



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4263/1

File Number: 2011/001847-1

Duration of Permit: From 25 July 2011 to 25 July 2013

PERMIT HOLDER

Antonio Scarfo

Eduardo Scarfo

LAND ON WHICH CLEARING IS TO BE DONE

Lot 11 on Diagram 89983 (Beermullah 6503)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 6 hectares of native vegetation within the area hatched yellow on attached Plan 4263/1.

CONDITIONS

Nil

A handwritten signature in black ink, appearing to read 'K Faulkner', written over a horizontal line.

Kelly Faulkner

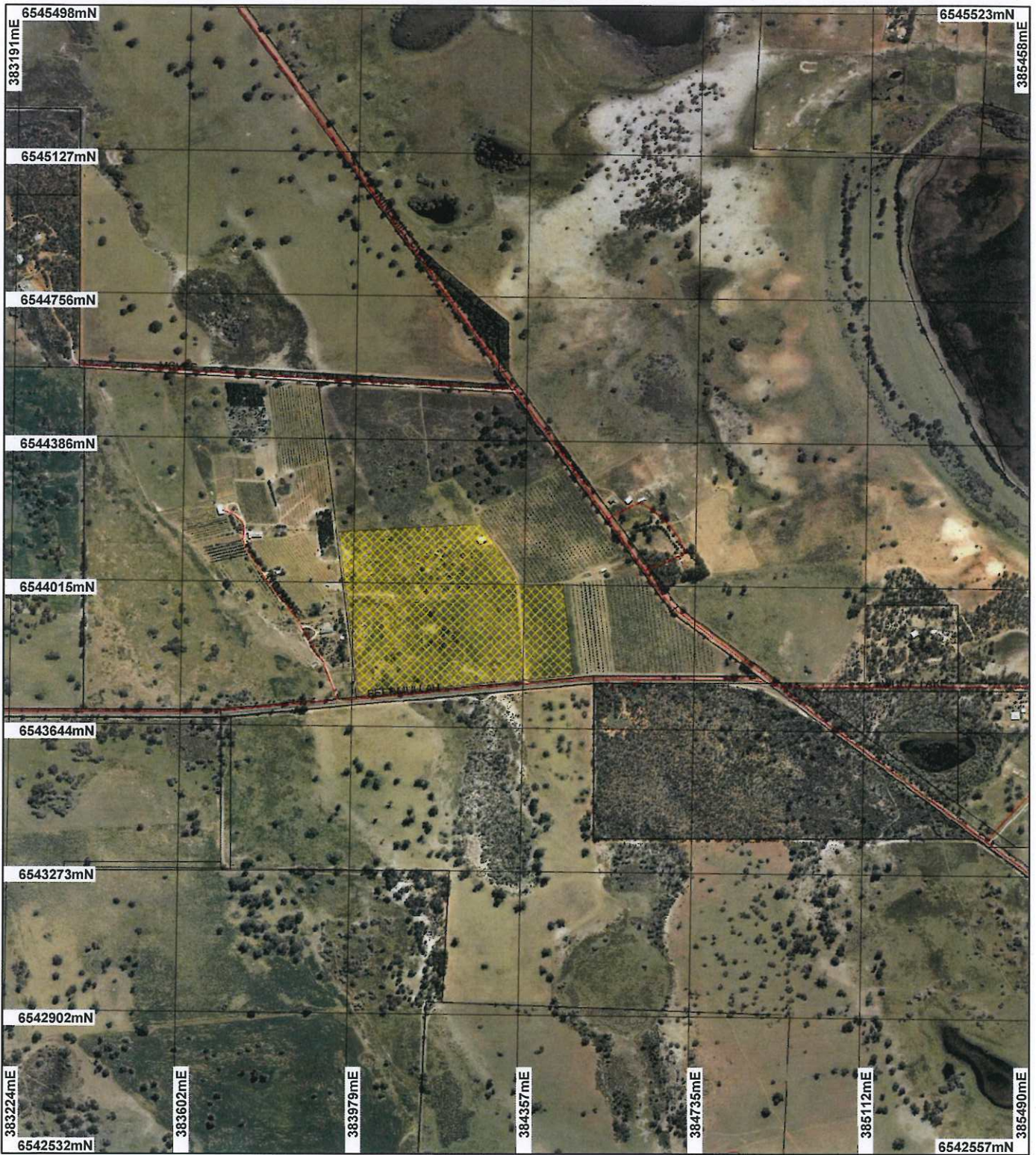
MANAGER

NATIVE VEGETATION CONSERVATION BRANCH

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

29 June 2011

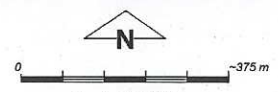
Plan 4263/1



LEGEND

Clearing Instruments

-  Areas Approved to Clear
-  Road Centrelines
-  Cadastre
- Gingin 50cm Orthomosaic - Landgate 2008



Scale 1:13197
(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.

