



## CLEARING PERMIT

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

<b>Purpose Permit number:</b>	CPS 4900/1
<b>Permit Holder:</b>	Millennium Minerals Ltd
<b>Duration of Permit:</b>	18 May 2012- 18 May 2024

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 extending the Nullagine Aerodrome runway.
- 2. Land on which clearing is to be done**  
Lot 16 on Deposited Plan 242702 (NULLAGINE 6758)
- 3. Area of Clearing**  
The Permit Holder must not clear more than 7.1 hectares of native vegetation within the area hatched yellow on attached Plan 4900/1.
- 4. Period in which clearing is authorised**  
The Permit Holder shall not clear any native vegetation after 18 May 2019.
- 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. 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 *Land Administration Act 1997* or any other written law.
- 7. 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

- 8. 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.

## 9. 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.

## 10. Fauna management

- (a) Two weeks prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* for the presence of active *Macrotis lagotis* (Greater Bilby) burrows.
- (b) Where active *Macrotis lagotis* (Greater Bilby) burrows are identified in relation to condition 10(a) of this Permit, the Permit Holder shall ensure that no clearing occurs within 50 meters of the identified active *Macrotis lagotis* (Greater Bilby) burrows, unless approved by the CEO.

## 11. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) Retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) Within six months following the completion of the Golden Eagle Satellite Deposit Project, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
  - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
  - (ii) ripping the ground on the contour to remove soil compaction; and
  - (iii) laying the vegetative material and topsoil retained under condition 11(a) on the cleared area(s).
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this Permit:
  - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 11(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 11(c)(ii) of this permit, the Permit Holder shall repeat condition 11(c)(i) and 11(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 11(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 11(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 11(c)(ii).

## 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 fauna management pursuant to condition 10 of this Permit, the location of each active burrow 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.
- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 11 of this Permit:
  - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
  - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.
  - (v) a copy of the environmental specialist's report.

### **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 February 2024, 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:

*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;

*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;

*local provenance* means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

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


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

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

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

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

**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*.



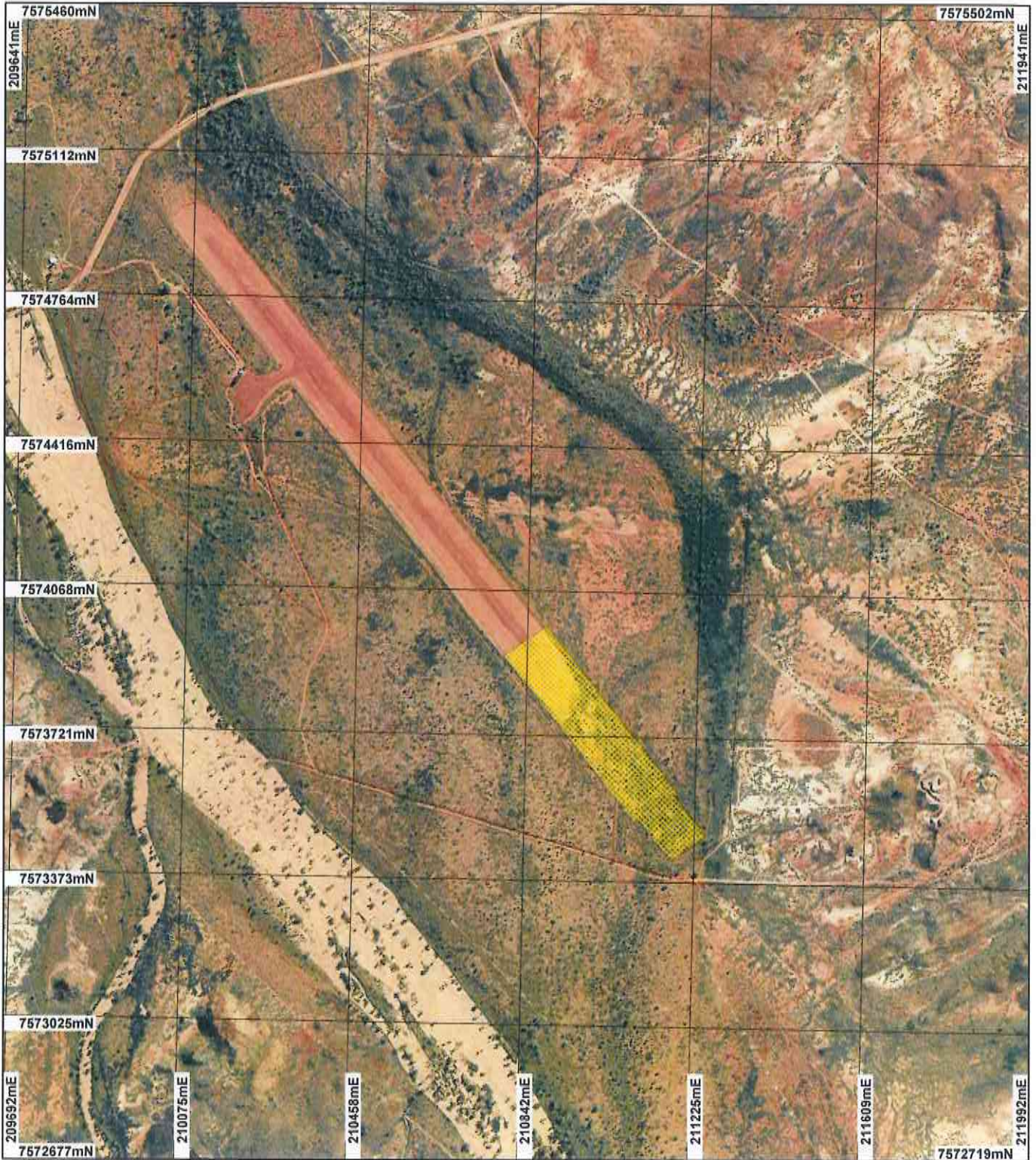
Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

