



## **CLEARING PERMIT**

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

<b>Purpose Permit number:</b>	CPS 2997 / 1
<b>Permit Holder:</b>	Pastoral Management Pty Ltd
<b>Duration of Permit:</b>	23 May 2009 – 23 May 2014

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 development of an accommodation camp, associated access road and spray irrigation area for pastoral activities.
- 2. Land on which clearing is to be done**  
Part Lot 263 on plan 220164 (Pastoral Lease 1027, Mardie 6714)
- 3. Area of Clearing**  
The Permit Holder must not clear more than 70 hectares of native vegetation within the area hatched yellow on attached Plan 2997/1.
- 4. Clearing not authorised**  
Clearing is not authorised between December and April.
- 5. 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.
- 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.

### 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 in relation to the clearing of native vegetation authorised under this Permit:

- (a) the species composition, structure and density of the cleared area;
- (b) 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;
- (c) the date that the area was cleared; and
- (d) the size of the area cleared (in hectares).

#### **10. 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 9 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 23 February 2014, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.



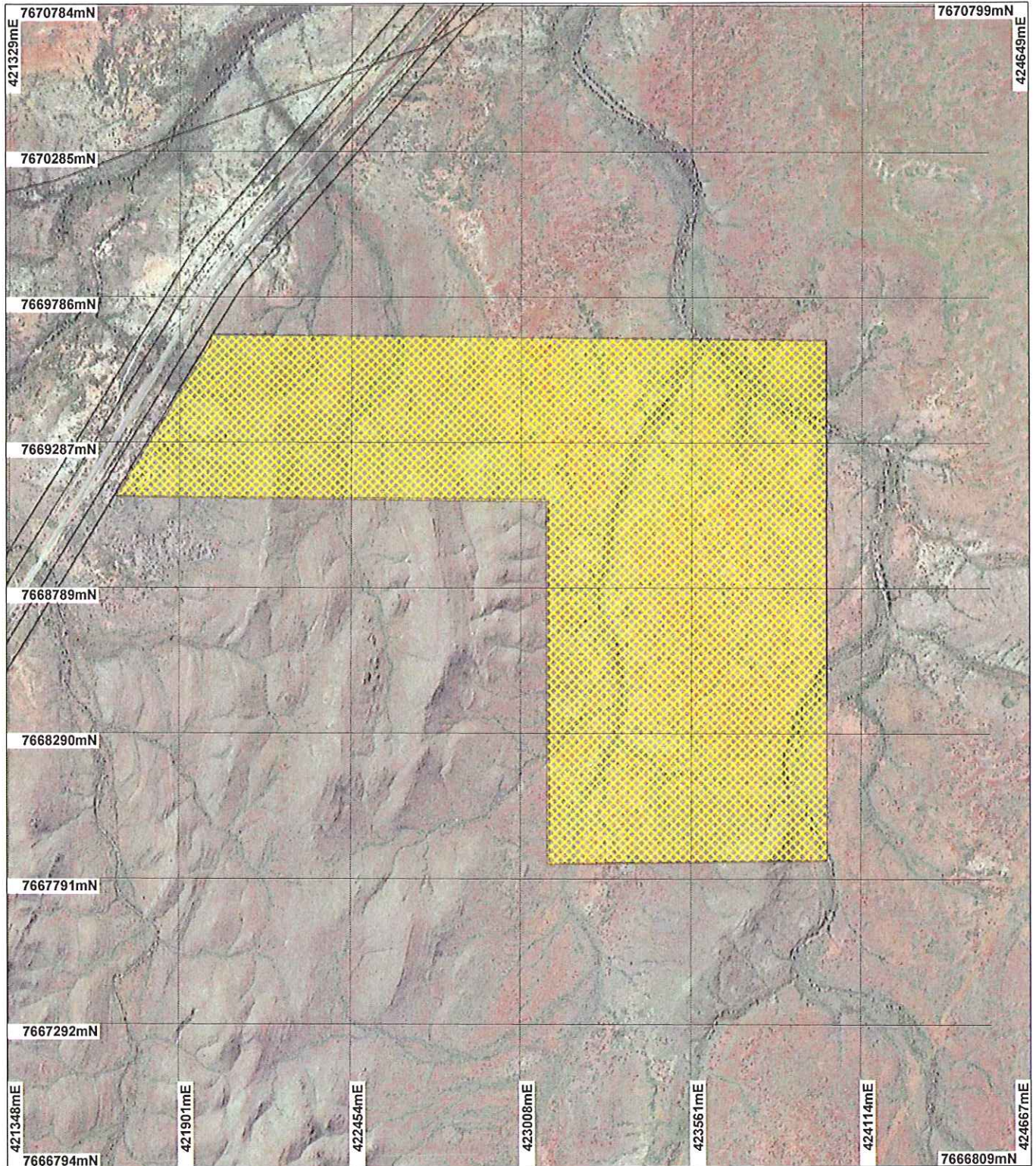
Keith Claymore  
A/ DIRECTOR  
NATURE CONSERVATION DIVISION

