



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1752/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Rinker Australia Pty Ltd

### 1.3. Property details

Property: LOT 3 ON PLAN 14769 (House No. 89 COCKRAM MARTIN 6110)  
Local Government Area: City Of Gosnells  
Colloquial name:

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 3.5                |           | Mechanical Removal | Miscellaneous       |

## 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>Beard Vegetation Associations</p> <p>- 3; Medium forest; jarrah-marri (Shepherd et al. 2001, Hopkins et al. 2001).</p> <p>- 4; Medium woodland; marri and wandoo (Shepherd et al. 2001, Hopkins et al. 2001).</p>  | <p>The application is to clear 3.5ha of native vegetation to extend the Readymix Gosnells Quarry and improve vehicle access on a largely vegetated 267.6ha lot.</p>   | <p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p> | <p>The vegetation clearing description is based on information obtained during a site inspection on 17/04/2007 (TRIM Ref. DOC20820) and from a report prepared for the clearing permit application by URS Corporation (2007).</p> |
| <p>Heddle Vegetation Complexes:</p> <p>- Dwellingup Complex in medium to high rainfall; no information available (Hedde et al. 1980).</p> <p>- Darling Scarp Complex; Vegetation ranges from low open woodlands to lichens according to depth of soils. Woodland components chiefly E. wandoo with E. laeliae in the north, C. haematoxylon in the south, and C. calophylla throughout the region. Dominant vegetation types R.R (Hedde et al. 1980).</p> | <p>The vegetation under application can be separated into two different areas. The first area, adjacent to the main pit on the south eastern benches, comprises of thin strips of revegetated local and non-local native species and a small area of remnant vegetation to the west of the thin strips. These native and non-native plants were intentionally planted in the 1980's (to stabilise the soils). Local species present within this area include Eucalyptus wandoo, with the remnant comprising Corymbia calophylla, Eucalyptus drummondii, Calothamnus rupestris (Priority 4) and Hibbertia vaginata (URS Corporation 2007).</p> |  |   |
| <p>Mattiske Vegetation Complex</p> <p>- DS (Darling Scarp); Mosaic of open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla, with some admixtures with Eucalyptus laeliae in the north (subhumid zone),</p>  | <p>The second area on the south eastern portion of the application (~1.04 ha) comprises three different vegetation communities including:</p> <p>- Open low woodland of Corymbia calophylla over Heath dominated by Hakea undulata/Hakea trifurcata</p>   |  |   |

with occasional *Eucalyptus marginata* subsp. *elegantella* (mainly in subhumid zone) and *Corymbia haematoxylon* in the south (humid zone) on deeper soils adjacent to outcrops, woodland of *Eucalyptus wandoo* (subhumid and semiarid zones), low woodland of *Allocasuarina huegeliana* on shallow soils over granite outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on or near granite outcrops in all climate zones (Mattiske Consulting 1998).

or *Melaleuca radula* with herbs of *Dampiera alata* where the area was more open;

- Dense Heath of mixed species, mainly *Hakea erinacea* in loam with scattered to dense granite rocks; and
- Herbs of *Borya sphaerocephala* surrounding large outcropping granite rocks, with scattered shrubs becoming dense and blending into the first vegetation unit (URS Corporation 2007). The majority of the vegetation was in an excellent condition, with localised patches in a degraded condition.

### 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 may be at variance to this Principle**

The proposal is for the clearing of 3.5 ha for the purposes of quarrying. The land is within the Extractive Industry Zone under the City of Gosnells Town Planning Scheme No.6.

The application is to clear 3.5ha of vegetation on a largely vegetated 267.6ha lot.

The vegetation under application can be separated into two different areas. The first area, adjacent to the main pit on the south eastern benches of the quarry, comprises of thin strips of revegetated local and non-local native species and a small area of remnant vegetation to the west of the thin strips. These native and non-native plants were intentionally planted in the 1980s with the majority of species not local to the area (URS Corporation 2007). Given that the majority of species present in this area are alien to the region, this first area is not considered to comprise a high level of biological diversity.

