



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3175/2

File Number: DEC11624

Duration of Permit: From 10 January 2010 to 10 January 2013

PERMIT HOLDER

Fauna Rehabilitation Foundation Inc.

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1001 on Plan 51435 Camboon Road, Malaga 6090

AUTHORISED ACTIVITY

Clearing of up to 0.104 hectares of native vegetation within the area hatched yellow on attached Plan 3175/2a.

CONDITIONS

1. Dieback and 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* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall not move soils in wet conditions;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

2. Retain vegetative material, revegetation and rehabilitation

- (a) The Permit Holder shall retain the vegetative material removed by clearing authorised under this Permit and stockpile the vegetative material in an area that has already been cleared.
- (b) Within six months of the construction of the fence lines, the Permit Holder must lay the vegetative material retained under condition 2(a) along the internal fence lines constructed for the purpose of this Permit.
- (c) Within six months of the construction of the fence lines the Permit Holder must undertake *revegetation* and *rehabilitation* of the area cross-hatched red on attached plan 3175/2b by:
 - (i) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
 - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.

- (d) Within 12 month of *revegetation* and *rehabilitation* of the area cross-hatched red on attached plan 3175/2b, in accordance with condition 2(c) of this Permit:
- (i) determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 2(d)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

3. Records to be kept

In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 2 of this Permit:

- (a) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (b) a description of the *revegetation* and *rehabilitation* activities undertaken;
- (c) the size of the area *revegetated* and *rehabilitated* (in hectares); and
- (d) the species composition, structure and density of *revegetation* and *rehabilitation*.

4. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 3 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 10 October 2012 the Permit Holder must provide to the CEO a written report of records required under condition 3 of this Permit where these records have not already been provided under condition 4(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 100 kilometres of the area cleared;

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

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*.



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

8 April 2010

Plan 3175/2a



LEGEND

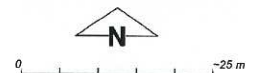
- Cadastre for labelling
- Road Centrelines
 - FW
 - HY
 - LRO (cont)

- LRS
- MR
- N
- TR

Perth Metropolitan Area
North 20cm Orthomosaic -
Landgate 2007

Clearing Instruments

- Areas Approved to Clear



Scale 1:952

(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.

K. Faulkner Date *8/4/10*

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.



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

Plan 3175/2b



LEGEND

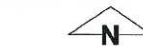
- Cadastre for labelling
- Road Centrelines
- FW
- HY
- LRO (cont)

- LRS
- MR
- N
- TR

Perth Metropolitan Area
North 20cm Orthomosaic -
Landgate 2007

Clearing Instruments

- Areas Subject to Conditions



0 50 m

Scale 1:2073

(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.

[Signature] Date 8/4/10

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.



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1. Application details

1.1. Permit application details

Permit application No.: 3175/2
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Fauna Rehabilitation Foundation Inc

1.3. Property details

Property: LOT 1001 ON PLAN 51435 (House No. 170 CAMBOON MALAGA 6090)
Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.104		Mechanical Removal	Fence Line Maintenance

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
Heddlle Vegetation Type: Bassendean Complex: Central and South: Vegetation ranges from woodland of <i>E. marginata</i> - <i>C. fraseriana</i> - <i>Banksia</i> spp. to low woodland of <i>Melaleuca</i> species, and sedgelands on the moister sites. This area includes the transition of <i>E. marginata</i> to <i>E. todtiana</i> in the vicinity of Perth. Beard vegetation Association: 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina	The proposal is to clear 0.104 ha for the purpose of constructing four enclosures to keep native mammals used during a research project. The vegetation under application consists of open <i>Banksia</i> woodland over a dense shrubland in an excellent condition. The overstorey consisted of <i>Banksia attenuata</i> , <i>Banksia menziesii</i> , <i>Banksia ilicifolia</i> and <i>Nuytsia floribunda</i> . The understorey contains a high diversity of species including <i>Mesomelaena</i> sp., <i>Dasypogon</i> sp, <i>Hakea</i> sp., <i>Alexgeorgea</i> sp, <i>Patersonia</i> sp, <i>Stirlingia</i> sp., <i>Acacia</i> sp., <i>Hibbertia</i> sp, <i>Xanthorrhoea</i> sp and <i>Jacksonia</i> sp.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Vegetation clearing description based on site visit conducted by DEC officers on the 13th July 2009 (DEC 2009).

