



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 5177/1  
File Number: 2012/005228-1  
Duration of Permit: From 12 October 2013 to 12 October 2015

### PERMIT HOLDER

Grenleigh Pty Ltd

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 131 on Deposited Plan 238652, Marble Bar (Crown Lease 386-1993, Pastoral Lease LA3144/1169)

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 150 hectares of native vegetation within the area cross hatched yellow on attached Plan 5177/1.

### CONDITIONS

#### 1. Weed control

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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

#### 2. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit. In relation to the clearing of native vegetation authorised under this Permit:

- (a) 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 or decimal degrees;
- (b) the date that the area was cleared; and
- (c) the size of the area cleared (in hectares).

#### 3. 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 2 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 12 July 2015, the Permit Holder must provide to the CEO a written report of records required under condition 2 of this Permit where these records have not already been provided under condition 3(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;

*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;

*weed/s* mean any plant -

- (a) that is a declared pest under section 22 of the Biosecurity and Agriculture Management Act 2007; or
- (b) published in the former Department of Environment and Conservation Regional Weed Assessments, regardless of ranking ; or
- (c) not indigenous to the area concerned; and
- (d) that is a species permitted for planting under a Pastoral Diversification Permit issued by the Department of Regional Development and Lands.



M Warnock  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

12 September 2013



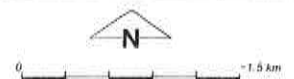
# Plan 5177/1



## LEGEND

- Clearing Instruments**
- Areas Approved to Clear
  - Cadastre
  - Local Government Authorities

- Road Centralines  
 Pearara 80cm Orthomosaic - Landgate 2007



Scale 1:50000  
 (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.

*M Warnock* Date 12/9/13  
 M Warnock

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

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



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





# Clearing Permit Decision Report

Government of Western Australia  
Department of Environment Regulation

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5177/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Grenleigh Pty Ltd

### 1.3. Property details

Property: PART LOT 131 ON PLAN 238652 (MARBLE BAR 6760)  
Local Government Area: Shire of East Pilbara  
Colloquial name: Warrawagine Station Grenleigh irrigated agriculture project

### 1.4. Application

Clearing Area (hectares)	No. Trees	Method of Clearing	For the purpose of:
150		Mechanical Removal	Pastoral Diversification

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 12 September 2013

## 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
Approximately 95 per cent of the application area is mapped as Beard vegetation association 177: Hummock grasslands, sparse shrub steppe; <i>Acacia bivenosa</i> over hard spinifex <i>Triodia brizoides</i> (Shepherd et al. 2001).	Warrawagine Station Grenleigh irrigated agriculture project.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Native vegetation within the application area consists of hard and soft Spinifex hummock grasslands with isolated to very scattered shrubs (Global Gorundwater 2012a).
Approximately 5 per cent of the application area is mapped as Beard vegetation association 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>T. wiseana</i> on basalt (Shepherd et al. 2001).	The application is to clear 150 hectares of native vegetation within Lot 131 on Plan 238652, Marble Bar, Shire of East Pilbara, for the purpose of irrigated agriculture.	To  Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	The application area is within an existing Pastoral Lease and is likely to have been impacted by historical grazing and pastoral activities.  Vegetation description and condition were determined from information provided by the applicant (Global Gorundwater 2012a) and aerial imagery (Pearana 80cm Orthomosaic - Landgate 2007).

## 3. Assessment of application against clearing principles

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

Comments

#### Proposal may be at variance to this Principle

The application is to clear 150 hectares of native vegetation for the purpose of irrigated agriculture. The application is approximately 117 kilometres east of the Nullagine townsite. The vegetation under application is considered to be in an excellent (Keighery 1994) to good (Keighery 1994) condition. The application area is within an existing Pastoral Lease and is likely to have been impacted by historical grazing and pastoral activities.