26 April 2012

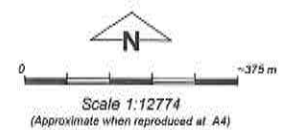


# Plan 4900/1



## LEGEND

- |                             |  |
|-----------------------------|--|
| <b>Clearing Instruments</b> |  |
| Areas Approved to Clear     | Recently added                             |
| Road Centrelines            | Coverage                                   |
| Cadastre                    | Nullagine 80cm Orthomosaic - Landgate 2007 |
| Image Index (cont)          |  |



Geocentric Datum Australia 1994  
 Note: The data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.  
 K. Faulkner  
 Date 26/4/12

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.



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





## 1. Application details

### 1.1. Permit application details

Permit application No.: 4900/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Millennium Minerals Ltd

### 1.3. Property details

Property: LOT 16 ON PLAN 242702 (NULLAGINE 6758)  
Local Government Area: Shire of East Pilbara  
Colloquial name:

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 26 April 2012

## 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 190: Hummock grasslands, sparse shrub steppe; <i>Acacia bivenosa</i> & <i>A. trachycarpa</i> over hard spinifex, <i>Triodia wiseana</i> , Very poor rocky country on gneiss (Shepherd, 2009).	The amended application is for the clearing of 7.1 ha within Lot 16 on Deposited Plan 242702, Nullagine for the purpose of extending the Nullagine Aerodrome runway to enable larger planes to land.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation condition and description was determined through a flora and vegetation survey submitted by the applicant (Mattiske Consulting, 2010).
	The vegetation under application consists of two plant communities:	To	
	1) Shrubland of <i>Acacia sabulosa</i> and <i>Acacia trachycarpa</i> over mixed grasses, with occasional emergent <i>Atalaya hemiglauca</i> on sandy loam on flats (the majority of the application area consists of this).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	
	2) Open woodland of <i>Corymbia candida</i> subsp. <i>dipsodes</i> and <i>Atalaya hemiglauca</i> over mixed <i>Acacia</i> spp. over <i>Triodia longiceps</i> on sandy-loam on flats.		
	These plant communities have been modified significantly within the airport area due to clearing and grazing activities.		

## 3. Assessment of application against clearing principles

### Comments

The application is to clear up to 7.1 hectares of native vegetation within Lot 16 on Deposited Plan 242702, Nullagine, for the purpose of extending the Nullagine Aerodrome runway to enable larger planes to land.

The local area is highly vegetated with most of the surrounding vegetation in similar condition as that under application.

The Declared Rare Flora (DRF) species *Lepidium catapycnon* has been recorded in the local area (20km) on the same soil and vegetation type and has the potential to occur within the area under application. However this species was not identified in two Level 2 flora surveys which were conducted in December 2010 and April 2011 following high summer rainfall (Mattiske Consulting, 2010). No DRF or priority flora species were identified within the airport expansion survey area (Mattiske Consulting, 2010).

The boundary of the priority 3 ecological community (PEC) 'Stony Saline Clay Plains of the Mosquito Land System' is mapped within the southern end of the application area. However, based on the compositional data, and soil and landform information supplied by Mattiske Consulting, this PEC is unlikely to be present in the area under application (DEC, 2012).

Seven species of conservation significant fauna have been recorded in the local area (20km radius) including *Dasyurus hallucatus* (Northern Quoll) and *Macrotis lagotis* (Greater Bilby) which are both listed as Rare or Likely to Become Extinct under the Wildlife Conservation Act 1950 and Endangered and Vulnerable respectively under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and the Priority 4 *Dasyarcus blythi* (Brush-tailed Mulgara).

A Level 1 vertebrate fauna reconnaissance survey including hand foraging for mammals and reptiles was conducted within the application area over 3 days in December 2010 and recorded 12 species of birds, 2 dragon species and old Greater Bilby diggings and burrows (Ninox Wildlife Consulting, 2011). Additional Greater Bilby survey work was conducted post significant summer rainfall in April 2011 and recorded an increase in bilby activity in the area with fresh burrows and diggings, mainly digging where *Acacia trachycarpa* occurred on sandy substrates (Ninox Wildlife Consulting, 2011).

In February 2012, BioLogic Environmental conducted a targeted survey for the Greater Bilby. This survey recorded seven instances of possible evidence (burrows and diggings) of the Greater Bilby, however the Greater Bilby was not physically present. No recent diggings or scats were found in the application area (BioLogic Environmental, 2012).