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

23 April 2009



# Plan 2997/1



## LEGEND

Clearing Instruments  
Cadastral  
Fortescue 1:4m Orthomosaic -



0 500 m

Scale 1:18320

(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

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.



Department of  
Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 2997/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Pastoral Management Pty Ltd

### 1.3. Property details

Property: PART LOT 263 ON PLAN 220164 ( MARDIE 6714)  
PART LOT 263 ON PLAN 220164 ( MARDIE 6714)

Local Government Area: Shire Of Roebourne

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70		Mechanical Removal	Building or Structure

## 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 Unit:	The proposal is to clear 70 ha of native vegetation for the purpose of constructing an accommodation camp, access road and spray irrigation area.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation was determined through aerial mapping (Fortescue 1.4m Orthomosaic - Landgate 1998) and a field flora and vegetation survey (Astron, 2009).
93 - Hummock grasslands, shrub steppe; kanji over soft spinifex			
157 - Hummock grasslands, grass steppe; hard spinifex, Triodia wiseana	The vegetation is in very good (Keighery, 1994) condition.		
	The vegetation is in very good (Keighery, 1994) condition.		

## 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 70 hectares of native vegetation in very good (Keighery, 1994) condition, for the purpose of constructing an accommodation camp, access road and spray irrigation area.

A desktop survey of the applied area identified no rare or priority flora within the survey area however reports submitted by the applicant identified that three priority flora species may occur within the applied area (Astron, 2009a). DEC considers that the proposed clearing is not likely to impact on any rare or priority flora species.

A nearby site survey identified the Australian Bustard and Lakeland Downs Mouse within property under application (Astron, 2009b).

There are no known Priority or Threatened Ecological Communities (PECs or TECs) within the local area (20km radius) however an onsite survey of an area north of the applied area noted that the tussock grassland vegetation types within the survey area may have conservation significance as they are analogous with other regions in the area currently recognised as Roebourne Plains coastal grasslands Priority 1 PEC (Astron, 2009b).

The local area (20km radius) retains approximately 90% native vegetation cover, given the above the clearing

as proposed may contain a high level of biological diversity in a local context and therefore may be at variance to this principle.

**Methodology**

**References:**

Astron (2009a)  
Astron (2009b)  
Keighery (1994)

**GIS Database:**

SAC Biodatasets - accessed 5 March 09  
Pre European Vegetation - DA 01/01  
Clearing Regulations, Environmentally Sensitive Areas 30 May 2005

**(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**

Several species of conservation significance have been previously recorded within a 20km radius of the application area. The fauna recorded include:

- \* *Mormopterus loriae cobourgiana* (Little North-western Mastiff Bat) - Priority 1;
- \* *Numenius madagascariensis* (Eastern Curlew) - Priority 4;
- \* *Lagostrophus conspicillatus* (Spectacled Hare-wallaby) - Priority 4;
- \* *Leggadina Lakedownensis* (Lakeland Downs Mouse (Kerakengai)) - Priority 4;
- \* *Pseudomys chapmani* (Western Pebble-mound Mouse) - Priority 4;
- \* *Ardeotis australia* (Australian Bustard) - Priority 4.

A flora and fauna survey of near by areas identified Australian Bustards and Lakeland Downs Mouse within Lot 263 (Astron, 2009b).

The fauna habitats within the proposed area to be cleared are well represented elsewhere within the local area (20km radius). The area to be cleared does not represent a fauna corridor and therefore the clearing will not remove an ecological linkage that is necessary for the maintenance of fauna.

Based on the above information, the proposed clearing is not likely to be at variance to this Principle as the vegetation under application is not likely to be significant habitat for native fauna in a local context.

