



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 5204/1

File Number: DEC6754

Duration of Permit: 19 October 2012 to 19 October 2014

PERMIT HOLDER

Numans Group Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 44 on Plan 181724 (NEWMAN 6753)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 11.7 hectares of native vegetation within the area hatched yellow on attached Plan 5204/1.

CONDITIONS

1. Vegetation management

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse* or *wetland* within and/or adjacent to the area cross-hatched yellow on Plan 5204/1.

2. Weed control

- (a) 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*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under 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;

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

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*.

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.

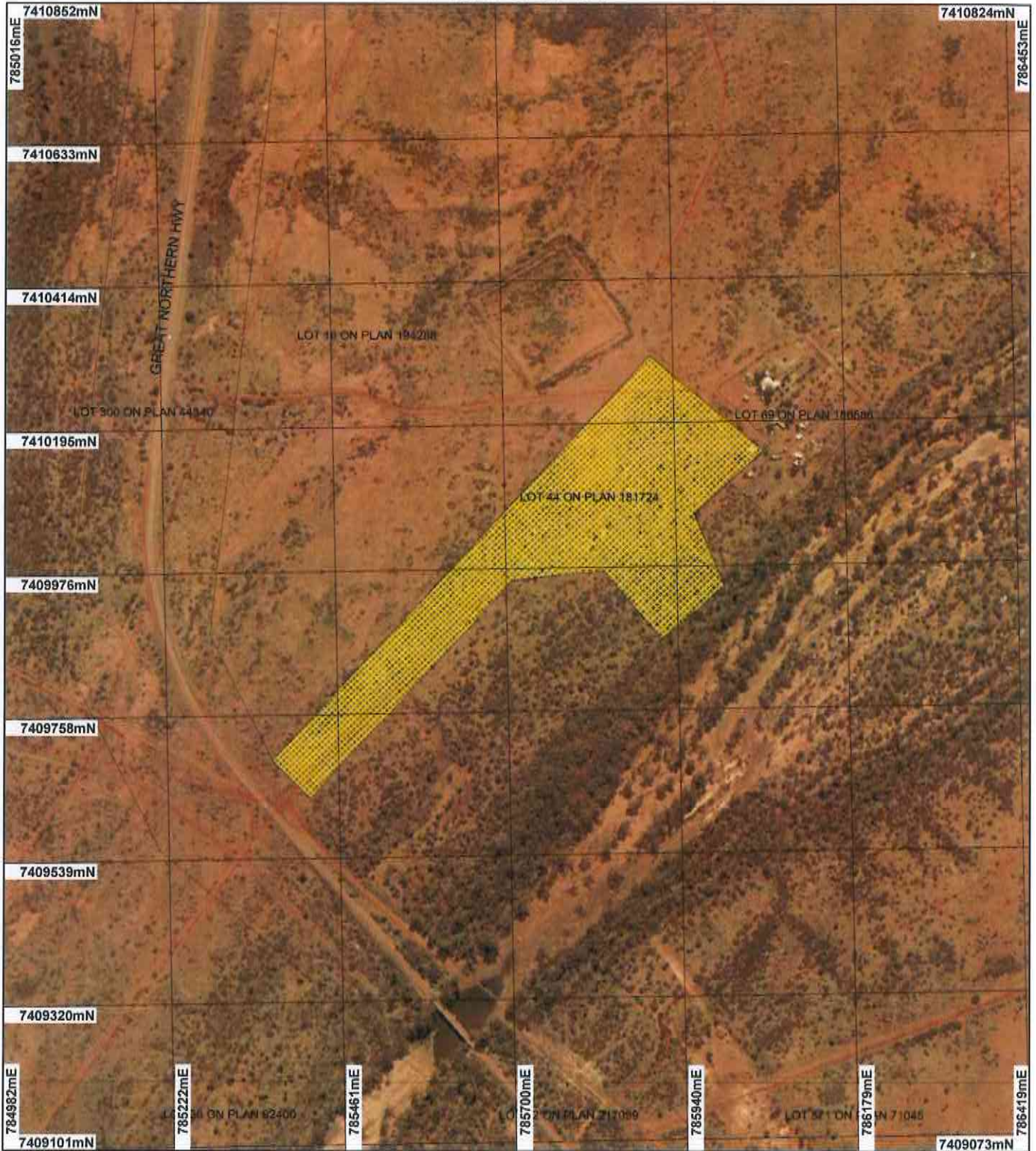


Roxane Shadbolt
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

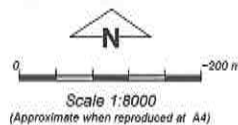
27 September 2012

Plan 5204/1



LEGEND

- | | |
|-----------------------------|---|
| Clearing Instruments | Towns |
| Areas Approved to Clear | Cadastre for labelling |
| Road Centrelines | Newman 1.4m Orthomosaic - Landgate 2003 |
| Cadastre | |



Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

R. Shadbolt 27/9/12
 Roxane Shadbolt Date

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.



1. Application details

1.1. Permit application details

Permit application No.: 5204/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Numans Group Pty Ltd

1.3. Property details

Property: LOT 44 ON PLAN 181724 (Lot No. 44 GREAT NORTHERN NEWMAN 6753)

Local Government Area: Shire of East Pilbara

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 27 September 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 29: Sparse low woodland; mulga, discontinuous in scattered groups (Shepherd et al. 2001; Hopkins et al. 2001).	The proposed clearing of 11.7ha is for the purpose of constructing a caravan park and accommodation village. The application area consists of hummock grasslands and River Gum woodland along the southern boundary (EIS, 2008). Weed species such as <i>Cenchrus ciliaris</i> (buffel grass) are abundant within the application area (EIS, 2008).	Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation within the application area was assessed through aerial photography and the Vegetation Management Plan by VDM Environmental regarding the application area (2008).

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 proposal is for the clearing of 11.7 hectares for the purpose of constructing a caravan park and accommodation village. The area to be cleared consists of Beard vegetation association 29 of which there is approximately 99 per cent of the Pre-European extent remaining (Government of Western Australia 2011). The vegetation on site has obvious signs of disturbance and the condition of the vegetation is classified as degraded (Keighery, 1994). The application area consists of hummock grasslands and River Gum woodland along the southern boundary abutting the Fortescue River (EIS, 2008). Weed species *Cenchrus ciliaris* (buffel grass) is abundant in the application area (EIS, 2008).

There are a number of weeds (including buffel grass) common to the Pilbara region which could be introduced to the site and surrounding areas as a result of this proposal. Strategies to reduce the risk of introduction and spread of weeds should be undertaken. Stockpiling of topsoil in a position away from the Fortescue River will also require management for weeds until it is required for rehabilitation activities.

Given the high extent of vegetation remaining, the application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

Based on the above, the proposed clearing is not likely to be at variance to this principle.

Methodology References:
- EIS (2008)
- Keighery (1994)
- Government of Western Australia (2011)
GIS Datasets:
- SAC Biodatasets - accessed 05/09/2012
- Newman 1.4m Orthomosaic - Landgate 2003

(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**
Fauna habitats within the proposed area to be cleared are well represented elsewhere within the local and regional area with 90% of pre-European vegetation remaining in the local area. 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.

The majority of the vegetation in the Newman area (Sparse low woodland; mulga, discontinuous in scattered groups) is in excellent (Keighery 1994) condition. Given the proposed clearing (11.7ha) consists of previously cleared and degraded vegetation (Keighery 1994) it is unlikely that the proposed clearing will have impact on significant habitat for fauna indigenous to Western Australia and therefore is not likely to be at variance to this principle.

Methodology References:
Keighery (1994)
GIS Datasets:
- Threatened Fauna, SAC Bio Dataset - accessed 04/09/2012
- Newman 1.4m Orthomosaic - Landgate 2003

(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 within a 10km radius of the application area.

A site visit conducted by VDM Environmental found no DRF within the application area (EIS, 2008).

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

Methodology References:
- EIS (2008)
GIS Datasets:
- SAC Biodatasets - accessed 05/09/2012

(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**
There is one threatened ecological community (TEC) mapped within the local area (10km radius). Ethel Gorge Aquifer Stygobiont Community is classified as Endangered and is found within the Fortescue River underground water system, surrounding the application area to the west and to the north, within 1km.

