



1. Application details

1.1. Permit application details

Permit application No.: 3073/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Ironbridge Holdings Pty Ltd

1.3. Property details

Property: LOT 12 ON DIAGRAM 57822 (House No. 11 IBIS HIGH WYCOMBE 6057)
Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.028		Mechanical Removal	Road construction or 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
<p>The native vegetation within the area under application is mapped as follows.</p> <ul style="list-style-type: none"> - Beard (1980) Association 1001: medium very sparse woodland; Eucalyptus marginata (Jarrah), with low woodland; Banksia spp. and Allocasuarina spp. - Hedde (1980) Southern River Complex: open woodland of Corymbia calophylla (Marri) - Eucalyptus marginata (Jarrah) - Banksia species with fringing woodland of Eucalyptus rudis (Flooded Gum) - Melaleuca raphiophylla (Swamp Paperbark) along creek beds. - Ecoscape (Australia) Pty Ltd undertook floristic surveys in March 2007 and September 2007 and identified affinity with floristic community types 20c, 21a and 21c. - DEC undertook a floristic survey in December 2007 and identified affinity with floristic community type 20c and/or 20a. - Ecoscape (Australia) Pty 	<p>A site inspection undertaken by DEC staff in January 2009 identified that the native vegetation under application is consistent with the mapped types.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>The native vegetation under application has previously been cleared, but is recovering well and with appropriate management is expected to achieve a structure, density and diversity similar to pre-clearing types in the area.</p> <p>The native vegetation condition is considered to range from 'excellent' to 'degraded' condition (Keighery 1994).</p>

Ltd undertook a floristic survey in August and November 2009 and identified floristic community type 3a and affinity with floristic community types 3b, 20c, 20a and 23a.

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 at variance to this Principle

This application is for the clearing of approximately 0.028 hectares of native vegetation within a linear strip of approximately 1.6 metres x 172 metres immediately adjacent to an existing firebreak along the south-western perimeter on the northern portion of Lot 12 on Diagram 57822, to facilitate the construction of a sealed road to access the southern portion of Lot 12 to enable development. The area under application has previously been cleared and is regenerating.

Ecoscape (Australia) Pty Ltd undertook floristic surveys in March 2007 and September 2007 on the northern portion of Lot 12 (including within the area under application) and determined that the native vegetation present has affinity with floristic community types 20c, 21a and 21c. Ecoscape (Australia) Pty Ltd reported on past disturbance through grazing and clearing, that the native vegetation has good potential for recovery, and that the majority of the site is recovering and should recover to some resemblance of the original native vegetation.

The area under application lies on the eastern side of the Swan Coastal Plain in a region that has been extensively cleared. Over 96% of the Ridge Hill Shelf (foothills) and Pinjarra Plain soils in this area has been cleared and little of the remaining vegetation is in 'good' or better condition (as per Keighery et al, 1994). A study by Keighery and Trudgen (1992) concluded that too little of the vegetation of this section of the Swan Coastal Plain remained to adequately conserve representative types. Vegetation of this region exhibited a high degree of endemism with over 34 species only found on the eastern side of the Swan Coastal Plain.

DEC undertook a site inspection in January 2009 and determined that the soils on the northern portion of Lot 12 (including within the area under application) are consistent with heavy soils expected on the eastern side of the Swan Coastal Plain, supported by the presence of *Grevillea bipinnatifida*, a large-leaved form of *Bossiaea eriocarpa* and another five taxa associated with the eastern Swan Coastal Plain, on the northern portion of Lot 12. Twenty seven additional taxa were recorded during this inspection, indicating that the native vegetation is regenerating well following the clearing event. DEC also determined that the native vegetation on the northern portion of Lot 12 (including within the area under application) consists of three distinct sections delineated by changes in the condition of the native vegetation present. Within the area under application, approximately 50% is considered to be in 'very good' to 'excellent' condition (as per Keighery et al, 1994), approximately 25% in 'good' condition, and approximately 25% in 'degraded' to 'good' condition. Overall, the condition of the native vegetation has improved since Ecoscape (Australia) Pty Ltd's 2007 surveys, and is likely to contain an increasing diversity of indigenous species.