The second area on the south eastern portion of the application comprises three different vegetation communities including open low woodland of *Corymbia calophylla* over heath, dense heath of mixed species and herbs of *Borya sphaerocephala* surrounding large outcropping granite rocks, with scattered shrubs becoming dense and blending into the first vegetation unit (URS Corporation 2007). The majority of the vegetation in the second area (1.04ha) is in an excellent condition with localised patches in a degraded condition (Site inspection 2007). Approximately 80 species across the three vegetation communities were recorded over this area during a flora survey undertaken in May 2006, including individuals of *Calothamnus rupestris* (Priority 4) (Bennett Environmental Consulting Pty Ltd 2006).

Whilst the area under application contains areas of more than 80 flora species, it is part of a large remnant that has a similar species composition which is in excellent condition. It is unlikely that the area under application contains a higher level of biodiversity than the surrounding vegetation which is in excellent condition.

**Methodology**

**References:**

- Site inspection (2007) (TRIM Ref. DOC20820)
- Bennett Environmental Consulting Pty Ltd (2006)
- URS Corporation (2007)

**GIS database:**

- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

#### (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 may be at variance to this Principle**

The application is to clear 3.5ha of vegetation on a largely vegetated 267.6ha lot within the City of Gosnells. The areas surrounding this lot directly to the north, east, south and west are largely vegetated.

Nine conservation significant fauna species have been recorded by the Department within a 5km radius of the vegetation under application including *Hydromys chrysogaster* (Water Rat) (Priority 4), *Kawaniphila pachomai* (Priority 1) (Insecta), *Isoodon obesulus fusciventer* (Quenda) (Priority 5), *Dasyurus geoffroi* (Chuditch) (Vulnerable), *Phascogale tapoatafa* (Brush-tailed Phascogale) (Vulnerable) and *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo) (Vulnerable). Of these species, *H.chrysogaster* (Priority 1) is not likely to be

found within the vegetation under application as it prefers habitats containing wetlands or watercourses. *Phascogale tapoatafa* (Vulnerable), *D. geofroii* (Vulnerable) and *C. banksii* (Vulnerable) may utilise parts of the vegetation under application to forage for food, however they are unlikely to breed in the area due to the lack of available tree hollows required for nesting.

A vertebrate fauna survey undertaken between 15 November 2004 and 21 November 2004 of Lot 3 (267.6ha) adjacent to the vegetation under application identified 78 species of fauna within the areas adjacent to the vegetation under application. Of these 78 species, two are protected under State and/or Commonwealth legislation, 29 are considered locally significant due to their limited distribution and two are introduced species (URS Corporation 2007).

The area proposed to be cleared is likely to be habitat for fauna species in the area, however, given the small area which is part of a large remnant is not likely to be significant habitat for fauna indigenous to WA.

**Methodology**    **References:**  
- DEC Fauna Habitat Notes.xls February 2007  
- Site inspection (2007) (TRIM Ref. DOC20820)  
- URS Corporation (2007)  
**GIS databases:**  
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05  
- SAC Bio Datasets, Accessed 20 April 2007

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

**Comments**    **Proposal may be at variance to this Principle**

There are approximately 22 known occurrences of Declared Rare or Priority Flora within a 5km radius of the vegetation under application, the closest being *Acacia oncinophylla* subsp. *patulifolia* (Priority 2) located ~633m from the vegetation under application. The closest known Declared Rare Flora (DRF) occurrence is two populations of *Darwinia apiculata*, located ~785m from the vegetation under application.

Other known occurrences of DRF or Priority Flora include;

- 3 populations of *Thelymitra stellata* (Rare);
- 1 population of *Darwinia apiculata* (Rare);
- 1 population of *Conospermum undulatum* (Rare);
- 1 population of *Acacia lasiocarpa* var. *bracteolata* long peduncle variant (Priority 1);
- 1 population of *Schoenus pennisetis* (Priority 1);
- 3 populations of *Acacia oncinophylla* subsp. *patulifolia* (Priority 2);
- 1 population of *Goodenia arthrotricha* (Priority 2);
- 3 populations of *Asteridea gracilis* (Priority 3);
- 1 population of *Tetratheca* sp. Granite (Priority 3);
- 1 population of *Acacia horridula* (Priority 3);
- 1 population of *Haigania corymbosa* (Priority 3);
- 2 populations of *Calothamnus rupestris* (Priority 4); and
- 1 population of *Pimelea rara* (Priority 4).

Of these known populations of Declared Rare and Priority Flora, *Schoenus pennisetis* (Priority 1) and *Acacia lasiocarpa* var. *bracteolata* long peduncle variant (Priority 1) are not known to occur within the same Beard, Heddlé or Mattiske vegetation communities as the vegetation under application.

