



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5727/1

File Number: 2010/009252-1

Duration of Permit: From 19 October 2013 to 19 October 2015

PERMIT HOLDER

Cottesloe Golf Club Incorporated

LAND ON WHICH CLEARING IS TO BE DONE

Lot 502 on Deposited Plan 62731 (Reserve 9299), Swanbourne

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.175 hectares of native vegetation within the area hatched yellow on attached Plan 5727/1.

CONDITIONS

Nil.

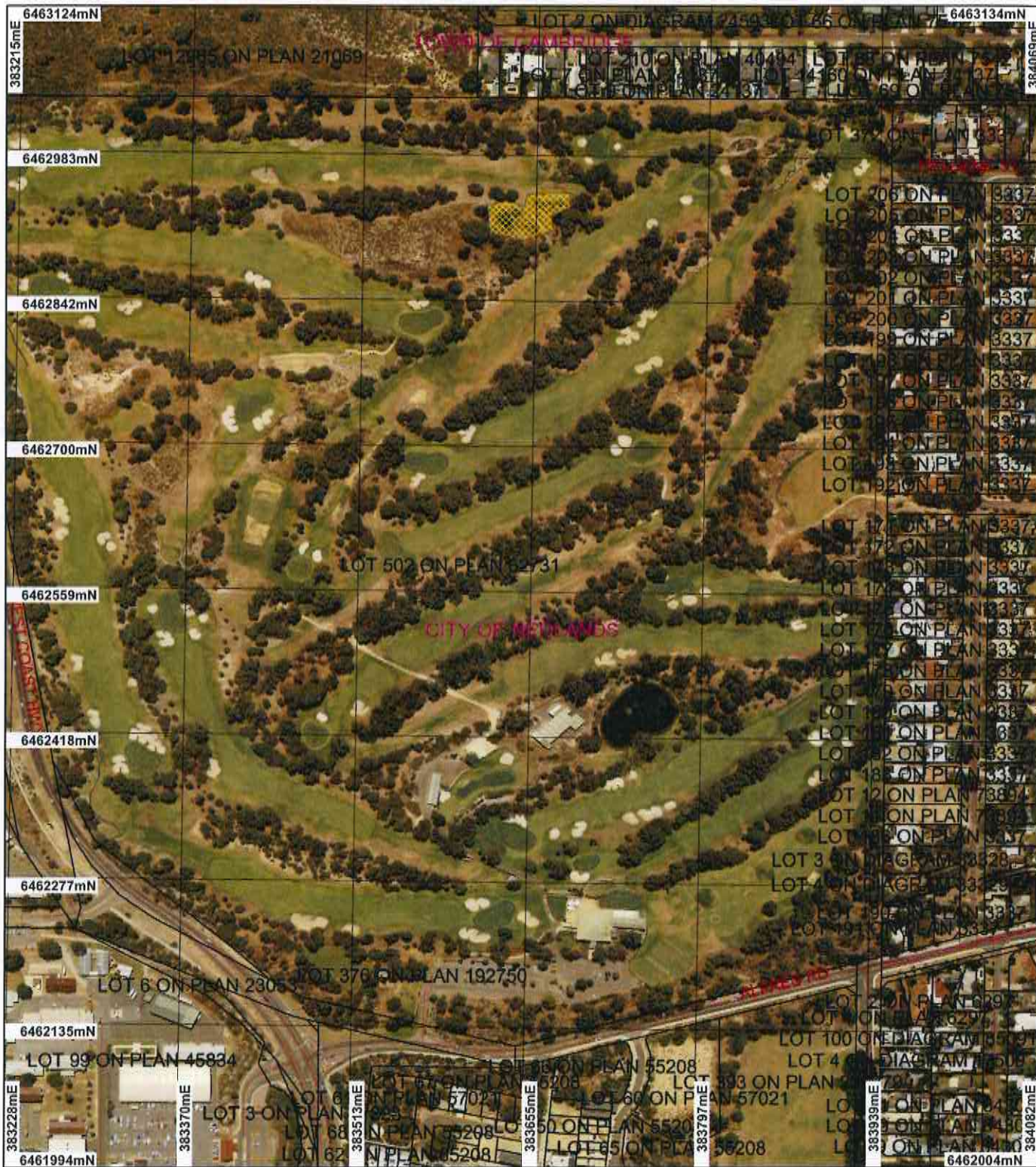
A handwritten signature in cursive script, appearing to read 'M. Warnock', written over a horizontal line.