Ecoscape (Australia) Pty Ltd undertook further floristic surveys in August 2009 and November 2009 and determined that the native vegetation present on the northern portion of Lot 12 comprises floristic community type 3a and an affinity with 3b on the rear third of the site, with the remaining two thirds of the northern portion of Lot 12 having an affinity with floristic community types 20c, 20a and 23a. Ecoscape (Australia) Pty Ltd indicates that floristic community type 3a is identified as occurring across approximately 33% of the area under application which is also considered to have affinity with floristic community type 3b, and the remaining 67% of the area under application was inconclusively analysed but is considered to have affinity with floristic community types 20a, 20c and 23a. Floristic community types 3a, 20a and 20c are threatened ecological communities (TECs), with 3a and 20c being federally recognised under the Environment Protection and Biodiversity Conservation Act 1999.

There are more than 150 records of rare and priority flora within a ten kilometre radius of the area under application, representing several species. Some of these records occur in close proximity to the area under application. Given the close proximity of the records there is a possibility that, through natural succession with recovery of the native vegetation over time, some may occur within the area under application.

During Ecoscape (Australia) Pty Ltd's 2009 floristic surveys, *Conostylis bracteata* (Priority 3) was identified as occurring in seven of ten quadrats placed on the northern portion of Lot 12. The nearest is approximately 20 metres from the area under application.

In a local context, the native vegetation under application is within 180 metres of Bush Forever site 45 (separated by Maida Vale Road) and is part of a viable habitat island of approximately 3 hectares in an otherwise extensively cleared landscape of urban development.

In the context of its size, 0.028 hectares in a linear strip adjacent to a larger area of native vegetation is unlikely to comprise significant biodiversity values. However in this instance the native vegetation under application

includes a federally recognised TEC, provides maintenance for recognised TECs and , may include priority flora. Given that the native vegetation under application is regenerating well, it is likely that it will achieve a condition similar to its pre-clearing density, diversity and structure. Therefore it is considered that the native vegetation under application is likely to include significant biodiversity values, particularly in the context of surrounding landuses.

Therefore the proposed clearing is at variance with this principle.

Methodology Ecoscape 2010
Ecoscape 2007
DEC 2009
Keighery et al 1994
Keighery and Trudgen 1992
GIS datasets:
- Swan Coastal Plain Central 20cm Orthomosaic - Landgate 2006
SAC biodatasets:
- WAHerb - DEC 2008
- DeFI - DEC 2008

(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**
In a local context, the native vegetation under application is within 180 metres of Bush Forever site 45 (separated by Maida Vale Road) and is part of a viable habitat island totalling approximately 3 hectares in an otherwise extensively cleared landscape of urban development.

DEC undertook a site inspection in January 2009 and determined that numerous bird species occur on the northern portion of Lot 12 (including within the area under application), and that it is likely that these fauna utilise resources provided within the area under application. DEC also identified Southern Brown Bandicoot (Priority 5) diggings on an adjacent property (Lot 9). DEC's 2009 site inspection determined that overall the condition of the native vegetation has improved since Ecoscape's 2007 flora surveys.

There are over 100 records of threatened and priority fauna within a ten kilometre radius of the area under application. The closest of these is for *Isodon obesulus fusciventer* (Southern Brown Bandicoot, Priority 5), located approximately 1.5 kilometres away. The nearest record of threatened fauna is *Calyptorhynchus latirostris* (Carnaby's Black-Cockatoo, Endangered) located approximately 2.3 kilometres away.

However in the context of size, 0.028 hectares in a narrow linear strip adjacent to a larger area of native vegetation the proposed clearing is not likely to comprise significant habitat for fauna.

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

Methodology Ecoscape 2007
DEC 2009
Keighery et al 1994
GIS datasets:
- Bush Forever 2000 - Site Boundaries - DPI 2000
- Swan Coastal Plain Central 20cm Orthomosaic - Landgate 2006
SAC biodatasets:
- Fauna (Jan 09)

(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 more than 50 records of declared rare flora within a ten kilometre radius of the area under application, representing several species. The nearest record is *Conospermum undulatum*, with three records located approximately 320 metres, 330 metres and 700 metres from the area under application. The Western Australian Herbarium's FloraBase website indicates that this species is associated with grey or yellow-orange clayey sand, similar to that found within the area under application.

Ecoscape (Australia) Pty Ltd undertook floristic surveys in March 2007 and September 2007 on the northern portion of Lot 12 (including within the area under application) but did not report any rare flora. Ecoscape (Australia) Pty Ltd undertook further floristic surveys in August 2009 and November 2009, and reported a Priority 3 species approximately 20 metres from the area under application, but did not report any rare flora. DEC undertook a site inspection undertaken in January 2009 on the northern portion of Lot 12 (including within the area under application) but did not report any rare flora.

