



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5166/1
Permit Holder:	Futura Asset Pty Ltd
Duration of Permit:	18 January 2013 – 31 December 2015

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 pivot irrigation, access tracks and construction of sheds.

2. Land on which clearing is to be done

LOT 1539 ON PLAN 69939 (Pastoral Lease CL155/1974) (Eighty Mile Beach 6725)

3. Area of Clearing

The Permit Holder must not clear more than 210 hectares of native vegetation within the area hatched yellow on attached Plan 5166/1.

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.

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:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

8. 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.

9. Control of Permitted Species

At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any species permitted to be grown under a Pastoral Diversification Permit, issued under the *Land Administration Act 1997*, which are growing within a 100 metre buffer of each pivot area.

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 declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*; or
- (b) published in the Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.

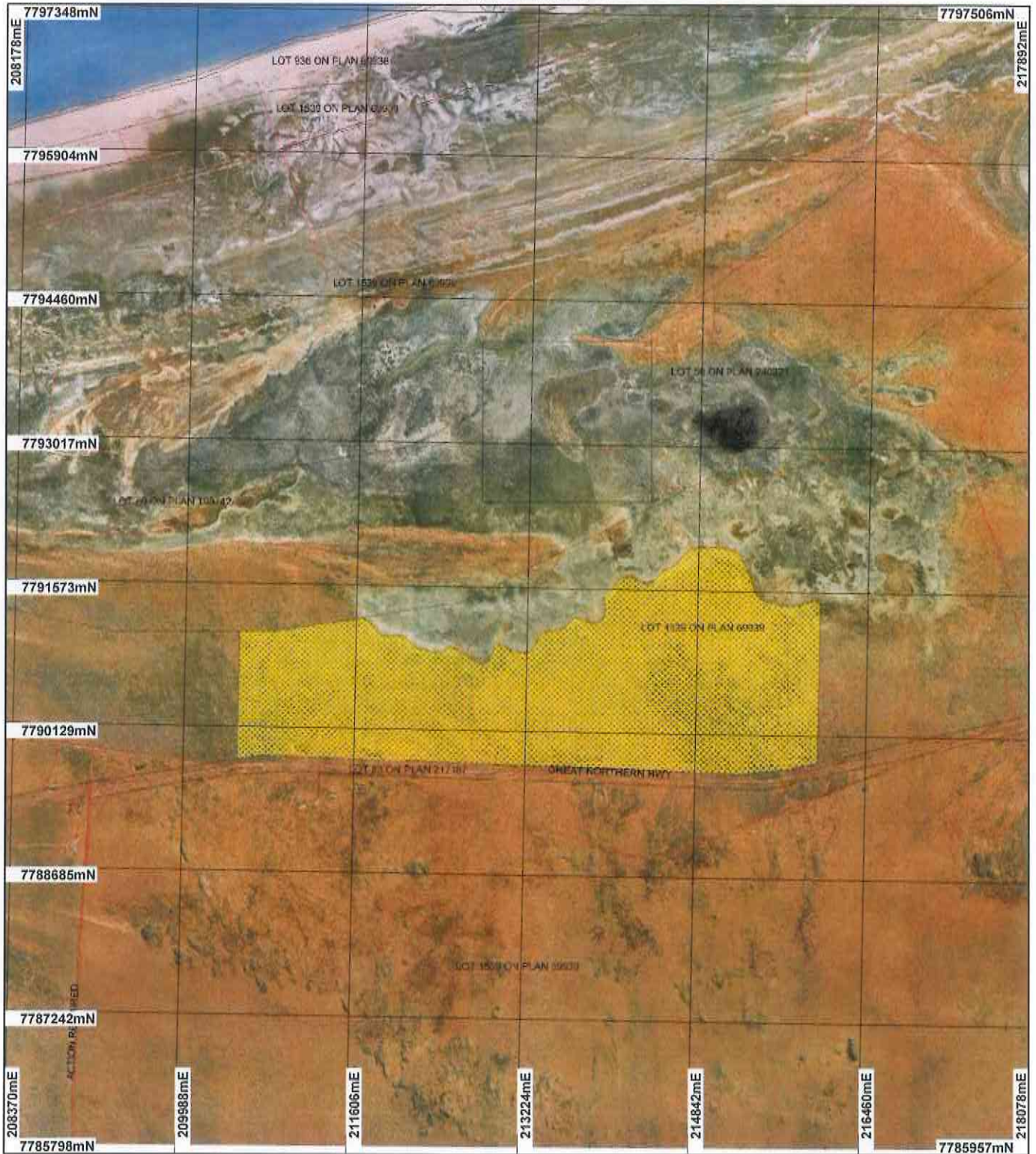


M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

27 December 2012

Plan 5166/1



LEGEND

- Road Centrelines
- Clearing Instruments
- Areas Approved to Clear
- Cadastre for labelling
- Shoanta 50cm Orthomosaic - Landgate 2004



