



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5907/1
Permit Holder:	Western Australian Land Authority TA LandCorp
Duration of Permit:	5 April 2014 – 5 April 2019

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 purposes of constructing roads and public works for the Karratha Health Campus and surrounding infrastructure.

2. Land on which clearing is to be done

Lot 1480 on Deposited Plan 213602 (Reserve 33666), Karratha
Lots 550 on Deposited Plan 60246, Pegs Creek
Lots 552 on Deposited Plan 60246, Pegs Creek
Lot 561 on Deposited Plan 74721, Pegs Creek
Lot 593 on Deposited Plan 71801 (Reserve 36458), Pegs Creek
Lot 1477 on Deposited Plan 213671 (Reserve 34405), Pegs Creek
Lots 4540 on Deposited Plan 189072 (Reserve 34129), Pegs Creek
Lot 4542 on Deposited Plan 189072 (Reserve 41594), Pegs Creek
Lot 4602 on Deposited Plan 192918 (Reserve 34405), Pegs Creek
Cossack Road reserve (PIN 11438788), Pegs Creek
Alexander Stephen Court road reserve (PIN 11438789), Pegs Creek
Unallocated Crown land (PIN 705526), Pegs Creek
Balmoral Road reserve (PIN 11441934), Millars Well

3. Area of Clearing

The Permit Holder must not clear more than 28.07 hectares of native vegetation within the area hatched yellow on attached Plan 5907/1.

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 right to access land under the *Land Administration Act 1997* or any other written law.

PART II –MANAGEMENT CONDITIONS

6. 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.

7. 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.

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 means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