 Date 29/5/16

K. Faulkner
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.: 4263/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Antonio and Eduardo Scarfo

1.3. Property details

Property: LOT 11 ON DIAGRAM 89983 (House No. 47 NINE MILE SWAMP BEERMULLAH 6503)
Local Government Area: Shire of Gingin
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 June 2011

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
The area under application is mapped as Beard vegetation association 1041 which is described as "Mosaic: Low woodland; banksia / Shrublands; teatree thicket" (Shepherd, 2009).	The area under application is very open and is in a completely degraded (Keighery, 1994) condition. The whole property has been previously cleared and is continually being grazed. The majority of the property consists of scattered Xanthorrhoea with the occasional Nuytsia floribunda and Eucalyptus todtiana. Only one Banksia was observed on the whole property. Juncus pallidus was observed in the wetland area in the south west corner of the property (DEC, 2011).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The condition of the vegetation under application was determined via a site inspection (DEC, 2011) and through digital imagery (Gingin 50cm Orthomosaic - Landgate 2006).

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 amended proposal is to clear up to 6 hectares of native vegetation within Lot 11 on Diagram 89983, Beermullah for the purpose of horticulture.

The area under application has historically been cleared and continually grazed. The majority of the property consists of scattered Xanthorrhoea over agricultural weeds and is therefore in a completely degraded (Keighery, 1994) condition.

Within the local area (10km radius) five species of rare flora were recorded on the same vegetation and soil type; Verticordia lindleyi subsp. Lindleyi, Isotropis cuneifolia subsp. Glabra, Anthotium junciforme, Grevillea evanescens and Caladenia speciosa.

Due to the completely degraded (Keighery, 1994) condition of the area under application it is unlikely to contain rare or priority flora, significant habitat for indigenous fauna or priority ecological communities. Therefore, the area under application is not likely to contain a high level of biodiversity.

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

Methodology References:
Keighery (1994)

GIS Database:
- Gingin 50cm Orthomosaic - Landgate 2006
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed April 2011

(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**

A search of NatureMap (DEC, 2007) found that within a 10km radius of the application area there are three fauna species which are rare or likely to become extinct; *Calyptorhynchus baudinii* (Baudin's Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo) and *Dasyurus geoffroyi* (Western Quoll, Chuditch).

The area under application predominately consists of scattered *Xanthorrhoea*, *Eucalyptus tottiana* and *Corymbia calophylla* (Marri) over agricultural grass. Therefore, it is not likely that the application area comprises significant habitat for any of the identified species.

The vegetation under application may be used by transient individuals passing from Yurine Swamp in the south and remnant patches of vegetation in the north, however due to its completely degraded nature it is not likely that this area of vegetation is a significant wildlife corridor.

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

Methodology References:
DEC (2007)

GIS Databases:
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed April 2011

(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**

Within the local area (10km radius) four species of rare flora were identified; *Banksia mimica*, *Goodenia arthrotricha*, *Anigozanthos viridis* subsp. *Terraspectans* and *Thelymitra dedmaniarum*.

Banksia mimica was identified approximately 6km east of the application area within Boonanarring Nature Reserve. *Banksia mimica* is a prostrate, lignotuberous shrub, growing between 0.15 and 0.4 m high. It occurs on white or grey sand over laterite, sandy loam (Western Australian Herbarium 1998-). This species was recorded on different soil and vegetation type to the area under application. Considering this it is not likely that this rare species will occupy the area under application.

Goodenia arthrotricha is an erect perennial herb. The preferred habitat for this species is granite rocks and slopes (Western Australian Herbarium 1998-). The area under application does not contain this species' preferred habitat.

Anigozanthos viridis subsp. *Terraspectans* inhabits winter wet depressions on grey sandy clay loam or grey sand, in low heath that is regenerating after fire. This species has only been found west of Cataby and the area under application is east of Cataby.

Thelymitra dedmaniarum inhabits open wandoo woodland on red-brown sandy loam, associated with dolerite and granite outcropping. The area under application does not comprise suitable habitat for this species.

Given the above it is not likely that the area under application includes, or is necessary for the continued existence of rare flora. Therefore, the clearing as proposed is not likely to be at variance to this clearing principle.

Methodology References:
Western Australian Herbarium (1998-)

GIS Databases:
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed April 2011

(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 (TEC) within the area under application, however within the local area (10km radius) eight records of the TEC Muchea Limestone (Shrublands and woodlands on Muchea Limestone) were identified.