M Warnock
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

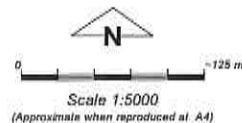
19 September 2013

Plan 5727/1



LEGEND

- | | |
|------------------------------|---|
| Clearing Instruments | <input type="checkbox"/> Cadastre for labelling |
| Areas Approved to Clear | Perth Metropolitan Area |
| Local Government Authorities | Central 15cm Orthomosaic - Landgate 2012 |
| Road Centrelines | |



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 19/9/13
 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.

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



1. Application details

1.1. Permit application details

Permit application No.: 5727/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Cottlesloe Golf Club Inc

1.3. Property details

Property: LOT 502 ON PLAN 62731 (House No. 173 ALFRED SWANBOURNE 6010)
Local Government Area: City of Nedlands
Colloquial name: Swanbourne Golf Course

1.4. Application

Clearing Area (hectares)	No. Trees	Method of Clearing	For the purpose of:
0.175		Mechanical Removal	Recreation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 September 2013

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 vegetation under application is mapped as Beard vegetation association 998 (Spearwood) which is described as: Medium woodland; tuart (Shepherd et al. 2001).	Swanbourne golf course realignment of playing holes 12 and 13. This application is to clear 0.175 hectares of native vegetation within Lot 502 on Deposited Plan 62731, Swanbourne, City of Nedlands, for the purpose of hazard reduction and to improve the golf course.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994).	The vegetation under application is described as <i>Melaleuca systema</i> / <i>Calothamnus quadrifidus</i> low open heath. The vegetation is described as being in poor condition with abundant weed species, particularly Veldt grass (<i>Ehrharta calycina</i>) and Geraldton Carnation Weed (<i>Euphorbia terracina</i>) (PGV Environmental 2013). Vegetation description and condition were determined from information provided by the applicant (PGV Environmental 2013) and aerial imagery (Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012).

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 is to clear 0.175 hectares of native vegetation for the purpose of hazard reduction and to improve the Swanbourne golf course. The vegetation under application is considered to be in a degraded (Keighery 1994) to completely degraded (Keighery 1994) condition. The vegetation under application is described as *Melaleuca systema* / *Calothamnus quadrifidus* low open heath, with abundant weed species, particularly Veldt grass (*Ehrharta calycina*) and Geraldton Carnation Weed (*Euphorbia terracina*) (PGV Environmental 2013). The applicant has advised that the application area contains two *Pinus radiata* and two Coastal Moort (*Eucalyptus* spp.) trees, and associated understorey.

There are 36 species of priority flora recorded within the local area (10 kilometre radius). Of these species, two are recorded within the same soil (Northcote et al. 1960-68) and Beard vegetation (Shepherd et al. 2001) types as the application area. The closest of these species (Priority 3) is recorded approximately 1.2 kilometres from the application area. This species grows in sand over limestone and on dune slopes and flats, and is found within coastal heath and shrubland, and within open *Banksia* woodland (WA Herbarium 2013). The application area does not contain these vegetation types, and is therefore unlikely to contain suitable habitat for this species. The second species of priority flora (Priority 3) is recorded approximately 3 kilometres from the application area. Little information is available on the preferred habitat of this species. Given the distance of the closest record of this species, and the degraded condition of the application area, it is unlikely to contain

suitable habitat for this species.

There are 24 priority ecological communities recorded within the local area (10 kilometre radius). These communities are occurrences of four types of priority ecological communities. These include:

1. Wooded waterbird wetlands, common name: 'Wooded wetlands which support colonial waterbird nesting areas' (Priority 2);
2. SCP25, common name: 'Southern Eucalyptus gomphocephala-Agonis flexuosa woodlands' (Priority 3);
3. SCP29b, common name: 'Acacia shrublands on taller dunes' (Priority 3); and
4. SCP24, common name: 'Northern Spearwood shrublands and woodlands' (Priority 3).

Based on aerial imagery and information provided by the applicant (PGV Environmental 2013), the application area does not contain these vegetation types. The vegetation proposed to be cleared is therefore unlikely to contain vegetation representative of these priority ecological communities.