There are eight species of priority flora mapped within the local area (40 kilometre radius). Three species are mapped within the same soil and Beard vegetation types as the application area. The first species of priority flora (Priority 1) grows in sandy loams & stony, calcareous, alkaline soils within hummock grassland, low open woodland and disturbed sites (WA Herbarium 2013). The application area contains hummock grasslands and soils are red earthy loams and sandy earths with topsoils ranging from slightly acid to slightly alkaline (Global Gorundwater 2012a). The application area may therefore contain suitable habitat for this species.

Little information is available on the habitat requirements of the second species of priority flora (Priority 2). It is therefore unknown whether the application area is likely to contain suitable habitat for this species.

The third species of priority flora grows on gravelly hillsides within stony grounds (WA Herbarium 2013). This species is mapped within Beard vegetation association 172, and soil type Fa28, which is mapped within a small portion (approximately 5 per cent) of the application area. There is little change in elevation within the application area and soils are not described as gravelly or stony (Global Groundwater 2012a). The application area is therefore unlikely to contain suitable habitat for this species.

There are no priority ecological communities within the local area (40 kilometre radius).

Given that the application area may contain suitable habitat for one species of priority flora, and this is unknown for a second species of priority flora, the application may be at variance to this clearing principle.

Given the high percentage (approximately 95 per cent) of remaining vegetation within the local area (40 kilometre radius), the application area is unlikely to contain significant habitat for priority species within the local area.

#### Methodology

##### References:

Global Groundwater (2012a)  
Keighery (1994)  
WA Herbarium (2013)

##### GIS Databases:

- Pearana 80cm Orthomosaic -Landgate 2007
- SAC Bio Datasets (accessed 26/08/13)
- Soils Statewide
- Topography
- Veg Stats

#### **(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**

Four fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 are recorded within the local area (40 kilometre radius). These are the Red Knot (*Calidris canutus* subsp. *rogersi*), Pilbara Olive Python (*Liasis olivaceus* subsp. *barroni*), Dwarf Bearded Dragon (*Pogona minor* subsp. *minima*) and Orange Leaf-nosed bat (*Rhinonicteris aurantius*) (DEC 2007-).

The Red Knot is a migratory shorebird and is therefore unlikely to be found within the application area (DSEWPaC 2013). The application area may contain suitable habitat for the remaining three species of rare fauna recorded within the local area (40 kilometre radius).

The application area is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its pre-European vegetation extent remaining (Government of Western Australia 2013). The application area is therefore unlikely to contain habitat necessary for the maintenance of the rare fauna species recorded within the local area (40 kilometre radius).

The application area is within an existing Pastoral Lease and is likely to have been impacted by historical grazing and pastoral activities. Surrounding areas of intact vegetation are therefore likely to contain more suitable habitat for the rare fauna species recorded within the local area (40 kilometre radius).

Given the above, the application is not likely to be at variance to this clearing principle.

#### Methodology

##### References:

DEC (2007-)  
DSEWPaC (2013)  
Government of Western Australia (2013)

##### GIS Databases:

- IBRA Australia
- Pearana 80cm Orthomosaic -Landgate 2007
- SAC Biodatasets (accessed 26/08/13)

#### **(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 records of rare flora species within the local area (40 kilometre radius). The closest record of a rare flora species is mapped approximately 100 kilometres from the application area.

Given the above, the application is not likely to be at variance to this clearing principle.



**Methodology** GIS Databases:  
 - SAC Biodatasets (accessed 26/08/13)

**(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 communities (TECs) mapped within the local area (40 kilometre radius). The closest mapped TEC is approximately 230 kilometres from the application area.  
 Given the above, the application is not likely to be at variance to this clearing principle.

**Methodology** GIS Databases:  
 - SAC Biodatasets (accessed 26/08/13)

**(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 at variance to this Principle**  
 The area under application is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its pre-European vegetation extent remaining (Government of Western Australia 2013).

The application area is mapped as Beard Vegetation Association 177 (approximately 95 per cent of the application area) and 173 (approximately 5 per cent of the application area). These vegetation associations have approximately 99 per cent of their pre-European extent remaining in the Pilbara bioregion (Government of Western Australia 2013).