This TEC supports a rich layer of herbaceous annuals under a dense, diverse shrub layer. The limestone substratum associated with the black clay soils of the eastern side of the Swan Coastal Plain is rare and has historically been cleared for quarrying and agriculture. Species that characterise the community are typically associated with limestone soils in coastal areas including *Eucalyptus decipiens*, *Eucalyptus foecunda*, *Exocarpos sparteus*, *Melaleuca huegelii*, and *Melaleuca acerosa* (DSEWPC, 2011).

Considering the above information the area under application is not likely to comprise whole or a part of, or is necessary for the maintenance of this TEC. Therefore, this proposal is not likely to be at variance to this clearing principle.

Methodology References:
DSEWPC (2011)

GIS Databases:
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed April 2011

(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

The vegetation under application is described as Beard vegetation association 1041 which has approximately 55.57 per cent of its pre-European extent remaining (Shepherd, 2009). This vegetation association retains more than the threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The local area (10km radius) surrounding the property under application contains approximately 40 per cent native vegetation.

Digital imagery (Gingin 50cm Orthomosaic - Landgate 2006) reveals that the local area is a fragmented landscape, however due to the completely degraded nature of the vegetation under application it is not likely that it forms part of a significant ecological corridor therefore fragmentation will not be exasperated by the proposed clearing.

The area under application does not contain a high level of biological diversity, is not considered to be significant fauna habitat within the local landscape and is in a completely degraded (Keighery, 1994) condition. Therefore the vegetation under application is not considered to be a significant remnant in an extensively cleared landscape and is therefore not likely to be at variance to this clearing principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Swan Coastal Plain	1 501 209.2	587 889.1	39.16
Shire*			
Gingin	319 670.72	176 644.80	55.26
Beard Vegetation Association*			
1014	41 064.15	22 817.82	55.57
Beard Vegetation Association within Bioregion*			
1014	41 064.15	22 817.82	55.57

* (Shepherd 2009)

Methodology References:
Commonwealth of Australia (2001)
Keighery (1994)
Shepherd (2009)

GIS Databases:
- Gingin 50cm Orthomosaic - Landgate 2006

- Local Government Authorities - DLI 8/07/04
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - accessed April 2011

(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 local area (10km radius) contains a large number of wetlands including Resource Enhanced wetlands, Multiple Use wetland, Conservation Category wetlands and Environmental Protection Policy Lakes.

The south west corner of the property is mapped as a non perennial swamp and is classified as a Resource Enhanced wetland..

Resource Enhanced category wetlands are considered priority wetlands which may have been partially modified but still retain substantial ecological attributes and functions (Water and Rivers Commission, 2001).

This wetland area is in a completely degraded (Keighery, 1994) condition and if re-evaluated may be determined more consistent with a Multiple Use management category (DEC, 2008). At the time of inspection this wetland area did not contain any visible water however the wetland area was evident due to the presence of *Juncus pallidus* (DEC, 2011).

A multiple use wetland is located on the adjacent property and two conservation category wetlands (White Lake and Yurine Swamp) are located within 1km of the application area.

Although limited, a portion of the proposed clearing is growing in association with a wetland, therefore this proposal remains at variance to this clearing principle.

It is noted that although limited clearing will occur within this mapped wetland, the applicant will not be applying direct irrigation or fertilisation to this area therefore reducing the risk of eutrophication.

Methodology

References:

- DEC (2008)
- DEC (2011)
- Water and Rivers Commission (2001)

GIS Database:

- EPP Lakes - dep 14/05/97
- Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
- Hydrogeology, Linear - DOC13/07/06
- Hydrogeology, Statewide - DOC13/07/06
- SAC Biodatasets - accessed April 2011

(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

Soil Assessment of the West Gingin Area (Smolinski and Scholtz, 1997) indicates that the area proposed to be cleared is dominated by soil types Yanga, Phase 2 - Mapped Unit 213Ya_2 and to a lesser extent Yanga, Phase 28x - Map Unit 213Ya_28x.

Yanga, Phase 2: Brown siliceous soils

Yanga, Phase 28x: Shallow, grey to black, calcareous loams, clay loams and pedal duplex soils.

The south west corner of the property is mapped as Phase 28x (also mapped as Resource Enhanced wetland) and the remainder of the property is Phase 2 soils.

Map Unit 213Ya_2 has a very high risk of erosion (Commission of Soil and Land Conservation, 2011).

The Commission of Soil and Land Conservation (2011a) has advised that soil type 28x has a high risk of eutrophication (nutrient export) and waterlogging. Limited clearing is proposed on soil type 28x.

The clearing as proposed is not likely to result in appreciable land degradation. Therefore, the proposal is not likely to be at variance to this clearing principle.

It is noted that the applicant has committed to planting tree buffers to assist in minimising the risk of wind erosion and that the applicant will not be applying direct irrigation or fertilisation to this soil type therefore reducing the risk eutrophication and waterlogging.