0 1.5 km

Scale 1:53306

(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 27/12/12
M Warnock

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.: 5166/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Futura Asset Pty Ltd

1.3. Property details

Property: LOT 1539 ON PLAN 69939 (House No. 44 GREAT NORTHERN EIGHTY MILE BEACH 6725)
Local Government Area: Shire of Broome
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
210		Mechanical Removal	Cropping

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 27 December 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 Vegetation Association - No. 32: Shrublands, pindan; acacia shrubland with scattered low trees over <i>Triodia</i> spp (Shepherd et al, 2001).	This application proposes to clear 210 hectares of native vegetation within a larger footprint (833 hectares) for the purpose of pivot irrigation, access tracks and construction of sheds.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition obtained from Commissioner of Soil and Land Conservation (CSLC, 2011a), photographs supplied by the proponent and aerial imagery.

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 application proposes to clear 210 hectares of native vegetation within a larger footprint (833 hectares) within Lot 1539 on Deposited Plan 69939, Eighty Mile Beach for the purpose of pivot irrigation, access tracks and construction of sheds.

The local area (20 kilometre radius) is well vegetated containing approximately 95 percent vegetation cover. The application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

Commissioner of Soil and Land Conservation (CSLC) advice received for a similar clearing purpose on the same land parcel indicates the local area has a history of being stocked with cattle, with a moderate level of grazing pressure. The vegetation is rated to be in a good range condition (equivalent to Keighery's 1994 scale of 'very good condition') (CSLC, 2011a and 2011c).

Two priority flora species have been recorded within the local area. *Acacia* sp. (P3) and *Keraudrenia* sp. (P3) are located approximately 12 and 13 kilometres west of the application area respectively on the same vegetation and soil type. It is possible these species may be present onsite, however the historical grazing pressures is likely to impacted the species long term survival within the area under application. These species have been recorded at a number of sites within the Local Government Areas Broome, Derby, West Kimberly and East Pilbara (WAH, 1998-2011) and therefore the proposed clearing is not likely to impact on their conservation status.

Two fauna species Bilby (*Macrotis lagotis*) and Northern Marsupial Mole (*Notoryctes caurinus*), classified as rare or likely to become extinct (Wildlife Conservation Act 1950) have been recorded within a 20 kilometre

radius. The fauna habitats within the area proposed to be cleared are well represented elsewhere within the local and regional area, and no significant loss of habitat for fauna indigenous to Western Australia is expected.

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

Methodology References:
- CSLC (2011a and 2011c)
- Keighery (1994)
- WAH (1998-2011)

GIS data:
- SAC Biodata set accessed September 2012

(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**
Two fauna species classified as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 20 kilometre radius of the application area, being the Bilby (*Macrotis lagotis*) and Northern Marsupial Mole (*Notoryctes caurinus*) (DEC 2007-).

It is noted that the vegetation within the local area (20 kilometre radius) has an altered structure as a result of moderate grazing pressure (CSLC, 2011a), however the fauna habitat within the areas proposed to be cleared are well represented elsewhere within the local and regional area. The proposed clearing will not sever any ecological linkages necessary for the maintenance of fauna.

Given the above, the vegetation under application is not likely to be of significant habitat for these fauna species.

Methodology References:
- CLSC (2011a)
- DEC (2007-)

GIS data:
- SAC Biodata set accessed September 2012

(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**
No records of rare flora have been identified within the local area (20km).

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

Methodology GIS data:
- SAC Biodata set accessed September 2012

(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**
No records of threatened ecological communities have been identified within the area under application, or within the local area (20km radius).

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

Methodology GIS data:
- SAC Biodata set accessed September 2012

(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 Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 100 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2011).