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

Methodology Ecoscape 2010
Ecoscape 2007
DEC 2009
DEC 2007
WA Herbarium (1998-)
GIS datasets:
- Swan Coastal Plain Central 20cm Orthomosaic - Landgate 2006
SAC biodatasets:
- WAHerb - DEC 2008
- DeFI - DEC 2008

(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 at variance to this Principle

Eight known threatened ecological communities (TECs) occur within a ten kilometre radius of the area under application. The nearest known TEC is floristic community type 20a, located at two sites approximately 1.1 kilometres east-southeast and southeast of the area under application. The Dundas Road bushland (Bush Forever site 319, located approximately 2 kilometres southwest of the area under application) contains a mosaic of native vegetation that includes floristic community types 3a and 20a (Bush Forever 2000), and there are distinct similarities between the native vegetation present at this site and on the northern portion of Lot 12 (being that area subject to a vegetation conservation notice, and includes the area under application).

Ecoscape (Australia) Pty Ltd undertook floristic surveys in March 2007 and September 2007 and determined that the native vegetation present on the northern portion of Lot 12 (including within the area under application) has affinity with floristic community types 20c, 21a and 21c. Ecoscape (Australia) Pty Ltd undertook further floristic surveys in August 2009 and November 2009 and determined that the native vegetation present on the northern portion of Lot 12 comprises floristic community type 3a and an affinity with 3b on the rear third of the site, with the remaining two thirds of the northern portion of Lot 12 having an affinity with floristic community types 20c, 20a and 23a. Floristic community type 3a is identified as occurring across about a third of the area under application (about 0.7 hectares), with that third also considered to have affinity with floristic community type 3b, and the remainder of the area under application (about 0.13 hectares) was inconclusively analysed but considered to have affinity with floristic community types 20a, 20c and 23a.

DEC undertook a floristic survey in December 2007 and determined that the native vegetation present on the northern portion of Lot 12 (including within the area under application) is consistent with floristic community types 3a, 20a and/or 20c. DEC undertook a site inspection in January 2009 and determined that the soils on the northern portion of Lot 12 (including within the area under application) are consistent with heavy soils expected on the eastern side of the Swan Coastal Plain. This is supported by the presence of *Grevillea bipinnatifida*, a large-leaved form of *Bossiaea eriocarpa* and another five taxa associated with the eastern Swan Coastal Plain, on the northern portion of Lot 12. Twenty seven additional taxa were recorded during this inspection, indicating that the native vegetation on the northern portion of Lot 12 is regenerating well following the clearing event.

The available data suggests that the native vegetation on the northern portion of Lot 12 (including within the area under application) comprises a mosaic of floristic community types that include:

- the wetland community 3a (*Eucalyptus calophylla* - *Kingia australis* woodlands on heavy soils);
- affinity with 3b (*Eucalyptus calophylla* - *Eucalyptus marginata* woodlands on sandy clay soils);
- affinity with 20a (*Banksia attenuata* woodlands over species rich dense shrublands)
- affinity with 20c (shrublands and woodlands of the eastern side of the Swan Coastal Plain); and
- affinity with 23a (*Banksia attenuata* - *Banksia menziesii* woodlands of the central Swan Coastal Plain).

Floristic community types 3a, 20a and 20c are threatened ecological communities.

In relation to floristic community type 3a:

- this TEC is known from 28 occurrences totalling an area of approximately 147 hectares of which about 3% are in conservation reserves and the majority of occurrences are in 'very good' or better condition (as per Keighery et al, 1994); and
- this TEC is listed as 'Critically Endangered' endorsed by WA Minister for Environment and is listed as 'Endangered' under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999; and
- in a local context the nearest occurrence of this TEC is 2.3 kilometres south of the area under application.

In relation to floristic community type 20a:

- this TEC is known from 51 occurrences totalling approximately 412 hectares of which about 7% are in conservation reserves and the majority of occurrences are in 'excellent' or better condition (as per Keighery et al, 1994);
- this TEC is listed as 'Endangered' endorsed by WA Minister for Environment;
- in a local context the nearest occurrence of this TEC is 1.1km southeast of the area under application; and

- the current land tenures which this TEC occupies do not necessarily provide for the protection of conservation values and a number of occurrences are subject to development proposals and one has already been cleared.

In relation to floristic community type 20c:

- this TEC is known from two occurrences totalling about 113 hectares of which the majority is in 'good' or better condition (as per Keighery et al, 1994);
- this TEC is listed as 'Critically Endangered' endorsed by WA Minister for Environment and is listed as 'Endangered' under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999; and
- in a local context the nearest occurrence of FCT 20c is 3.9km northeast of the area under application.

