation Complex**				
Williams-Avon-Brockman-Mumballup	16,650	3,716	22%	1% (243ha)

* (Shepherd, 2009)

** (Shepherd, 2007)

The majority of the application area is in completely degraded (Keighery, 1994) condition and is not considered to be representative of the mapped vegetation types. The most highly vegetated section of the application area is mapped as a Beard vegetation unit that is well represented in the IBRA bioregion and as such, the vegetation proposed to be cleared is not likely to be a significant remnant of a highly cleared vegetation type.

The local area (10 kilometre radius) has approximately 30% vegetation remaining with approximately 4700 hectares in the Dwellingup State Forest, 1700 hectares in a DEC managed timber reserve and approximately 11400 hectares privately owned by gold mining companies.

The vegetation at the western end of the application area is part of a large remnant of vegetation that provides the only direct link from a 3000 hectare remnant to the Hotham River. Removal of vegetation from this area may disrupt river access for local fauna.

Considering the above, the application may be at variance to this principle.

Methodology

References:

- Hedde et al., 1980
- Keighery, 1994
- Mattiske and Havel, 1998
- Shepherd, 2007
- Shepherd, 2009
- GIS Databases:
 - Dwellingup 50cm Orthomosaic - Landgate 2006
 - Pre-European vegetation - DA 01/01

(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**
Five minor, non-perennial watercourses intersect the application area. Vegetation around these watercourses is predominantly cleared.

The application area is adjacent to the Hotham River, which is classified as a mainstream. At two locations the application area is within 50 metres of the Hotham River, with the closest point approximately 25 meters from the bank.

Aerial imagery suggests the application area may contain riparian vegetation (Dwellingup 50cm Orthomosaic - Landgate 2006).

Considering the above, the application may be at variance to this principle.

Methodology GIS Databases:
- ANCA, Wetlands - 26/03/99
- Dwellingup 50cm Orthomosaic - Landgate 2006
- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear - DoW 13/7/06
- RAMSAR, Wetlands - 15/10/09

(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 application area is narrow and linear with up to 2 hectares of native vegetation proposed to be removed over a distance of approximately 8.1 kilometres.

Soils are yellow/brown deep sandy duplexes, brown deep loamy duplexes, grey deep sandy duplexes and wet and semi-wet soils (McArthur et al., 1977).

The application area is predominantly cleared and has low relief topography, with elevation ranging from 195 metres AHD in the west to 220 metres AHD in the east.

Considering the above, it is unlikely that the proposed clearing will result in appreciable land degradation.

Methodology References:
McArthur et al., 1977
GIS Databases:
- Acid Sulfate Soils Risk Map, 50k - DEC 02/07/10
- Evapotranspiration, Area Actual - BOM 30/09/01
- Groundwater Salinity, statewide - DoW 13/07/06
- Hydrogeology, statewide - DoW 13/07/06
- Rainfall, Mean Annual - BOM 30/09/01
- Soils, Statewide - 30/11/99
- 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**
The Dwellingup State Forest extends to within 4.9 kilometres to the northwest, 7 kilometres to the west and 7.2 kilometres to the southwest of the western end of the application area.

Due to the distance separating the application area from the Dwellingup State Forest, the proposed clearing is not likely to impact on the environmental values of this conservation area.

Methodology GIS Databases:
- DEC Managed Lands & Waters - DEC 28/10/09
- Pre-European vegetation - DA 01/01
- Soils, Statewide - 30/11/99

(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

Five minor, non-perennial watercourses intersect the application area. Vegetation around these watercourses is predominantly cleared.

The application area is adjacent to the Hotham River, which is classified as a mainstream. At two locations the application area is within 50 metres of the Hotham River, with the closest point approximately 25 metres from the bank.

The proposed clearing may result in a temporary increase in sedimentation of nearby watercourses, however it is not likely to result in appreciable water quality degradation.

Methodology GIS Databases:

- Hydrogeographic Catchments, Catchments - DoW 01/06/07
- Hydrogeology, statewide - DoW 13/07/06
- Public Drinking Water Source Areas (PDWSAs) - DoW 07/02/06
- Rainfall, Mean Annual - BOM 30/09/01
- RIWI Act, Areas - DoW 05/04/02
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Soils, Statewide - 30/11/99
- 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 application area is narrow and linear, with up to 2 hectares of clearing proposed over a distance of approximately 8.1 kilometres.

The application area has low relief and annual rainfall is moderate (700 - 800 millimetres). Evapotranspiration rate for the area is 700 millimetres per annum.

Considering this, the proposed clearing is unlikely to increase the risk or intensity of flooding and is not likely to be at variance to this principle.

Methodology GIS Databases:

- Evapotranspiration, Area Actual - BOM 30/09/01
- Hydrogeology, statewide - DoW 13/07/06
- Pre-European vegetation - DA 01/01
- Rainfall, Mean Annual - BOM 30/09/01
- Soils, Statewide - 30/11/99
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

Crown Reserve 42226 is vested with the Shire of Boddington, with a management order that it is to be utilised for the designated purpose of 'Tourist Railway' only.

Crown Reserve 42226 currently consists of Lot 15717 on Deposited Plan (DP) 185273, Lot 15710 on DP 215125, Lots 179 and 180 on DP 33781 and Lot 15892 on DP 220174. The application area includes one parcel of unallocated Crown land, which the Department of Regional Development and Lands advises is in the process of being included in Crown Reserve 42226 (DEC Ref: A368182).

The Shire of Boddington is supportive of this application for a purpose permit to clear within Crown Reserve 42226 (DEC Ref: A362611).

The application area includes land parcels zoned 'parks and recreation' and 'rural' as well as areas that area unzoned.

The Gnaala Karla Booja people have a native title claim over the application area. Native Title notification was conducted pursuant to Section 24MC of the Native Title Act 1993. The applicant is advised of its obligations under the Aboriginal Heritage Act 1972.

There are no known Aboriginal Sites of Significance within the application area.

- Methodology** GIS Databases:
- Aboriginal Sites of Significance - DIA 02/10
 - Cadastre - Landgate 12/09
 - Country Area Water Supply Act (Part IIA) Clearing Control Catchments - DoW 29/06/06
 - Environmental Impact Assessments - EPA 08/03/05
 - Native Title Claims - LA 02/5/07
 - Public Drinking Water Source Areas (PDWSAs) - DoW 07/02/06
 - RIWI Act, Areas - DoW 05/04/02
 - RIWI Act, Groundwater Areas - DoW 13/07/06
 - RIWI Act, Irrigation Districts - DoW 13/07/06
 - Town Planning Scheme Zones - MFP 31/08/98

4. References

- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
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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)