Digital imagery (Pearana 80cm Orthomosaic -Landgate 2007) indicates that the local area (40 kilometre radius) retains approximately 95 per cent vegetation. The Shire of East Pilbara contains approximately 99 percent of its pre-European vegetation (Government of Western Australia 2013).

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 above, the application is not at variance to this clearing principle.

	Pre-European (hectares)	Current Extent (hectares)	Remaining (%)	Extent in DEC Managed Lands (%)
<b>IBRA Bioregion</b>				
Pilbara	17 808 657	17 733 584	99	8
<b>Shire</b>				
Shire of East Pilbara	37 183 050	37 155 254	99	4
<b>Beard Vegetation Association in Bioregion</b>				
177	169 446	169 141	99	1
173	1 752 521	1 747 678	99	14

**Methodology** References:  
 Commonwealth of Australia (2001)  
 Government of Western Australia (2013)

GIS Databases:  
 - IBRA Australia  
 - Local Government Authorities  
 - Pearana 80cm Orthomosaic -Landgate 2007  
 - Veg Stats

**(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 at variance to this Principle**  
 The application area is within the DeGrey catchment. All rivers in the DeGrey catchment are seasonal and only flow after heavy rain (Global Gorundwater 2012a). The application area does not contain any naturally occurring waterbodies (Global Gorundwater 2012a). The application area intersects the Warri Warri Creek, a minor non-perennial watercourse, and appears to contain riparian vegetation.

The application is therefore at variance to this clearing principle.

The applicant has advised that the natural defined drainage features in the application area will not be modified by the development of an agricultural area, remaining intact for the duration of the project. All drainage lines will be excluded from the production areas and native vegetation buffer zones will be retained (Global Groundwater 2012a).

**Methodology** References:  
Global Groundwater (2012a)

GIS Databases:  
- Hydrography, linear  
- Pearana 80cm Orthomosaic -Landgate 2007

**(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**

Soils within the application area are predominantly red earthy loams and sandy earths. Subsoil depth and drainage are highly variable, with topsoil horizons ranging from moderately to highly permeable, and subsoils ranging from slowly to highly permeable. Topsoils range from slightly acid to slightly alkaline, and subsoils range from neutral to alkaline (Global Groundwater 2012a).

The application area is comprised of flat to slightly sloping alluvial plains, located on gently inclined slopes (less than 3 per cent incline) (DAFWA 2012) and flats (Global Groundwater 2012a). Rainfall within the application area is highly seasonal (Global Groundwater 2012a). Bare soil without vegetation cover within the application area is likely to cause both sheet and rill erosion during high intensity rainfall events (DAFWA 2012). The proposed clearing may cause land degradation in the form of soil erosion during seasonal rains (DAFWA 2012).

The vegetation cover of the irrigation area will be perennial pasture, which is thought to be sufficient ground cover to prevent soil erosion (Global Groundwater 2012a). The risk of land degradation within the application area is therefore likely to be short term, in the time between clearing and the establishment of crops. The risk of land degradation from soil erosion can be reduced by managing the timing of clearing and development operations to avoid the periods when high intensity rainfall is likely to occur, and by establishing and maintaining a good protective vegetative cover (DAFWA 2012).

Given the above, the application is not likely to be at variance to this clearing principle.

**Methodology** References:  
DAFWA (2012)  
Global Groundwater (2012a)

GIS Databases:  
- Rainfall, Mean Annual  
- Topography  
- 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 at variance to this Principle**

There are no conservation areas mapped within the local area (40 kilometre radius).

The application is therefore not at variance to this clearing principle.

**Methodology** GIS databases:  
- DEC Tenure

**(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 application area intersects the Warri Warri Creek, a minor non-perennial watercourse. The proposed clearing may therefore cause deterioration in the quality of surface water during seasonal rains, however these impacts are likely to be short term and minimal. All drainage lines will be excluded from the production areas and native vegetation buffer zones will be retained (Global Groundwater 2012a).

The application is therefore not likely to be at variance to this clearing principle.