3. Assessment of application against clearing principles

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

Comments

The applicant has requested an amendment to revegetation condition 2b and 2c on the Permit.

The vegetation under application consists of open *Banksia* woodland over a dense shrubland in excellent (Keighery 1994) condition and is considered to contain high floral diversity. In addition, a priority 4 flora species, *Jacksonia sericea*, was identified within the applied area during the site visit (DEC 2009a).

It is considered that the vegetation at Lot 1001 Camboon Rd is a significant habitat for native fauna including the conservation significant Carnaby's Black Cockatoo, Quenda and the Graceful Sunmoth. The proposed clearing of 2 m wide fencelines across half of a 1.6 ha remnant of native vegetation on Lot 1001 Camboon Rd may cause fragmentation to this habitat. Therefore, it may be considered likely for the vegetation proposed to be cleared (0.104 ha) to be necessary for the maintenance of significant habitat for local indigenous fauna.

It may also be considered likely for the area under application to contain habitat suitable for the rare flora species, *Caladenia huegelii*. (Western Australian Herbarium 1998-).

Therefore, it is considered likely that the proposed clearing is at variance to this principle. An offset condition

and a weed and dieback condition will be placed on the permit to mitigate this impact.

Methodology **References**
-DEC (2009a)
-Western Australian Herbarium (1998-)
GIS Databases
-SAC Bio Databases (08/07/2009)

(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

Within the local area (~ 5 km radius) 6 species of conservation significant fauna have been recorded including the Black-Striped Snake (*Neelaps calonotos*), a native bee (*Hybueus globuliferus*), Western Brush Wallaby (*Macropus irma*), the Graceful Sunmoth (*Synemon gratiosa*) and Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*).

The vegetation under application is *Banksia* woodland in excellent condition and includes an understorey that would provide suitable habitat for ground-dwelling fauna such as snakes, lizards and the conservation significant species, Quenda and Black Striped Snake (DEC 2007).

Carnaby's Black Cockatoos are known to feed on seeds, nuts and flowers of a large variety of plants including *Banksia*, *Dryandra* and *Grevillea* with the Northern Region of the Swan Coastal Plain considered being an important area throughout the season for this species (Shah 2006).

The Graceful Sunmoth (*Synemon gratiosa*), has been recorded 4.0 km northwest of the area under application. This species has been found in *Banksia* woodlands and shows some preference for high quality vegetation (Williams 2009). Given that the area under application contains *Banksia* woodland in an excellent condition it may be considered likely that the applied area may provide habitat for the conservation significant Graceful Sunmoth.

Given the excellent condition of the vegetation and the potential of the vegetation to be used by conservation significant species, it is considered that vegetation at Lot 1001 Camboon Rd is significant habitat for native fauna. The proposed clearing of 2 m wide fencelines across half of a 1.6 ha remnant of native vegetation on Lot 1001 Camboon Rd may cause fragmentation to this habitat. Therefore, it is considered that the vegetation proposed to be cleared (0.104 ha) may be necessary for the maintenance of significant habitat for local indigenous fauna.

Methodology **References**
-DEC (2007)
- DEC (2009a)
- Shah (2006)
- Williams (2009)
GIS Databases
-SAC Bio Databases (08/07/2009)

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

Comments

There are two rare flora species, *Caladenia huegelii* and *Epiblema grandiflorum* var. *cyaneum*, recorded in the local area (~ 5 km radius) occurring within the same vegetation and soil types as the area under application. These species were recorded 1.9 km and 3.5 km east of the area under application respectively.

Epiblema grandiflorum var. *cyaneum* is a tuberous perennial herb that occurs within winter-wet swamps (Western Australian Herbarium 1998-2009). The area under application consists of *Banksia* woodland over dense low shrubland and does not contain winter wet areas (DEC 2009a). Therefore, it is unlikely for this species to occur within the area under application.

Caladenia huegelii is a tuberous, perennial herb that grows between 0.25-0.6 m high and flowers during September and October (Western Australian Herbarium 1998-2009). This species occurs within mixed Jarrah (*Eucalyptus marginata*) and *Banksia* woodlands that occur on deep sandy soils and favours dense undergrowth (Brown et al. 1998).

Given that the area under application includes *Banksia* woodland with a dense understorey occurring on sandy soil (Northcote et al. 1960-68) it is considered that there is potential for *C. huegelii* to occur in the applied area and therefore the proposed clearing to may be at variance to this Principle.