**Methodology**

**References:**

Astron (2009b)

**GIS Database:**

SAC Bio Datasets accessed 9 March 2009  
Pre European Vegetation - DA 01/01  
Hydrography linear - DOW 13/7/06

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

**Comments**

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

There are no known records of rare flora within the local area (20 km radius).

Therefore the clearing as proposed is not likely to be at variance to this principle.

**Methodology**

**GIS Database:**

SAC Bio Datasets accessed 9 March 2009

**(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 (TECs) within the local area (20km radius).

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

**Methodology**

**GIS Database:**

SAC Bio Datasets accessed 9 March 2009



**(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			
	Pre-European	Current extent		Remaining in DEC managed Lands
		(ha)	(ha)	(%)
IBRA Bioregions**				
Pilbara		17,804,187	17,794,646	99.95
Shire*				
Roebourne		1,535,622	1,515,551	98.69
Beard Vegetation Complex**				
157				
- statewide		501,448	501,334	99.98
- in Pilbara Bioregion		198,633	198,518	99.94
93				
- statewide		3,044,291	3,044,242	100.00
- in Pilbara Bioregion		3,042,113	3,042,064	100.00

\* (Shepherd, 2007)

\*\* (Shepherd et al. 2001; Hopkins et al., 2001)

The local area (20km radius) retains approximately 90% native vegetation and the areas proposed to be cleared do not represent a fauna corridor.

Given the above, the applied area is not likely to be significant in an extensively cleared landscape and therefore is not likely to be at variance to this principle.

Methodology	References:
	Hopkins et al. (2001) Shepherd et al. (2001) Shepherd (2007)
Methodology	GIS Database:
	Interim Biogeographic Regionalisation of Australia - EA 18/10/00
	Local Government Authorities - DLI 8/07/04
	Pre European Vegetation - DA 01/01
Methodology	SAC Biodatasets - accessed 9 March 2009

**(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 area under application intersects a minor perennial watercourse in two places.
Comments	There are no mapped wetlands within 20km of the applied area.
	Therefore the clearing as proposed is at variance to this principle.
Comments	The applicant intends to apply for a licence to interfere with beds and banks from the Department of Water (CPS 2997/1 Application, 2009).

Methodology	References:
	CPS 2997/1 Application (2009)
Methodology	GIS Database:
	Hydrography linear - DOW 13/7/06
	Hydrography linear (hierarchy) - DoW 13/7/06

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

Comments	Proposal is at variance to this Principle
	The area under application is mapped as having soil types Gf1; Brown loams and earthy loams (Northcote et

al., 1980). The applied area is mapped as having 400mm of rain and evapotranspiration annually.

Clearing for the purpose of an accommodation camp and spray irrigation area has land degradation risks including water erosion, flooding and inundation (DAFWA, 2009).

Given the scale of the proposed clearing (70 ha) and the likelihood of clearing resulting in appreciable land degradation in the form of water erosion, waterlogging and flooding, the clearing as proposed is at variance to this principle.

As the purpose of clearing is for an accommodation camp, access road and spray irrigation area it is likely that some areas will be re-established with vegetation and other soils will be stabilised from building/structures or roads surface management.

The applicant has advised that clearing will not occur during the wet season in order to mitigate the potential for clearing to cause appreciable land degradation. In addition the applicant has advised that a flood management plan will be designed and implemented prior to clearing commencing (McAlinden, 2009)

**Methodology**    **References:**  
DAFWA (2009)  
McAlinden (2009)  
Northcote et al. (1980)

**GIS Database:**  
Acid Sulfate Soil Risk Map, Swan coastal Plain - DEC 07/08/06  
Average Annual Rainfall Isohyets - WRC 29/09/98  
Annual Evaporation Contours (Isopleths) - WRC 29/09/98  
Hydrogeology, statewide DOW 13/07/06  
Hydrographic catchments, catchments - DoW 01/06/07  
Hydrography, linear - DOW 13/7/06  
Salinity Risk LM 25m - DOLA 00  
Soils, Statewide DA 11/99  
Topographic contours statewide - DOLA and ARMY 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**  
There are two areas of conservation significance within the local area (20km radius), namely Coastal Region Exmouth Gulf to Mary Anne Island and Coastal Islands (Mary Anne to Regnard).  
  
The closest (mainland) conservation area is the Coastal Region Exmouth Gulf to Mary Anne Island (System 9 area) and is approximately 17.2km west of the applied area.  
  
Given the distance of the applied area to the closest area of conservation significance the clearing as proposed is not likely to be at variance to this principle.