Stygofauna are animals that live permanently in the underground water system (DEC 2012a). They include crustaceans, fish, worms, snails, mites and insects, living in a range of groundwater habitats from tiny spaces between sand grains to pools and streams in caves. Stygofauna play a significant role in maintaining water quality. They act as a natural 'filter', regulating the concentration of material in the groundwater and also keeping the water flowing by maintaining spaces between soil particles (DEC 2012a). Changes in water levels, contamination of groundwater and compaction from heavy equipment all pose significant threats to the Endangered community. Many of these species are endemic to the Pilbara, not found anywhere else in the world (DEC 2012a).

The clearing of the vegetation under application is unlikely to cause any direct impacts to this TEC as the clearing of shallow rooted vegetation occurring within the area proposed to be cleared is unlikely to impact the hydrology of the area (DEC 2012a).

The proposed clearing is unlikely to have a direct impact upon the threatened ecological community and is therefore not likely to be at variance to this principle.

Methodology References:

- DEC (2012a)
- Keighery (1994)
- GIS Datasets:
- SAC Biodatasets - accessed 05/09/2012
- Newman 1.4m Orthomosaic - Landgate 2003

(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

Approximately 99 per cent of the Pre-European vegetation remains in the IBRA Gascoyne bioregion, Augusta subbioregion, Shire of East Pilbara and Beard Vegetation Association 29, all within which this proposal is located (Shepherd et al., 2001).

Given the high vegetation representation within the local and regional area and the degraded vegetation condition (Keighery, 1994) of the application area, it is not considered to be a significant remnant of native vegetation within an extensively cleared area.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Gascoyne	18,075,219	18,067,441	99	10
Shire*				
Shire of East Pilbara	37,183,051	37,155,255	99	4
Beard Vegetation Association in Bioregion*				
29	3,802,459	3,799,635	99	8

* Government of Western Australia (2011)

Methodology

- References:
- Government of Western Australia (2011)
 - Keighery (1994)
 - Shepherd et al (2001)
- GIS Datasets:
- Pre-European Vegetation

(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 southern boundary of the application area is adjacent to the Fortescue River. There is a very low topographical relief from the application area into the Fortescue River.

The south east portion of the vegetation under application consists of River Gum woodland which is considered riparian vegetation to the adjacent Fortescue River.

Given the close proximity of the application area to Fortescue River and that the proposal involves the removal of riparian vegetation, the application is at variance to this principle.

Methodology

- References:
- DEC (2012c)
 - Keighery (1994)
 - VMP (2008)
- GIS Datasets:
- Hydrography, linear
 - Topography, statewide

(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 topography of the proposed clearing is of low relief (520-530m above sea level), and is situated on rocks of low permeability. The site is described as extensive flat and gently sloping plains, which sometimes have a surface cover of gravels and on which red-brown hardpan frequently outcrops. Chief soils are shallow earthy

loams (Northcote et al. 1960-68).

Rainfall and evapotranspiration rates are both 300mm, suggesting that there is a low risk of water-logging for most of the year however the low flat topography, low permeability of soils and heavy rainfall events can lead to temporary water-logging during the wet season.

As the surrounding area has a similar level of topography it, the proposed clearing may cause erosion in the form of water erosion during rainfall events.

Given the above, the application may cause appreciable land degradation and therefore may be at variance to this principle.

Methodology References:
- Northcote et al. (1960-68)
GIS Datasets:
- Topography, linear
- Rainfall - Mean annual
- Evapotranspiration rate

(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 no conservation areas mapped within the local area (10km radius).

The vegetation to be cleared is well represented in the local area, does not serve as an ecological linkage and is in a degraded (Keighery 1994) condition.

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

Methodology References:
- Keighery (1994)
GIS Datasets:
- DEC Tenure
- Newman 1.4m Orthomosaic - Landgate 2003

(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**
The clearing of 11.7 hectares of vegetation is unlikely to have a direct impact on groundwater in the proposed , clearing area given the average annual rainfall of the site is 300mm, with most rainfall occurring over the summer months (BoM, 2008), and an evapotranspiration rate of 300mm per annum. Groundwater salinity is rated as 500 - 1000mg/L which is marginal.

The majority of existing vegetation is shallow rooted grass and shrub species and thus the proposed clearing is unlikely to have a significant impact on the level or quality of the groundwater table. However the resulting land use has the potential to affect groundwater quality for a number of reasons. These include: reduced groundwater levels from abstraction; contaminant inputs; and impacts to the Ethel Gorge Aquifer Stygobiont Community which acts as a natural groundwater filter.