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

Methodology

References:

Keighery (1994)
Northcote et al.(1960-68)
PGV Environmental (2013)
Shepherd et al. (2001)
WA Herbarium (2013)

GIS Datasets:

- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- SAC Biodatasets (Accessed on 04/09/13)
- Soils Statewide
- Veg stats

(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

Thirty-two fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 are recorded within the local area (10 kilometre radius) (DEPaW 2007-). Of these species, seven are marine species, and 19 are shorebirds. The remaining species include the Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Chuditch (*Dasyurus geoffroii*), Bilby (*Macrotis lagotis*), Numbat (*Myrmecobius fasciatus*), and Quokka (*Setonix brachyurus*).

Given the degraded condition of the application area, it is unlikely to contain suitable habitat for the Chuditch, Bilby, Numbat, or Quokka.

The Forest Red-tailed Black-Cockatoo and Carnaby's Cockatoo nest in hollows of mature Marri (*Corymbia calophylla*), Karri (*Eucalyptus diversicolor*) and Jarrah (*Eucalyptus marginata*) trees, and feed on a range of plant species, including Marri trees, Proteaceae species, and Pinus species (Cale 2003; Chapman 2008). Based on aerial imagery and information provided by the applicant (PGV Environmental 2013), the application area does not contain vegetation suitable as breeding habitat of black cockatoo species. Remnant vegetation within Bush Forever sites to the north of the application area is likely to contain more suitable foraging habitat for both black cockatoo species.

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

Methodology

References:

Cale (2003)
Chapman (2008)
DEPaW (2007-)
PGV Environmental (2013)

GIS Datasets:

- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 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

There are three species of rare flora recorded within the local area (10 kilometre radius). One of these species is presumed extinct (WA Herbarium 2013). The second species of rare flora occurs in areas of mixed Eucalyptus, Banksia, Corymbia and Allocasuarina woodland. This species tends to favour dense undergrowth, and usually grows in deep grey-white sand (DEC 2009). The third species of rare flora is found in low-lying depressions in peaty and sandy clay swamps, often in standing water (TSSC 2008). Based on aerial imagery and information provided by the applicant (PGV Environmental 2013), the application area does not contain these habitat types, and is therefore unlikely to contain suitable habitat for these species.

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

Methodology

References:

DEC (2009)
PGV Environmental (2013)
TSSC (2008)
WA Herbarium (2013)

GIS Datasets:

- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- SAC Biodatasets (Accessed on 04/09/13)

(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 four threatened ecological communities recorded within the local area (10 kilometre radius). These communities are occurrences of SCP30a, common name: 'Callitris preissii (or Melaleuca lanceolata) forests and woodlands, Swan Coastal Plain' (Vulnerable). Based on aerial imagery and information provided by the applicant (PGV Environmental 2013), the application area does not contain this vegetation type. The vegetation proposed to be cleared is therefore unlikely to be representative of this threatened ecological community.

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

Methodology

References:

PGV Environmental (2013)

GIS Datasets:

- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- SAC Biodatasets (Accessed on 04/09/13)

(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 area under application is located within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 39 per cent of its Pre-European vegetation extent remaining (Government of Western Australia 2013).

The vegetation under application is mapped as Beard vegetation association 998 (Shepherd et al. 2001), and Hedde vegetation complex 'Cottesloe Complex-Central and South' (Hedde et al. 1980), which have approximately 38 per cent and 41 per cent of Pre-European extent remaining in the Swan Coastal Plain bioregion (Government of Western Australia 2013).

Aerial imagery (Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012) indicates that the local area (10 kilometre radius) retains approximately 20 per cent vegetation cover.

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). Within constrained areas (i.e. areas of urban development in cities and major towns) on the Swan Coastal Plain and within the Greater Bunbury Region Scheme and Peel Region Scheme the target for representation of the pre-clearing extent of a particular native vegetation complex is 10 per cent (EPA 2006).

Given that the application area is within a constrained area, and the remaining percentage of native vegetation is above 10 per cent within all vegetation communities and area units measured (see table below), the proposed clearing is not likely to be at variance to this clearing principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion				
Swan Coastal Plain	1 501 222	587 708	39	35
Shire				
City of Nedlands	1 980	269	14	0
Beard Vegetation Association in Bioregion				
998 (Spearwood)	50 868	19 373	38	41
Hedde Vegetation Complex				
Cottesloe Complex - Central and South (52)	44 995	18 474	41	9

Methodology References:
Commonwealth of Australia (2001)
EPA (2006)
Government of Western Australia (2013)
Hedde et al. (1980)
Shepherd et al. (2001)

GIS Datasets:
- Hedde Vegetation Complexes
- IBRA Australia
- Local Government Areas
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- Veg Stats

(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**

There are no watercourses or wetlands within close proximity to the application area. The proposed clearing is therefore not likely to be at variance to this clearing principle.