The vegetation under application is mapped as Beard Vegetation Associations 32, which has approximately 99 per cent of their Pre European extent remaining in the Dampierland bioregion (Government of Western Australia 2011).

Digital imagery (Shoonta 50cm Orthomosaic - Landgate 2004) indicates that the local area (20km radius) surrounding the area under application retains approximately 95 per cent vegetation cover.

Given the vegetation representation within the local area the vegetation under application is not considered to be significant as a remnant in an extensively cleared landscape.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Dampierland	8,345,172.68	8,321,243.27	99.71	1.06
Shire*				
Shire of Broome	5,469,435.83	5,436,145.90	99.39	0.89
Beard Vegetation Association in Bioregion*				
32	244,296.02	244,264.48	99.99	0%

*Government of Western Australia (2011)

Methodology References:
- Government of Western Australia (2011)

GIS Databases:
- Pre-European vegetation
- Shoonta 50cm - Orthomosaic - Landgate 2004

(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**
The application area is approximately 5.6 kilometres from Eighty Mile Beach a RAMSAR Wetland. ANCA Wetland, Eighty Mile Beach System is located approximately 4.5 kilometres north of the application area.

The wetlands are sufficiently distanced from the proposed clearing that their environmental values are unlikely to be impacted.

No rivers, creeks or other defined water courses occur within the areas under application, or within the local area (20 kilometre radius). Therefore the vegetation under application is not likely to be riparian.

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

Methodology GIS data:
- ANCA
- Hydrography, linear
- RAMSAR
- Biodata set accessed September 2011

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

Comments **Proposal may be at variance to this Principle**
The area under application has been mapped as soil type Lh1 which Northcote et al (1960 - 1968) describes as coastal plains mainly beyond marine flooding influence: main soils are pedal calcareous earths with some associated highly calcareous earths. On the seaward side are firstly samphire flats and then bare saline mud. Calcareous dunes commonly occur on the seaward edge of the plains.

Previous land degradation advice received from Commissioner of Soil and Land Conservation for a pivot irrigation project within the same land parcel suggests that the large scale of clearing for pivot irrigation may result in wind erosion. However, this could be managed if the pivot areas are irrigated. Further, should the pivot areas be no longer utilised, vegetation is likely to quickly establish ensuring landscape stability (CSLC, 2011a and 2011c).

There is no defined surface drainage on the areas proposed to be cleared or within the local area (20 kilometre radius) so very little channelled runoff from heavy rainfall events would occur. The site is located on flat country that generally has a slope of less than 0.5 percent. There is very little overland flow due to the porous nature of the soils and the flat topography (CSLC, 2011a).

However, it is possible surface runoff and soil erosion could occur under intense rainfall conditions that the

region experiences with some frequency. With the adoption of minimum cultivation and retention of stubbles, the soil erosion risk can be managed (CSLC, 2011a).

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

- Methodology** References:
- CSLC (2011a and 2011c)
-Northcote et al (1960-1968)
- GIS Databases:
- 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 likely to be at variance to this Principle**
The application area is approximately 5.6 kilometres from Eighty Mile Beach, RAMSAR Wetland. ANCA Wetland, Eighty Mile Beach System is located approximately 4.5 kilometres north of the application area
- Given this distance to these areas, it is unlikely that the clearing as proposed will have a significant impact on these conservation areas.
- Given the above, the proposal is not likely to be at variance to this principle.

- Methodology** GIS data:
-ANCA, Wetlands
-DEC Tenure
-RAMSAR, Wetlands

(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 area under application is within the Canning-Kimberley Groundwater sub area, proclaimed under the Rights in Water and Irrigation (RIWI) Act 1914.
- Previous Department of Water (DoW) advice received for a pivot irrigation project, on the same land parcel as this proposal, indicates the removal of the existing shallow-rooted vegetation, combined with the fact the application area lies over sandstone aquifers, is unlikely to cause deterioration in groundwater quality (DoW, 2011a and 2011b). Current DoW (2012a) advice supports this.
- Previous Commissioner of Soil and Land Conservation advice received for the pivot irrigation proposal within the same land parcel, suggests clearing could potentially expose the disturbed areas to soil erosion, and hence a decrease in surface water quality, if the land is left bare. This is due to a combination of the sandy texture of the soil and the gentle slopes encountered on the site. However, with the adoption of minimum cultivation and retention of stubbles, the soil erosion risk will be manageable (CSLC, 2011a and 2011c).
- Given the above, the proposal to clear is not likely to be at variance to this principle.