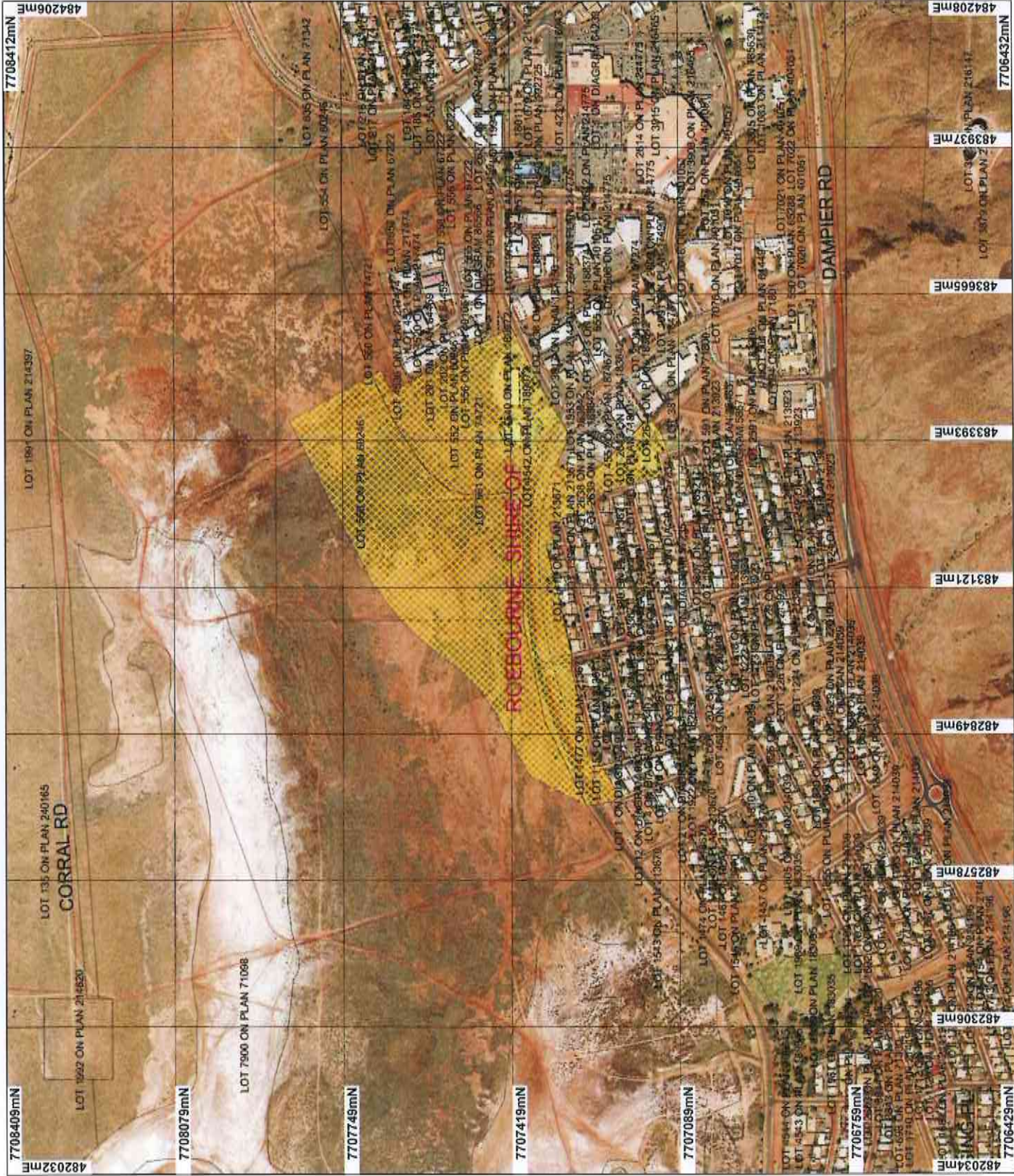


Jane Clarkson
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

6 March 2014

Plan 590711



LEGEND

- Right-of-Way
- Local Government / Clearing Instrument
- Areas Approved to Clear
- Damper and Exotic Orthostomat - Land

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



0 300m

Scale 1:10021

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been processed. This may result in geometric distortion or measurement inaccuracies.

[Signature] Date 6/3/14
Jane Clarkson

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.



Government of Western Australia
Department of Environment Regulation

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Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 5907/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Western Australian Land Authority TA LandCorp

1.3. Property details

Property: LOT 550 ON PLAN 60246 (Lot No. 550 BALMORAL PEGS CREEK 6714)
UNALLOCATED CROWN LAND (PEGs CREEK 6714)
LOT 561 ON PLAN 74721 (PEGs CREEK 6714)
LOT 552 ON PLAN 60246 (Lot No. 552 CRANE PEGs CREEK 6714)
LOT 1480 ON PLAN 213602 (House No. 20 WARAMBIE KARRATHA 6714)
LOT 4540 ON PLAN 189072 (Lot No. 4540 WARAMBIE PEGs CREEK 6714)
LOT 4542 ON PLAN 189072 (House No. 34 BALMORAL PEGs CREEK 6714)
ROAD RESERVE (MILLARS WELL 6714)
LOT 593 ON PLAN 71801 (House No. 9 HILLVIEW PEGs CREEK 6714)
LOT 1477 ON PLAN 213671 (Lot No. 1477 BALMORAL PEGs CREEK 6714)
LOT 4602 ON PLAN 192918 (Lot No. 4602 BALMORAL PEGs CREEK 6714)
ROAD RESERVEs (PEGs CREEK 6714)

Local Government Area: Shire of Roebourne

1.4. Application

Clearing Area (ha) 28.07 No. Trees Method of Clearing Mechanical Removal For the purpose of: Building or Structure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 6 March 2014

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
Mapped Beard Vegetation Association 589 is described as mosaic of short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe and soft spinifex (Shepherd et al, 2001).	The proposed clearing consists of 28.07 hectares of native vegetation within multiple lots, for the purposes of constructing a road and public works for the Karratha Health Campus and surrounding infrastructure.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The vegetation under application consists of tussock grassland/herbland of <i>Eragrostis setifolia</i> , <i>Sclerolaena bicornis</i> and <i>Dactyloctenium radulans</i> on patchy cracking clay plains. Also included are patches of <i>Atriplex bunburyana</i> and <i>Atriplex codonocarpa</i> , as well as patches of <i>Panicum decompositum</i> and <i>Streptoglossa tenuiflora</i> (GHD, 2013). The vegetation description and condition was determined via a report undertaken by GHD (2013).