Methodology **References**
-Brown et al. (1998)

- DEC (2009a)
- Northcote et al. (1960-68)
- Western Australian Herbarium (1998-)
- GIS Databases
- SAC Bio Databases (08/07/2009)

(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

Fourteen recordings of the Threatened Ecological Community (TEC) 20a: *Banksia attenuata* woodlands over species rich dense shrublands occur in the local area (~5km radius). The nearest occurrence is ~788 m west of the area under application.

The area under application contains *Banksia attenuata* woodland over dense low shrubland in an excellent condition (DEC 2009a).

However, it is unlikely that 20a occurs in the area under application as the location, soils and landform unit (Bassendean Dunes Central and South) is unlikely to align with the occurrence of FCT20a (DEC 2009b). In addition, the presence of *Banksia illicifolia* within the area under application is unlikely to align with FCT20a. The combination of *B. attenuata*, *B. menziesii* with the presence of *B. illicifolia* suggests the site is more moist than usually associated with sites of FCT 20a, however *B. illicifolia* may occasionally occur on the outer boundary of 20a lower on the landscape at a transitional zone (DEC 2009b).

Therefore, it is not considered likely for the proposed clearing to be at variance with this Principle

Methodology

References

- DEC (2009a)
- DEC (2009b)
- GIS Databases
- SAC Bio Databases (08/07/2009)

(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

Hedde et al. (1980) defines the vegetation under application as consisting of the Bassendean Complex: Central and South: Woodlands of *E. marginata* - *C. fraseriana* - *Banksia* spp. to low woodland of *Melaleuca* species, and sedgeland on the moister sites, of which there is 27% of pre-European extent remaining (EPA 2006). The vegetation under application is also described as Beard vegetation association 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina, of which there is 25.3% of pre-European extent remaining (Shepherd 2007).

The area under application is located within the City of Swan, within which there is 27.0% of pre-European vegetation extent remaining. In addition, there is approximately 13.5% of pre-European vegetation remaining in the local area (~5km radius).

The vegetation types under application retain less than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). Although the vegetation complexes identified on site have less than the recommended 30% threshold remaining the applied area is considered to be within a constrained area. The EPA (2006) recognises the Perth Metropolitan Region as a 'constrained area', providing for the variation of the minimum % of vegetation complexes remaining to 10% of the pre-European extent.

In addition, the area under application is not considered a significant remnant in the local area due to its small linear shape and connectivity to surrounding bushland. Therefore, the proposal is not considered likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining %
IBRA Bioregion			
Swan Coastal Plain	1,501,208	583,141	38.84*
City of Swan	8868	2402	27.0*
Local Area (~5km radius)	7850	~1064.8	~13.5
Hedde vegetation complex			
Bassendean Complex- Central And South	87 477	23 624	27.0
Beard type in Bioregion			

* (Shepherd 2007)
 **(EPA, 2006)

Methodology References
 -EPA (2006)
 - Shepherd (2007)
 GIS Database
 -SAC Bio Databases (08/07/2009)
 -Hedde Vegetation Complexes
 -NLWRA, Current Extent of Native Vegetation
 -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

There nearest wetland to the area under application is a Resource Enhancement Wetland occurring 150m east and a Conservation Category Wetland occurring 660m southeast of the area under application. The nearest watercourse (Bayswater Main Drain) occurs 2.2 km east of the area under application.

Given the distance to the nearest watercourse and wetlands it is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology GIS Databases
 -Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
 -Hydrography, linear

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

Comments

The soils within the area under application are part of the Spearwood Dune System and comprise of leached sands (Northcote et al. 1960-68), which are considered to have a high risk of wind erosion (Department of Agriculture 2005).

There is a low salinity risk within the applied area. Therefore, it is not considered likely that the proposed clearing would result in an increase in salinity. Given this and the thin, linear nature of the proposed clearing, the risk of wind erosion will be reduced. Therefore, it is not considered likely for the proposed clearing to cause appreciable land degradation.

Methodology References
 -Department of Agriculture (2005)
 -Northcote et al. (1960-68)
 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

The area under application is within Bush Forever site 385 (Reid Highway Bushland, Mirrabooka/Malaga) and therefore will have a direct impact on this conservation area by the removal of native vegetation.

In addition, the proposed clearing will cause fragmentation of the eastern portion of this Bush Forever site and may reduce the movement of fauna through the site.

The proposed clearing will also impact on this conservation area through the spread and introduction of weeds species or dieback by machinery. Dieback affected Banksia trees were observed within the area under application (DEC 2009a).