- Methodology** References:
- CSLC (2011a and 2011c)
- DoW (2011a and 2012a)
- GIS data:
- Biodata set accessed September 2012

(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 area under application is relatively flat and comprises red sandy-earth soils that are well drained with high infiltration rates (CSLC, 2011a).
- Given the above, the proposal to clear is not likely to be at variance to this principle.

- Methodology** References:
- CSLC (2011a)
- GIS data:
- Biodata set accessed September 2012

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

Comments

Futura Asset Pty Ltd has applied for 7.5GL/annum of groundwater, and an allocation sufficient for Stage 1 (300,00kl/annum) plus stock water requirements has been issued. The remaining allocation is held in reserve pending an ongoing development and assessment process (Groundwater Consulting Services Pty Ltd 2012).

DoW (2012a) has advised they are satisfied that the proposed clearing of 210 hectares is unlikely to have an impact on the quality or quantity of groundwater. The application is located within the Canning/Kimberley groundwater area, as proclaimed under the Rights in Water and Irrigation Act (RIWI) 1914.

DoW (2012b) granted a Licence to take water under section 5C of the RIWI Act for taking of water for Irrigation up to 210 hectares and stock watering.

With regards to weeds (sorghum crop species has been selected) and nutrient spread, previous advice from the Commissioner of Soil and Land Conservation suggested that it is unlikely sorghum will spread beyond the pivot area as it can't persist without regular water and fertiliser. Given the soil type and soil structure the spread of nitrogen and phosphate fertilisers either by surface or the watertable should be negligible (CSLC, 2011b).

The applicant has submitted an application for a diversification permit to grow irrigated sorghum, maize and forage oats over the area subject to the native vegetation clearing permit application. The Department of Agriculture and Food (DAFWA)(2010) have listed these species as permitted non indigenous plant species and as being suitable for irrigated production. These species are considered to be lowest risk to the environment and should be suitable for most circumstances. The applicant has also applied to grow rhodes grass which DAFWA (2010) has listed as presenting a risk in certain circumstances or not being assessed for cultivation in Western Australia, risks may be manageable depending upon the specific circumstances; such as soil fertility, rainfall and proximity to wetlands or river systems

An application for a diversification permit has been submitted to the Department of Regional Development and Lands (Groundwater Consulting Services Pty Ltd).

An Indigenous Land Use Agreement is in place (register WI2010/26).

No public submissions have been received.

Methodology

References:

- CSLC (2011b)
- Department of Agriculture and Food (2010)
- DoW (2012a)
- DoW(2012b)
- Groundwater Consulting Services (2012)

4. References

- CSLC (2011a), Commissioner of Soil and Land Conservation; Land Degradation Advice Report for clearing permit application CPS 4390/1 received 28/06/2011; Department of Agriculture and Food Western Australia (DEC Ref. A409109)
- CSLC (2011b), Commissioner of Soil and Land Conservation; Land Degradation Advice Report for clearing permit application CPS 4207/1 received 25/03/2011; Department of Agriculture and Food Western Australia (DEC Ref. A378908).
- CSLC (2011c), Commissioner of Soil and Land Conservation; Land Degradation advice for clearing permit application CPS 4563/1 received 27/09/2011; Department of Agriculture and Food Western Australia (DEC Ref. A435077).
- Department of Agriculture and Food (2010) Non indigenous plant species lists for Western Australian rangelands.
- DEC (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. (Accessed September 2012)
- DoW (2011a), Department of Water; water extraction from bore advice report for clearing permit application CPS 4390/1 received 6/7/2011; (DEC Ref. A410272).
- DoW (2011b), Department of Water; water extraction advice for clearing permit application CPS 4563/1 received 12/09/2011; (DEC Ref. A430252).
- DoW (2012) Advice for Clearing Permit CPS 5166.1. Department of Water. Western Australia (DEC Ref. A537201)
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Groundwater Consulting Services Pty Ltd (2012), Application for a permit to clear native vegetation. (CPS 5166/1; DEC Ref A524943).
- 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.

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)