3. Assessment of application against clearing principles

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

Comments **Proposal is not likely to be at variance to this Principle**
The proposed clearing consists of 28.07 hectares of native vegetation within multiple lots, for the purposes of constructing roads and public works for the Karratha Health Campus and surrounding infrastructure.

The vegetation under application consists of tussock grassland/herbland of *Eragrostis setifolia*, *Sclerolaena bicornis* and *Dactyloctenium radulans* on patchy cracking clay plains. Also included are patches of *Atriplex bunburyana* and *Atriplex codonocarpa*, as well as patches of *Panicum decompositum* and *Streptoglossa tenuiflora* (GHD, 2013).

Several priority flora species have been recorded in the local area (20 kilometre radius), however no flora of conservation significance was identified in a flora survey of the application area (GHD, 2013).

The flora survey of the application area identified areas of vegetation (approximately 3.62 hectares) that have some affinity with the 'Horseflat Land System of the Roebourne Plains' priority ecological community (priority 3) (GHD, 2013). The closest mapped occurrence of this community is located 14.6 kilometres west of the application area, and given that the mapped vegetation on site is consistent with the local area, which is extensively vegetated, it is not likely that the proposed clearing will impact on the conservation status of this priority ecological community.

Several fauna species of conservation significance have been recorded within the local area (20 kilometre radius), however given that the fauna habitats within the application area are well represented elsewhere within the extensively vegetated local and regional area, no loss of significant habitat for fauna is expected.

The Pilbara Bioregion and the Shire of Roebourne retain approximately 99 and 98 per cent pre-European vegetation respectively (Government of Western Australia, 2013).

The proposed clearing will increase the risk of weeds spreading into adjacent vegetated areas. Weed management practices will assist in mitigating this risk.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-Keighery (1994)
-GHD (2013)
-Government of Western Australia (2013)

GIS Databases:
-SAC Bio Datasets

(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 fauna species of conservation significance have been recorded within the local area (20 kilometre radius), including, *Numenius madagascariensis* (Eastern Curlew), *Dasyurus hallucatus* (Northern Quoll), *Liasis olivaceus* subsp. *barroni* (Pilbara Olive Python), *Burhinus grallarius* (Bush Stone-curlew), *Leggadina lakedownensis* (Short-tailed Mouse), *Pseudomys chapmani* (Western Pebble-mound Mouse) and *Notoscincus butleri* (Lined Soil-crevice Skink) (DEC, 2007-).

The area of proposed clearing has the potential to provide suitable habitat for several of the abovementioned species. However, the fauna habitats within the application area are well represented elsewhere within the extensively vegetated local and regional area, therefore it is not likely that the vegetation under application provides significant habitat for indigenous fauna.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-Government of Western Australia (2013)
-DEC (2007-)

GIS Databases:
-SAC Bio Datasets

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

Comments **Proposal is not at variance to this Principle**
There is no rare flora mapped within the local area (20 kilometre radius) and a flora survey of the application area did not identify the presence of any rare flora (GHD, 2013).

The proposed clearing is not at variance to this Principle.

Methodology References:
-GHD (2013)

GIS Databases:
-SAC Bio Datasets

(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 at variance to this Principle

No threatened ecological communities (TECs) have been mapped within the local area (20 kilometre radius) and no TECs were identified in a flora survey of the application area (GHD, 2013).

The proposed clearing is not at variance to this Principle.

Methodology References:
-GHD (2013)

GIS Databases:
-SAC Bio Datasets

(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 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).

The Pilbara Bioregion, Shire of Roebourne and Beard Vegetation Association (589) retain approximately 99, 98 and 99 per cent of their pre-European vegetation respectively. These figures are all significantly greater than the abovementioned 30 per cent threshold, therefore the vegetation under application is not within an extensively cleared area and is not considered a significant remnant.

Given the above the proposed clearing is not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,808,657	17,733,584	99	8
Shire*				
Shire of Roebourne	1,529,965	1,500,851	98	1
Beard Vegetation Association				
589	728,768	724,696	99	2

Government of Western Australia (2013)

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

GIS Databases:
-SAC Bio Datasets

(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

A major drain and a minor non perennial watercourse have been mapped within the application area.

The aerial imagery indicates that there is vegetation growing in association with these areas, therefore the proposed clearing is at variance with this Principle.