**Methodology** References:  
Global Groundwater (2012a)



- GIS Databases:  
- Hydrography, linear  
- Pearana 80cm Orthomosaic -Landgate 2007

**(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 intersects the Warri Warri Creek, a minor non-perennial watercourse. The proposed clearing may therefore increase localised waterlogging during seasonal rains. Pastures will however provide increased groundcover and may stabilise soil resulting in decreased erosion by flood events (Global Groundwater 2012a). The risk of increased waterlogging is therefore likely to be short term, in the time between clearing and the establishment of crops.

Given the high percentage (approximately 95 per cent) of remaining vegetation within the local area (40 kilometre radius), the application is not likely to be at variance to this clearing principle.

**Methodology References:**  
Global Groundwater (2012a)

- GIS Databases:  
- Hydrography, linear  
- Pearana 80cm Orthomosaic -Landgate 2007

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

**Comments**

The area under application is subject to one native title claim. Both the claimants and their representing body have been notified of the application. To date no response has been received.

The application area falls within the Pilbara Surface and Groundwater Areas covered by the Rights in Water and Irrigation Act 1914. The Department of Water (DoW) considers that the proposed clearing is unlikely to have an impact on the quantity or quality of groundwater, provided clearing activities are conducted in accordance with DoW guidelines and advice (DoW 2012).

The Department of Agriculture and Food (DAFWA) considers that the proposed clearing may cause land degradation from soil erosion. DAFWA considers that this risk can be managed and supports this proposal (DAFWA 2012).

The applicant was issued a pastoral lease diversification permit from the Department of Regional Development and Lands, Pastoral Lands Unit, on 20 May 2013 (DRDL 2013).

The applicant has provided a detailed weed, nutrient and irrigation management plan (Global Groundwater 2012a; 2012b).

The applicant has advised that they do not require a licence to take water from the Department of Water, as they will use excess water from a nearby manganese mine site to irrigate crops. The applicant has provided documentation from Consolidated Minerals Pty Ltd which authorises Grenleigh Pty Ltd to utilise water from the nearby mine site that is excess to mine site requirements.

**Methodology References:**  
DAFWA (2012)  
DoW (2012)  
DRDL (2013)  
Global Groundwater (2012a)  
Global Groundwater (2012b)

- GIS Databases:  
- Native Title Claims  
- RIWI Act, Groundwater areas  
- RIWI Act, Surface water areas, Irrigation districts

**4. References**

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.  
DAFWA (2012) Comments on the application for a clearing permit CPS 5177/1 - Grenleigh Pty Ltd, Warrawagine Pastoral Lease. Department of Agriculture and Food, Western Australia. Received by the Native Vegetation Conservation Branch on 18/09/12 (A546771).  
DEC (2007-) NatureMap Species Report, created by guest user on 17/08/2012 (A651113).  
DoW (2012) Comments on Clearing Permit 5177/1 - Application to clear native vegetation under the Environmental Protection Act 1986. Department of Water, Western Australia. Received by the Native Vegetation Conservation Branch on 23/08/12 (A537175).



- DRDL (2013) Diversification Permit 120.13-002, Warrawagine Station, Crown Lease 386-1993, Pastoral Lease LA3144/1169, Permit for Agricultural Use (PE). Department of Regional Development and Lands, Western Australia. Received by the Native Vegetation Conservation Branch on 30/05/13 (A635383).
- DSEWPaC (2013a) *Calidris canutus* - Red Knot, Knot in Threatened Species and Ecological Communities. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available from: <http://www.environment.gov.au/sprat> [Accessed on 14/08/2013].
- Global Groundwater (2012a) Woodie Woodie Agriculture Project Nutrient and Irrigation Management Plan. Global Groundwater and Department of Agriculture, Western Australia. Received by the Native Vegetation Conservation Branch on 25/07/13.
- Global Groundwater (2012b) Woodie Woodie Trial Agriculture Project Weed Management Plan. Global Groundwater and Department of Agriculture, Western Australia. Received by the Native Vegetation Conservation Branch on 25/07/13.
- Government of Western Australia. (2013). 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- 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., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- WA Herbarium (2013) Florabase the Western Australian Flora, Species information, Department of Parks and Wildlife, Western Australia.

## 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)