The remaining eleven species are known to occur within one, or a combination, of the same vegetation communities associated with the vegetation under application.

Two flora surveys have been undertaken on Lot 3. The first flora survey undertaken in October 2004 identified vegetation communities and flora across the property, with three quadrats in close proximity to the vegetation under application. The second survey undertaken in May 2006 identified vegetation communities and flora within the vegetation under application.

*T. stellata* (Star Sun-Orchid) and *D. apiculata* (Scarp Darwinia) are known to occur within similar habitats and soils to the vegetation under application. No individuals of *Thelymitra stellata* (Rare) or *Darwinia apiculata* (Rare) were observed during the flora survey undertaken in October 2004 (Bennett Environmental Consulting Pty Ltd 2005) or May 2006 (Bennett Environmental Consulting Pty Ltd 2006). Given that *D. apiculata* is a small shrub, it is considered likely that this species would have been visible during the May 2006 survey. However, *T. stellata* would not have been visible during the time of this survey as it flowers in October.

The flora survey undertaken in October 2004 identified four *Thelymitra* species (none of which were *T. stellata*) within areas of vegetation adjacent to the vegetation under application (Bennett Environmental Consulting Pty Ltd 2005). Notwithstanding, as *T. stellata* is known to occur within similar habitats and soils as the vegetation under application it is possible that the species may occur within the remnant vegetation under application

(Species and Communities Branch 2007).

Furthermore, the flora survey undertaken in May 2006 concluded that up to thirty five individual *Calothamnus rupestris* (Priority 4) will be removed during the proposed expansion.

Given the above, the proposed clearing may be at variance to this Principle.

- Methodology** References:
- Bennett Environmental Consulting Pty Ltd (2005)
  - Bennett Environmental Consulting Pty Ltd (2006)
  - Western Australian Herbarium (1998)
  - Species and Communities Branch (2007)
- GIS Databases:
- Pre-European Vegetation - DA 01/01
  - Declared Rare and Priority Flora List - CALM 01/07/05
  - Swan Coastal Plain North 40cm Orthomosaic - DLI 05
  - Matiske Vegetation - CALM 24/3/98
  - Heddle Vegetation Complexes - DEP 21/06/95

**(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 known occurrences of Threatened Ecological Communities (TEC) within a 5km radius of the vegetation under application. The closest known occurrences are Floristic Community Type 3b and Floristic Community Type 20b, located approximately 1km from the proposed clearing. A second known occurrence of Floristic Community types 3b and 20b occur within a 5km radius of the vegetation under application.

Floristic Community Type 3b is known as the Vulnerable *Corymbia calophylla*-*Eucalyptus marginata* woodlands on sandy clay soils (Gibson et al. 1994). Floristic Community Type 20b is known as the Vulnerable Eastern *Banksia attenuata* and/or *Eucalyptus marginata* woodlands (Gibson et al. 1994).

The vegetation under application is located outside the recommended buffer distances to these local Threatened Ecological Communities.

The vegetation and flora surveys did not identify any TECs.

Given the above it is not likely that the proposed clearing will impact on any known TECs.

- Methodology** References:
- Bennett Environmental Consulting Pty Ltd (2006)
  - Gibson et al. (1994)
- GIS databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05
  - Threatened Ecological Communities - CALM 12/4/05

**(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 may be at variance to this Principle**

The vegetation under application is a component of Beard Vegetation Associations 3 and 4 (Hopkins et al. 2001) and Heddle: Darling Scarp Complex and Dwellingup Complex in medium to high rainfall (Heddle et al. 1980) of which 70.0%, 23.3%, 36.9% and 84.9% of Pre-European extent remain respectively (Adapted from: Shepherd et al. 2001). The vegetation under application is also a component of Matiske Darling Scarp (DS) Complex, of which 43.3% Pre-European extent remains (Matiske 1998).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents a clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000).

|                   | Pre-European | Current extent | Remaining | Conservation*** | % In reserves/<br>managed land |
|-------------------|--------------|----------------|-----------|-----------------|--------------------------------|
| CALM**            | (ha)         | (ha)           | (%)       | status          |                                |
| IBRA Bioregions   |              |                |           |                 |                                |
| Jarrah Forest     | 4,544,335    | 2,665,480      | 58.7      | Least Concern   |                                |
| City of Gosnells* | 12,759       | 3,751          | 29.4      | Vulnerable      |                                |