The area under application lies on the eastern side of the Swan Coastal Plain in a region that has been extensively cleared. Over 96% of the Ridge Hill Shelf (foothills) and Pinjarra Plain soils in this area has been cleared and little of the remaining vegetation is in 'good' or better condition (as per Keighery et al, 1994). A study by Keighery and Trudgen (1992) concluded that too little of the vegetation of this section of the Swan Coastal Plain remained to adequately conserve representative types. Vegetation of this region exhibited a high degree of endemism with over 34 species only found on the eastern side of the Swan Coastal Plain.

Many of the species that occur in and define floristic community types 3a, 20a and 20c are highly susceptible to Phytophthora sp. Dieback infestation and some occurrences are already affected. The majority of these TEC occurrences are exposed to too frequent fire, high weed invasion and high incidences of rubbish dumping as a result of their close proximity to roads and urban and industrial development. Uncontrolled access into many of these TECs makes their management and protection difficult.

The native vegetation under application is likely to be important in the regeneration of TECs on Lot 12 (including floristic community type 3a which occurs within the area under application) as well as assisting to buffer any edge effects from adjacent landuses. The proposed clearing and subsequent proposed sealed road construction may alter the hydrology and drainage of the local area, which in turn may affect these TECs.

Therefore the proposed clearing is at variance with this principle.

Methodology Keighery et al 1994
Keighery and Trudgen 1992
Bush Forever 2000
EPA 2006
Ecoscape 2010
Ecoscape 2007
DEC 2007
DEC 2009
GIS datasets:
- Bush Forever 2000 - Site Boundaries - DPI 2000
SAC biodatasets:
- TEC-PEC sites (Dec 08)

(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 mapped Beard (1980) and Heddl (1980) vegetation types represented within the area under application have greater than 10% pre-clearing extent remaining within a constrained area (Metropolitan Regional Scheme) of the Swan Coastal Plain bioregion (EPA, 2006).

In the context of its size, 0.028 hectares in a linear strip adjacent to a larger area of native vegetation is unlikely to comprise a significant remnant of native vegetation in an area that has been extensively cleared.

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

Methodology EPA, 2006
Keighery et al, 1994
GIS datasets
- Swan Coastal Plain Central 20cm Orthomosaic - Landgate 2006

(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

Part of the area under application is located within a 'Resource Enhancement' palusplain.

A minor tributary named Poison Creek occurs within 200 metres of the area under application.

Ecoscope (Australia) Pty Ltd undertook floristic surveys in August 2009 and November 2009 and determined that the native vegetation present on the northern portion of Lot 12 comprises floristic community type 3a, which is described as a wetland community type comprising Eucalyptus calophylla - Kingia australis woodlands on heavy soils.

Therefore the proposed clearing is at variance with this principle.

Methodology Ecoscope 2010
Florabase 2009
GIS datasets:
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC 2008
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 2008
- Hydrography, linear - DOW 2006

(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**
The soil within the area under application is mapped as Unit Cb38. This Unit is described as sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands, sometimes with a clay D horizon below 5 feet, on the dunes and sandy swamps. Associated are various soils in the clayey swamps.

Sandy soils have a moderate to high potential for wind erosion.

Sandy soils, in particular Bassendean sands, are known to have a low phosphorus retention index in comparison to heavier soils (Northcote et al 1960-8).

The area under application is mapped as having moderate to low risk of acid sulphate soils, and no immediate risk of salinity.

Given the relatively small area for this proposal (approximately 0.028 hectares), it is unlikely that the proposed clearing cause appreciable land degradation.

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

Methodology Northcote et al 1960-8
GIS datasets:
- Soils, Statewide - AGWA 1999
- Salinity Risk LM 25m - DOLA 00
- Salinity Mapping LM 25m - DOLA 00
- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC 2007

(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 seven National Parks, two State Forests, four Nature Reserves and a Marine Park within ten kilometres of the area under application. The nearest of these is a Nature Reserve located approximately 2.5 kilometres southwest of the area under application.

There are numerous Bush Forever sites within ten kilometres of the area under application. The nearest of these is Bush Forever site 45, which is across Maida Vale Road and approximately 180 metres from the area under application. Bush Forever site 45 includes Poison Creek, which occurs within 200 metres of the area under application

Given the distance and fragmented nature of vegetation between these areas and the area under application, it is unlikely that the proposed clearing will impact on these areas.