Since the time of the 2012 survey the applicant has reduced the clearing area and has consequently removed the majority of areas where evidence of Bilby's was observed. Although no recent Bilby activity was observed it is possible that Bilby's may make new burrows or return to old burrows between the time of the last survey and the time of clearing. Therefore, the requirement to inspect the application area for active burrows prior to clearing, and if found, to seek CEO approval to clear, will assist in mitigating the impacts to this species. Given the above, the application may be at variance to Principle (b).

It is noted the Department of Sustainability, Environment, Water, Populations and Communities (SEWPaC) requires the applicant to survey the area for the Greater Bilby prior to clearing and if found, a Greater Bilby Management Plan (the Plan) must be prepared (SEWPaC, 2012).

The flora and vegetation survey recorded two major weed species, *Cenchrus ciliaris* and *Aerva javanica*, within the survey area. Weed management should be undertaken to limit the spread of weeds.

The assessment of the application identified that the clearing may be at variance to Principle (b) and is not likely to be at variance to the remaining clearing principles.

#### Methodology

##### References:

BioLogic Environmental (2012)  
DEC (2012)  
Mattiske Consulting (2010)  
Ninox Wildlife Consulting (2011)  
SEWPaC (2012)

SAC Biodatabases (all accessed 29 February 2012):

- TEC/PEC Buffer
- TEC/PEC Boundary
- Hydrography linear
- WAHERB
- TPFL

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

##### Comments

The applicant is proposing to extend the existing Nullagine aerodrome by 400m to enable larger planes to land to service the existing Golden Eagle Project near Nullagine.

The Shire of East Pilbara (2010) approved the proposal to extend the Nullagine Aerodrome Runway subject to conditions on 17 December 2010.

The applicant referred the proposal (reference 2011/5855) to the Department of Sustainability, Environment, Water, Populations and Communities (SEWPaC) on 22 February 2011 who assessed the proposal under the EPBC Act. SEWPaC granted approval to Millennium Minerals Ltd on 17 January 2012 subject to 13 conditions. One of these conditions is the requirement to survey for the Greater Bilby prior to clearing and if found, to develop a Greater Bilby Management Plan to maximise the ongoing protection and long term conservation of the Greater Bilby. This Plan must be approved by the Commonwealth Minister prior to clearing (SEWPaC, 2012).



To offset the impacts to the Greater Bilby SEWPaC requires the applicant to fund the preparation of a Greater Bilby Protected Areas Report and provide \$60,000 each year for seven years to the DEC managed Pilbara Bilby Trust Fund (SEWPaC, 2012).

Seventeen Aboriginal Sites of Significance have been mapped in a 20km radius. An Aboriginal archaeological survey was conducted in November 2010 and identified 5 sites (Eureka, 2011). The applicant advised all Aboriginal Sites of Significance will be avoided.

The Department of Water (DoW) advises the area under application lies within a proclaimed surface and groundwater area under the Rights in Water and Irrigation Act 1914, however the proposed clearing is unlikely to have a significant impact on the quality or quantity of groundwater, provided activities are carried out in accordance with DoW advice (DoW, 2012).

The applicant advised any surface topsoils and vegetation recovered will be stored in low stockpiles for future rehabilitation of the aerodrome post mine site closure. Rehabilitation should be structured to encourage the return of fauna by providing micro-relief and dense vegetation cover and should be protected from introduced herbivores such as cattle (Ninox Wildlife Consulting, 2011).

#### Methodology

#### References:

DoW (2012)  
Eureka (2011)  
Ninox Wildlife Consulting (2011)  
SEWPaC (2012)  
Shire of East Pilbara (2010)

#### GIS Databases:

- Aboriginal Sites of Significance

## 4. References

- BioLogic Environmental (2012) Targeted Greater Bilby survey results and photos (DEC REF: A496856).  
DEC (2012) Species and Communities Branch advice on Priority Ecological Communities. Department of Environment and Conservation, Western Australia (DEC REF: A488918).  
DoW (2012) Advice for Clearing application CSP 4900/1, received 23/3/2012. Department of Water, Pilbara Region, WA (DEC REF A486430).  
Eureka (2011) Archaeological Work Area Clearance Survey of Nominated Mining Areas and Haul Roads East of Nullagine-Njama Native Title Claim, March 2011, Report prepared for Big Island Research Pty Ltd, Eureka Archaeological Research and Consulting, WA.  
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.  
Mattiske Consulting (2010) Assessment of the Flora and Vegetation on the Airstrip Expansion Area, prepared for Millennium Minerals Ltd, December 2010, Mattiske Consulting, Western Australia.  
Ninox Wildlife Consulting (2011) A Vertebrate Fauna Survey of Proposed Satellite Mining Areas, Near Nullagine Western Australia, prepared for Millennium Minerals Limited, Ninox Wildlife Consulting, WA.  
Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.  
Shire of East Pilbara (2010) Extension of Nullagine Airstrip Approval, dated 17 December 2011, Shire of East Pilbara, WA (DEC REF A476292).

## 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)