Methodology GIS Datasets:
- ANCA, Wetlands
- Geomorphic Wetlands Swan Coastal Plain dataset
- Hydrology, Linear
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- RAMSAR, Wetlands

(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**

Given the small size of the application area, the proposed clearing is not likely to be at variance to this clearing principle.

Methodology GIS Datasets:
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012

(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 Department of Parks and Wildlife managed lands or sites identified in the Register of National Estate within close proximity to the application area. The closest is Keanes Point Reserve, located approximately 4.2 kilometres from the application area.

There is a Bush Forever site located approximately 105 metres north of the application area. Based on aerial imagery and information provided by the applicant (PGV Environmental 2013), the area adjacent to the Bush Forever site has been extensively cleared, and contains invasive species. The proposed clearing is therefore unlikely to impact the conservation values of this Bush Forever site.

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

Methodology References:
PGV Environmental (2013)

GIS Datasets:
- Bushforever
- DEC Tenure
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- Register of National Estate

(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**

There are no watercourses or wetlands within close proximity to the application area. The application area is not within a Public Drinking Water Source Area, and groundwater salinity within the application area is 500 - 1000 milligrams per litre of Total Dissolved Solids, which is considered to be marginally saline (Mayer et al. 2005). The proposed clearing is therefore not likely to be at variance to this clearing principle.

Methodology References:
Mayer et al. (2005)

GIS Datasets:
- ANCA, Wetlands
- Geomorph Wetlands Swan Coastal Plain dataset
- Groundwater salinity, statewide
- Hydrology, Linear
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- Public Drinking Water Source Areas
- RAMSAR, Wetlands

(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 small size of the application area, the proposed clearing is not likely to be at variance to this clearing principle.

Methodology GIS Datasets:
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012

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

Comments

The application area is within a reserve under management order, with the primary interest holder being the City of Nedlands. The Cottesloe Golf Club Inc. has a lease over the area from the City of Nedlands. The City of Nedlands has approved the proposed clearing (City of Nedlands 2013).

An application for planning approval for larger golf course development works has been submitted by the Cottesloe Golf Club Inc to the Western Australian Planning Commission (WAPC). This application has been recommended for approval by the City of Nedlands (City of Nedlands 2013). This application is for the landscaping, fairway re-alignment and re-contouring of the Swanbourne Golf Course, and includes the clearing of 91 trees. The Cottesloe Golf Club has advised that a clearing permit to cover this wider area was not applied for, as the Club considers that the additional vegetation proposed to be cleared within the planning application is exempt from requiring a clearing permit. This is because the Cottesloe Golf Club advises that the vegetation outside of the clearing permit application area is not native vegetation according to the Environmental Protection Act 1986, as it consists of re-planted specimens during historic development of the golf course.

Three public submissions have been received in relation to this application (Submission 2013a; 2013b; 2013c). These submissions raise concerns about impacts of the proposed clearing on the availability of foraging habitat for Carnaby's cockatoos, and refer to the clearing of 50-91 trees. The submissions therefore are likely to be referring to the planning approval application submitted to the City of Nedlands and WAPC.

Methodology References:
City of Nedlands (2013)
Submission (2013a)
Submission (2013b)
Submission (2013c)

4. References

- DEC (2007-) NatureMap Species Report, Created by Guest user on 04/09/13 (A669997). Department of Environment and Conservation, Western Australia, Perth.
- 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.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- 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.
- PGV Environmental (2013) Information provided by the applicant in relation to the Cottesloe Golf Club Inc Clearing Permit Application CPS 5727/1. Received by the Native Vegetation Conservation Branch on 01/09/13 (A655874).
- 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.
- Submission (2013a) Submission in response to clearing permit application CPS 5727/1, as advertised in the West Australian on 19/08/13. Received by the Native Vegetation Conservation Branch on 26/08/13 (A666081).
- Submission (2013b) Submission in response to clearing permit application CPS 5727/1, as advertised in the West Australian on 19/08/13. Received by the Native Vegetation Conservation Branch on 02/09/13 (A668781).
- Submission (2013c) Submission in response to clearing permit application CPS 5727/1, as advertised in the West Australian on 19/08/13. Received by the Native Vegetation Conservation Branch on 10/09/13 (A668781).

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)