**Methodology**    **GIS Database:**  
CALM Managed Lands and Waters - CALM 01/06/05  
Hydrography, linear - DOW 13/7/06  
Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02  
System 1 to 5 and 7 to 12 areas DEC 11/7/06

**(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 at variance to this Principle**  
The area under application intersects a minor non-perennial watercourse in two places.

Given that clearing may interfere with the flow of these watercourses and taking into account the likelihood of clearing resulting in land degradation (DAFWA, 2009), the clearing as proposed is at variance to this principle.

The applicant has advised that clearing will not occur during the wet season in order to mitigate the potential for clearing to cause appreciable land degradation. In addition the applicant has advised that a flood management plan will be designed and implemented prior to clearing commencing (McAlinden, 2009)

**Methodology**    **References:**  
DAFWA (2009)  
McAlinden (2009)



GIS Database:  
 Evapotranspiration Isopleths - WRC 29/09/98  
 Groundwater Salinity Statewide DoW 13/07/06  
 Hydrographic catchments, catchments - DoW 01/06/07  
 Hydrography, linear - DOW 13/7/06  
 Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05  
 Salinity Risk LM 25m - DOLA 00  
 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 at variance to this Principle**

The area under application occurs on a gentle slope (60m to 80m AHD, west to east).

The applied area can be prone to flooding from the Maitland/Fortescue rivers and can be inundated with water for a number of days or weeks (DAFWA, 2009).

The likelihood of areas being flooded is high due to cyclones and heavy rainfall in the wet season (DAFWA, 2009).

Given the above the clearing as proposed is at variance to this principle.

The applicant has advised that clearing will not occur during the wet season in order to mitigate the potential for clearing to cause appreciable land degradation. In addition the applicant has advised that a flood management plan will be designed and implemented prior to clearing commencing (McAlinden, 2009)

**Methodology**

**References:**

DAFWA (2009)  
 McAlinden (2009)

GIS Database:  
 Evaporation Isopleths - WRC 29/09/98  
 Hydrographic catchments, catchments - DoW 01/06/07  
 Hydrography, linear - DoW 13/7/06  
 Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05  
 Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The area under application is within the Pilbara Groundwater Rights in Water Irrigation Area and the area under application intersects a number of minor non-perennial watercourses therefore this proposal requires a beds and banks licence from the Department of Water.

There are 3 native title claims over the applied area. The applicant has advised that negotiations with the traditional land owners are ongoing (DOC77189).

The area under application falls within an area reported as being impacted by a waste water spill in February 2009.

The applied area is under a Pastoral Lease. The applicant is required to obtain a pastoral diversification permit for this proposal (PLB, 2009)

The applicant has advised that clearing will not occur during the wet season in order to mitigate the potential for clearing to cause appreciable land degradation. In addition the applicant has advised that a flood management plan will be designed and implemented prior to clearing commencing (McAlinden, 2009)

**Methodology**

**References:**

McAlinden (2009)  
 PLB (2009)

GIS Database:  
 Cadastre - Landgate Dec 07  
 Native Title Claims - LA 2/5/07  
 RIWI Act, Groundwater Areas - DoW 13/07/06  
 Town Planning Scheme Zones - MFP 31/08/98  
 Aboriginal Sites of Significance 26 April 2007



## 4. Assessor's comments

### Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principle (f), (g), (i) and (j), may be at variance to Principle (a) and is not likely to be at variance to the remaining clearing Principles.

## 5. References

- Astron (2009a) Application for a permit to clear native vegetation including Desktop Flora and Fauna assessment advice. prepared by Astron Environmental Services for CITIC Pacific Mining Management Pty Ltd, unpublished document. DOC76802.
- Astron (2009b) Extract from Vegetation, Flora and Fauna Survey report, Astron Environmental Services for CITIC Pacific Mining Management Pty Ltd, unpublished document. DOC75501.
- Department of Agriculture and Food (2009) Land Degradation Advice. Commissioner of Soil and Land Conservation. DEC TRIM Ref: DOC79557.
- 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.
- McAlinden (2009) Advice from D McAlinden on behalf of Pastoral Management Pty Ltd, Land degradation management advice, unpublished correspondence, DOC81789.
- 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.
- PLB (2009) Advice to assessing officer on diversification requirements, Pastoral Lands Board, Department of Planning and Infrastructure, DEC Trim Ref DOC80392.
- 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)