Vegetation type:

|   |           |           |      |               |      |  |
|---|-----------|-----------|------|---------------|------|--|
| Beard**:  |           |           |      |               |      |  |
| - 3   | 2,661,514 | 1,863,982 | 70.0 | Least concern | 18.5 |  |
| - 4   | 1,054,316 | 245,361   | 23.3 | Vulnerable    | 10.9 |  |
| Hedde:  |           |           |      |               |      |  |
| - Darling Scarp Complex                         | 49,338    | 18,227    | 36.9 | Depleted      | 2.7  |  |
| - Dwellingup Complex in medium to high rainfall | 83,660    | 71,067    | 84.9 | Least concern | 12.9 |  |
| Mattiske:                                       |           |           |      |               |      |  |
| - Darling Scarp Complex                         | 291,043   | 126,045   | 43.3 | Depleted      |      |  |

\* (Shepherd et al. 2001)

\*\* (Adapted from: Shepherd et al. 2001)

\*\*\* (Department of Natural Resources and Environment 2002)

The proposal is to clear 3.5ha within a 267.6ha remnant. Whilst the City of Gosnells has only 29.4% of its original vegetation remaining, the area under application is not considered to be a significant remnant of native vegetation within an area that has been extensively cleared.

- Methodology**    **References:**
- Site inspection (2007) (TRIM Ref. DOC20820)
  - Mattiske (1998)
  - Hopkins et al. (2001)
  - Shepherd et al (2001)
  - Adapted from: Shepherd et al. (2001)
  - Department of Natural Resources and Environment (2002)
  - EPA (2000)
- GIS Databases:**
- Pre-European Vegetation DA 01/01
  - Hedde Vegetation Complexes - DEP 21/06/95
  - Mattiske Vegetation - CALM 24/3/98

**(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 wetlands or watercourses mapped within the vegetation under application. The closest watercourse is the Ellis Brook and an un-named tributary to the Canning River, located approximately 860m and 750m from the vegetation under application, respectively. The Canning River and associated floodplain (Conservation Category Wetland), is located approximately 1.1kms from the vegetation under application.

Two Australian Nature Conservation Agency (ANCA) wetlands occur within a 10km radius. ANCA wetlands are defined as wetlands of national importance, listed in A Directory of Important Wetlands in Australia (Australian Nature Conservation Agency 1996). The ANCA registered Brixton Street Swamps and Gibbs Road Swamp System are located approximately 6.5km and 6.6kms from the vegetation under application, respectively.

Given the above and the description of the areas of vegetation under application, the vegetation under application is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland. Therefore, the proposed clearing is not likely to be at variance to this Principle.

- Methodology**    **Reference:**
- Australian Nature Conservation Agency (1996)
- GIS databases:**
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
  - Rivers 250K - GA
  - ANCA, Wetlands - CALM 08/01

**(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 vegetation under application is associated with the Mw31 soil unit. This soil unit is associated with deeply incised, steep scarp and valley side slopes of the Darling scarp and its more deeply incised tributary valleys. Chief soils of the steep scarp and valley side slopes, on which massive rock outcrops are a feature, seem to be acid red earths on the colluvial slope deposits (DAWA 2004).

The soils within the area of vegetation under application can be separated into two distinct areas. The soil within

the first area of vegetation adjacent to the pit has been modified by previous mining activities, and is likely to comprise a combination of local soil material. The soil within the second area of vegetation under application in the south eastern corner comprises of lateritic soils overlying sandy clay with a weathering zone up to 10m deep overlying fresh granite (URS Corporation 2007).

The vegetation under application is associated with a Class 3 Acid Sulphate Soils Risk. A Class 3 risk is defined as no known risk.

Given the geology and topography of the area, the proposed clearing is not considered likely to cause appreciable land degradation. Therefore, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**    References:  
- DAWA (2004)  
- URS Corporation (2007)  
GIS databases:  
- Soils, Statewide - DA 11/99  
- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC

**(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 two large conservation areas within a 5km radius of the vegetation under application, the Pickering Brook National Park and the Jarrahdale State Forest. At its closest point the Pickering Brook National Park is ~1.1kms from the vegetation under application. The Jarrahdale State Forest is located ~3.7kms from the vegetation under application. The Ellis Brook Valley Reserve is also located in close proximity to the vegetation under application ~800m to the north (URS Corporation 2007).