Methodology References:
Commissioner of Soil and Land Conservation (2011)
Smolinski and Scholtz (1997)

GIS Database:
- Average Annual Rainfall Isohyets - WRC 29/09/98
- Hydrogeology, Linear - DOC13/07/06
- SAC Biodatasets - accessed April 2011
- 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**

Three conservation reserves were identified within the local area (10km radius); Yurine Swamp Nature Reserve, Boonanarring Nature Reserve and Bartletts Well Nature Reserve.

The closest of these reserves is Yurine Swamp Nature Reserve which is located directly south of the property under application. Beermullah Road separates the property under application and Yurine Swamp Nature Reserve.

The area under application does not contain a high level of biological diversity, is not considered to be significant fauna habitat within the local landscape and is in a completely degraded (Keighery, 1994) condition, therefore the proposed clearing is not likely to impact on the environmental values of this nature reserve. The proposed clearing is not likely to be at variance to this principle.

Methodology GIS Database:
- Gingen 50cm Orthomosaic - Landgate 2006
- 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 is not likely to be at variance to this Principle**

The proposed clearing is not likely to increase sediment levels in surface water runoff due to the soil types present, lack of land slope and short slope lengths (Commissioner for Soil and Land Conservation, 2011).

The south west corner of the application area contains soil type 213Ya_28x which has a very high to extreme risk of phosphorus loss. In order to protect groundwater quality the applicant will not be applying irrigation or fertilisation to soil type 213Ya_28x.

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

Methodology References:
Commissioner of Soil and Land Conservation (2011a)

GIS Database:
- Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
- Hydrogeology, Linear - DOC13/07/06
- Hydrogeology, Statewide - DOC13/07/06
- SAC Biodatasets - accessed April 2011
- 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 not likely to be at variance to this Principle**

The removal of native vegetation is not expected to contribute to flooding due to the soil types present (Commissioner of Soil and Land Conservation, 2011).

Methodology References:
Commissioner of Soil and Land Conservation (2011)

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

Comments

The property under application falls within an area (Gingin Groundwater) which is proclaimed under the Rights in Water and Irrigation Act 1914 (RIWI Act). The Department of Water (DoW) has advised that there is a Groundwater Licence under the RIWI Act associated with this property. In addition there is an application to take additional water currently being processed by DoW (DoW, 2011).

The original proposal under application was for the clearing 15 hectares of native vegetation. DEC assessed the initial proposal and advised that a decision would be deferred until the applicant's Licence to Take Water from DoW has been amended to accommodate the additional water requirements. The applicant has provided additional advice indicating that the full water entitlement under the current Licence is not being utilised. The applicant has reduced the proposed clearing area to 6 hectares to allow for one pivot to be established. Within this pivot approximately 3 hectares of vegetables will be grown using the excess water entitlement under the current Licence to Take Water.

The Shire of Gingin (2011) has issued Antonio and Eduardo Scarfo with a notice of Approval of Planning Consent. The applicant will be notified of the need to amend this approval to reflect the amended proposal.

Methodology

References:

DoW (2011)

Shire of Gingin (2011)

GIS Database:

- RiWI Act, Groundwater Areas - DoW

4. References

- Commissioner of Soil and Land Conservation (2011); Land Degradation Advice and Assessment Report for clearing permit application CPS 4263/1 received 27 April 2011; Department of Agriculture and Food Western Australia (DEC Ref. A391068).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2008) Memo re Standard Wetlands Advice for Native Vegetation Conservation Branch. Dated 17/07/2008. Species and Communities Branch, Department of Environment and Conservation, Western Australia (TRIM Ref. DOC59490).
- DEC (2010) Wetlands Branch Advice for Clearing Permit Application CPS 3726/1. Received 14/06/2010. Department of Environment and Conservation, Western Australia (DEC Ref. A310286).
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4263/1, Lot 11 Beermullah Road, Beermullah. Site inspection undertaken 1/04/2011. Department of Environment and Conservation, Western Australia (DEC Ref. A38666).
- DoW (2011) Water Licencing advice for Lot 11 Beermullah Rd, Beermallah - CPS 4263/1. Department of Water, Western Australia (DEC Ref. A383686).
- DSEWPC (2011) Threatened Species and threatened ecological communities - Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain. Department of Sustainability, Environment, Water, Population and Communities <http://www.environment.gov.au/biodiversity/threatened/communities/muchea-limestone.html>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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 Gingin (2011) Notice of Approval of Planning Consent (DEC Ref: A379817).
- Smolinski, H. J. and Scholtz, G. G. H. (1997). Soil Assessment of the West Gingin Area. Land Resources Series No 15. Agriculture Western Australia.
- Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed April 2011).

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)