Given the proposed clearing will directly impact the conservation area; it is considered that the proposal is at variance to this Principle. An offset condition and a weed and dieback condition will be placed on the permit to mitigate this impact.

Methodology References
 -DEC (2009a)

GIS Database:
-Bushforever

(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

There nearest wetland to the area under application is a Resource Enhancement Wetland occurring 150m east and a Conservation Category Wetland occurring 660m southeast of the area under application. The nearest watercourse (Bayswater Main Drain) occurs 2.2 km east of the area under application.

The area under application is not within a Priority Drinking Water Source Area (PDWSA) and has a low salinity risk. Therefore, it is unlikely for the proposed clearing to cause deterioration to the quality of underground water.

Given the distance to the closest wetlands and watercourse, the small area to be cleared and low salinity risk, it is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology

GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear
-Priority Drinking Water Source Area (PDWSA)
-Salinity Risk

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

Comments

There nearest wetland to the area under application is a Resource Enhancement Wetland occurring 150m east and a Conservation Category Wetland occurring 660m southeast of the area under application. The nearest watercourse (Bayswater Main Drain) occurs 2.2 km east of the area under application.

Given the distance to the nearest watercourse and wetlands it is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology

GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear

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

Comments

The permit is to clear 0.104 ha within an area of 1.6 ha remnant for the purpose of constructing a fence for fauna enclosures. The area under application is proposed to be used for a research project conducted jointly with DEC, Murdoch University, Perth Zoo and Australian Wildlife Conservancy to undertake research into the role of parasites in the decline of Woylie populations in WA. It is intended to clear 1 m on either side of a predator proof fence to allow maintenance and to provide fire breaks.

The Permit was granted in December 2009. The applicant has submitted an application to amend condition 2b and 2c of the Permit. This condition is a revegetation condition. Main Roads will be undertaking the revegetation for the applicant as their offset is also on the same property. Main Roads wishes to undertake the additional revegetation in accordance with their revegetation methods that are stated in their approved offset proposal. Main Roads approved offset states that revegetation is to occur through direct planting and seeding of 2500 steams per ha and 4 kilos of seed per ha using up to 72 native species of local provenance. The revegetation does not include laying vegetated material on the revegetation area and therefore the applicant would like to take this part of the condition out of the permit. They wish to lay the vegetated material along the internal fence lines of the enclosures instead.

WAPC approval is required as the clearing occurs within Bush Forever site 385. WAPC approval has been received.

The construction of fences higher then 1.3m requires City of Swan approval. City of Swan approval has been received.

Submission (2009) received from Bush Forever stated that they agree with the clearing under the following conditions:

1. a dieback and hygiene management plan is developed prior to clearing; and
2. an offset proposal is required prior to clearing to offset the clearing of vegetation within the Bush Forever Site.

Methodology

References

- Submission (2009)
- GIS databases:
 - Perth Metropolitan Area South 20cm Orthomosaic - Landgate 2007
 - Metropolitan Regional Scheme

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the assessment recommendation is that the proposed clearing is at variance to Principles (a) and (h) and may be at variance to Principle (b) and (c) and is not likely to be at variance to the remaining clearing Principles.

5. References

- Williams M.R (2009) Butterflies and Day-flying Moths in a Fragmented Urban Landscape, South-west Western Australia: Patterns of Species Richness. *Pacific Conservation Biology* V15,p 32-46.
- Brown A., Thomson-Dans C. and Marchant N.(1998). *Western Australia's Threatened Flora*, Department of Conservation and Land Management, Western Australia.
- DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.
- DEC (2009a) Site Inspection Report for Clearing Permit Application CPS 3175/1, Lot 1001 Camboon Road, Malaga. Site inspection undertaken 13/07/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC91206).
- DEC (2009b) TEC advice, Species and Communities Branch, DEC. TRIM Ref. DOC91493.
- Department of Agriculture (2005) AgMaps Land Manager CD-rom for the Shires of Serpentine-Jarrahdale, Kwinana, Rockingham, Mandurah, Murray, Boddington, Waroona and Harvey. Department of Agriculture, Western Australia. ISSN: 1448-235X.
- EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.
- 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.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.
- Shepherd, D.P. (2007) 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Submission (2009) Direct Interest Submission received from Bush Forever, Department of Planning and Infrastructure. TRIM Ref DOC91461
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 17/07/2009).

6. 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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)

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)