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

Methodology GIS datasets:
- Swan Coastal Plain Central 20cm Orthomosaic - Landgate 2006
- Bush Forever 2000 - Site Boundaries - DPI 2000
- CALM Managed Lands and Waters - CALM 2005
SAC biodatasets:
- ntwc_covenants_parcel - NTWA 2007
- dec_covenants_polygons_1 - DEC 2008

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposal is not likely to be at variance to this Principle**
The area under application occurs within the Perth groundwater area under the Rights in Water and Irrigation Act 1914.

The area under application is located within a 'Resource Enhancement' palusplain. A minor tributary named Poison Creek occurs within 200 metres of the area under application.

The area under application is mapped as having moderate to low risk of acid sulphate soils, and no immediate risk of salinity.

It is unlikely that the relatively small amount of clearing for this proposal (approximately 0.028 hectares) will have a significant impact on water resources in the area.

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

Methodology GIS datasets:
- RIWI Act, Groundwater Areas - DOW 2006
- Hydrography, linear - DOW 2006
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC 2008
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 2008
- Topographic Contours, Statewide - DOLA 2002
- Salinity Risk LM 25m - DOLA 00
- Salinity Mapping LM 25m - DOLA 00
- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC 2007

(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 landscape is relatively flat, with a slight variation of up to 2 metres across the whole of Lot 12.

The soil within the area under application is mapped as Unit Cb38. This Unit is described as sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands, sometimes with a clay D horizon below 5 feet, on the dunes and sandy swamps. Associated are various soils in the clayey swamps (Northcote et al 1960).

Sandy soils generally have a high recharge / infiltration capacity. The proposed clearing would not be expected to cause or exacerbate flooding.

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

Methodology Northcote et al 1960
GIS datasets:
- Soils, Statewide - AGWA 1999
- Topographic Contours, Statewide - DOLA 2002

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

Comments

The proponent has submitted a Structure Plan (dated 7 May 2007) to the Western Australian Planning Commission for development approval. Revised Structure Plans (dated 1 September 2008 and 2 April 2009) were submitted to DEC for comment on 22 October 2008 and 14 April 2009 respectively. The structure plans have not been approved by WAPC.

The native vegetation on the northern portion of Lot 12 (including within the area under application) is subject to a vegetation conservation notice (VCN) under section 70 of the Environmental Protection Act 1986. The VCN prevents further unlawful clearing and includes measures to promote regeneration of the native vegetation.

Section 68 of the Environmental Protection Act 1986 prevents the Western Australian Planning Commission from approving the subdivision of land to which a VCN applies unless DEC's CEO consents to that approval.

A submission was received for application CPS 3073/1 from the Shire of Kalamunda, advising that the application is not supported because:

- the Subdivision Plan has not been formally considered by Council;
- the clearing of native vegetation prior to planning permission being granted by Council for proposed development is not supported by Council;

- Council is unlikely to support ad-hoc subdivision development within an area that should be the subject of a Structure Plan; and
- the area under application is considered under the Local Planning Scheme No.3 for retention for conservation purposes and preparation of a management plan.

Ecoscope (Australia) Pty Ltd undertook a floristic survey of the northern portion of Lot 12 in August 2009 and November 2009 and provided a report of the surveys to DEC in February 2010. The report provides evidence that Lot 12 contains a combination of TECs. DEC also determined that the survey used methodology and analysis that were not wholly consistent with DEC's recommendations for TEC survey.

There are a number of Aboriginal site of significance within 10 kilometres of the area under application. The nearest permanent registered Aboriginal site of significance is within 30 metres of the area under application, and an archived record overlaps approximately 34 square metres at the southern end of the area under application.

Methodology

Ecoscope 2010

GIS dataset

- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLI

4. Assessor's comments

Comment

Assessment of this application has determined that the clearing proposed is 'at variance' with clearing principles (a), (d) and (f), and is 'not likely to be at variance' with the remaining clearing principles.

5. References

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- Department of Environmental Protection (2000) Bush Forever, Volume 2. Government of Western Australia.
- Ecoscope (Australia) Pty Ltd (2007) Vegetation and Flora Assessment of Lot 12 Ibis Place High Wycombe - Ironbridge Property. Report of floristic surveys undertaken on 20 March 2007 and 17 September 2007.
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- Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994) A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.
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- 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.
- Shire of Kalamunda's Local Planning Scheme No.3 (version 1, 15 March 2007).
- Western Australian Herbarium (1998+) FloraBase - The Western Australian Flora. Department of Environment and Conservation <http://florabase.dec.wa.gov.au>. Accessed 14 April 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)