Methodology GIS Databases:
-SAC Bio Datasets
-Hydrography, linear
-Hydrography, hierachy

(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 soils within the application area have been mapped by Northcote et al (1960-68) as saline loams with shelly sands and small areas of calcareous earths and shallow loams.

Sandy soils are highly permeable and loams moderately to highly permeable, therefore the proposed clearing is not likely to cause appreciable land degradation in the form of water erosion.

Sandy soils are susceptible to wind erosion and given the size of the area under application there is the potential for the proposed clearing to result in wind erosion post clearing. However, given that the application area falls within an extensively vegetated landscape which will act as a buffer to the application area, it is unlikely that wind erosion will result in appreciable land degradation.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-Northcote (1960-1968)
-Keighery (1994)

GIS Databases:
-SAC Bio Datasets
-Hydrography, linear
-Hydrography, hierachy

(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 closest conservation reserve to the application area is Murujuga National Park which occurs approximately 9.8 kilometres north west of the application area.

Given the distance of the application area to this reserve, it is not likely that the proposed clearing will impact on the environmental values of this conservation area.

The proposed clearing is not likely to be at variance to this 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 may be at variance to this Principle**

A major drain and a minor non perennial watercourse have been mapped within the application area.

Groundwater salinity mapped within the application area is between 1000 and 3000 milligrams per litre (brackish). Given this relatively low salinity level it is considered that the proposed clearing will not lead to a perceptible rise in the watertable and thus an increase in groundwater salinity levels.

The abovementioned watercourse will flow after major rainfall, therefore the proposed clearing may cause short term issues with surface water sedimentation. However, these issues are likely to be minimal given the non-perennial nature of the watercourse.

The proposed clearing may be at variance to this Principle.

Methodology GIS Databases:
-SAC Bio Datasets
-Hydrography, linear
-Hydrography, hierachy
-Groundwater Salinity, Statewide

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Given the presence of highly permeable Sandy soils and moderately permeable loams on site, it is not likely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Databases:
-SAC Bio Datasets
-Hydrography, linear
-Hydrography, hierachy

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

Comments

The proposed works form part of a State Government initiative to develop Karratha, including the infill of existing areas and support for the expansion of current residential and industrial zones. The proposed works involve extensions to existing roads to allow better access through the Karratha town centre, and the development of additional land for the city centre expansion to the north of the existing town centre (GHD, 2013).

The proponent has advised that the proposed works will require design approval from the Shire of Roebourne. The Shire of Roebourne has not yet issued this approval and has advised that LandCorp are authorised to conduct Infrastructure Works within the Karatha City Centre Precinct in accordance with designs approved by the Shire for roads, drainage, landscaping and irrigation (Shire of Roebourne, 2013).

The application area is zoned 'parks', 'drainage and recreation', 'city centre', 'district roads' and 'local roads' under the town planning scheme.

The application area falls within the Pilbara Rights in Water and Irrigation (RIWI) 1914 Surface Water and Groundwater Areas. The Department of Water (DoW) has advised that the proposed clearing does not interfere with any waterways assessed under the RIWI Act 1914 and a surface water licence or bed and banks permit will not be required. It is further advised that any groundwater extraction is subject to licensing (DoW, 2014).

The application area is within the Ngarlumu People and Ngarluma/Yindjibarndi registered native title claim areas. Notification of this clearing permit application was made to these claimants and their representative, the Yamatji Marpa Aboriginal Corporation. No response has been provided.

No submissions from the public have been received for the proposed clearing.

Methodology

References:

- DoW (2014)
- GHD (2013)
- Shire of Roebourne (2013)

GIS Databases:

- Town Planning Scheme Zones

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Dec (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dec.wa.gov.au/>. Accessed February 2013.
- DoW (2013) Rights in Water and Irrigation Area advice for CPS 5907/1. Department of Water, Western Australia. DER Ref A707796.
- GHD (2013) Report for Karratha City Centre Infrastructure Works - Stage 2. Additional Information for Clearing Permit Application CPS 5907/1. DER Ref A702461).
- 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.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P., 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 Roebourne (2014) Additional information for Clearing Permit Application CPS 5907/1. DER Ref A731848.