In addition, it is considered likely for the proposed clearing to affect the quality of surface water of the nearby Fortescue River. The application is adjacent to the Fortescue River, and involves the clearing of a 100m length of riparian vegetation. The removal of this vegetation may increase sediment flow and reduce the quality of water within the river through sedimentation. To minimise the amount of sediment and nutrients reaching the river, the vegetation management plan (2008) suggests keeping a 6 metre continuous dense groundcover to trap sediment; revegetate bank to create a buffer; and undertake earthwork during dry periods. Riparian management measures will go towards mitigating this impact.

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

Methodology References:
- BoM (2008)
- Northcote et al. (1960-68)
GIS Database:
- Hydrogeology, statewide
- Groundwater Salinity, Statewide
- Topographic Contours, Statewide
- Rivers

(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

Rainfall and evapotranspiration rates are both 300mm, suggesting that there is minimal risk of waterlogging for most of the year however the low flat topography, low permeability of soils and heavy rainfall events can lead to temporary waterlogging during the wet season.

Considering the degraded (Keighery 1994) condition of the vegetation under application, the shallow root systems and the infrequency of heavy rainfall events, the clearing is unlikely to cause or exacerbate flooding and is therefore not likely to be at variance to this principle.

Methodology References:

- Keighery (1994)

GIS Datasets:

- Rainfall, annual

- Topographic Contours, Statewide

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

Comments

The proposed clearing of 11.7ha is for the purpose of constructing a caravan park and accommodation village.

The applicant has development approval from the Shire of East Pilbara for the purpose of an accommodation village and tourist caravan park. This approval was granted on the 28 July 2011 and is valid for two years.

The applicant obtained a licence from Department of Water to abstract groundwater, valid from 4 July 2011 to 3 July 2016.

The vegetation management plan (2008) states that the increase in people visiting the permanent mining camp and consequently the Fortescue River, will promote the spread of weeds to the river. The plan proposes that to reduce further degradation of the river, vegetation management, in co-operation with DEC and the Shire of East Pilbara, should extend to the river foreshore. Furthermore, the proponent should integrate the floodplain rehabilitation to incorporate the section of river to be impinged on (VMP, 2008).

A recent monitoring program determined the presence of a threatened ecological community of stygofauna (Ethel Gorge Aquifer Stygobiont Community), classified as Endangered, 800 m north of the application area, however this boundary is not clearly defined. Although the clearing of vegetation within the application area is unlikely to have a significant impact on the stygofauna due to the shallow root system, the resulting land use and groundwater abstraction and contamination is very likely to be detrimental to the threatened community (DEC 2012b).

There is a high level of biodiversity and endemism in the stygofauna community and it contributes largely to the quality of water in the Fortescue marsh and river system (DEC 2012a).

There is one Native Title Claim, Nyiyaparli, over the area under application, as the property is privately owned the granting of the clearing permit is a secondary approval and does not constitute a future act under the Native Title Act 1993.

No public submissions have been received.

Methodology The application area is zoned as rural under the Town Planning Scheme Zones.

References:

- DEC (2012b)

- VMP (2008)

GIS Datasets:

- Aboriginal Sites of Significance

- Native Title Claim

- Town Planning Scheme Zones

4. References

BoM 2008. Bureau of Meteorology - Rainfall of Newman 2008. Sited on 27/05/2008 at <http://www.bom.gov.au/climate/dwo/IDCJDW6096.latest.shtml>

DEC (2012a) Stygofauna of the Pilbara. Department of Environment and Conservation. <http://www.dec.wa.gov.au/content/view/3253/1808/>, accessed 25/09/2012.

DEC (2012b) Advice regarding CPS 5204/1, Department of Environment and Conservation, Species and Communities Branch (DEC Ref: A548894).

DEC (2012c) Advice regarding CPS 5204/1, Department of Environment and Conservation, Pilbara Region (DEC Ref:

A546864).

- EIS (2008). Environmental Impact Statement. Proposed Accommodation Development Lot 44, Great Eastern Highway, Newman. VDM Environmental. Issue No. 2 February 2008.
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). 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.
- VMP (2008). Vegetation Management Plan. Proposed Accommodation Development Lot 44, Great Eastern Highway, Newman. VDM Environmental. Issue No. 1 January 2008.

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)