There are three Bush Forever sites within a 5km radius being Bush Forever sites 246, 61 and 124 located approximately 1.3kms, 2.8kms and 2.4kms from the vegetation under application, respectively.

Given the topography and location of the vegetation under application and distance to these reserves, it is unlikely that the proposed clearing will impact on the environmental values of these conservation areas. Therefore the clearing is not likely to be at variance to this Principle.

**Methodology**    Reference:  
- URS Corporation (2007)  
GIS databases:  
- CALM Managed Lands and Waters - CALM 1/07/05  
- Bushforever - MFP 07/01

**(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 soils within the area of vegetation under application can be separated into two distinct areas. The soil within the first area of vegetation adjacent to the pit has been modified by previous mining activities, and is likely to comprise a combination of local soil material. The soil within the second area of vegetation under application in the south eastern corner comprises of lateritic soils overlying sandy clay with a weathering zone up to 10m deep overlying fresh granite (URS Corporation 2007).

Erosion and sedimentation of surface water from cleared areas may occur during rainfall events (URS Corporation 2007). However, given the geology, distance to nearby surface water areas and elevation of the site, the proposed clearing is not considered likely to cause deterioration in the quality of surface or underground water.

**Methodology**    Reference:  
- URS Corporation (2007)  
GIS databases:  
- Soils, Statewide - DA 11/99  
- Topographic Contours, Statewide - DOLA 12/09/02  
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC  
- Rivers 250K - GA

**(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 geology of the vegetation under application comprises of lateritic soils overlying sandy clay with a weathering zone up to 10m deep overlying fresh granite (URS Corporation 2007).

The site is elevated at ~300m above sea level, with a groundwater level of 15m AHD (URS Corporation 2007).

Surface hydrology has been modified across the site (URS Corporation 2007), particularly in the first area of vegetation adjacent to the quarry, with current surface water runoff captured in the quarry dams. Given the small size of the second area of vegetation (~1.04ha) in relation to the existing quarry activities, geology of the site and depth to groundwater, the proposed clearing is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

**Methodology Reference:**  
- URS Corporation (2007)

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

##### **Comments**

An Extractive Industries Licence (EIL) renewal is required from the City of Gosnells, as the current EIL expires in June 2007. A renewal has been submitted to the City of Gosnells and is currently being considered. However, the development received Development Approval for the life of the quarry from the Metropolitan Region Planning Authority and the City of Gosnells under the Metropolitan Region Scheme in 1985 (TRIM Ref. DOC20709).

There are two Aboriginal Sites of Significance associated with the area under application, being Frog Dreaming (Site ID 19162) and Frog Dreaming Creek (Site ID 19572). It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

There is no other RIWI Act Licence, Works Approval, or EP Act Licence affecting this application.

**Methodology GIS Database:**  
- Aboriginal Sites of Significance - DIA

#### **4. Assessor's comments**

| <b>Purpose</b> | <b>Method Applied</b> | <b>area (ha)/ trees</b> | <b>Comment</b>   |
|----------------|-----------------------|-------------------------|--|
| Miscellaneous  | Mechanical Removal    | 3.5                     | The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986. The clearing as may be at variance to Principles (c) and is not likely to be at variance to the remaining Principles. |

#### **5. References**

- 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.
- Australian Nature Conservation Agency (1996). "A Directory of Important Wetlands in Australia." Second Edition, ANCA, Canberra. ISBN 0 642 21378.
- Bennett Environmental Consulting Pty Ltd (2005) Vegetation and Flora, Readymix Quarry Gosnells, January 2005 (TRIM Ref. DOC20734).
- Bennett Environmental Consulting Pty Ltd (2006) Flora Survey, May 2006 (TRIM Ref. DOC19650).
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Gibson et al. (1994) A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management.
- 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.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- NVC (2007) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, received 06/05/2007. Native Vegetation Conservation, Department of Environment and Conservation, Western Australia (TRIM Ref. DOC21734).
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Site inspection (2007) (TRIM Ref. DOC20820).
- Species and Communities Branch (2007) Biodiversity advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, received 02/05/2007. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC21478).
- URS Corporation (2007) Report: Supporting Documentation for the Clearing Permit Application (Purpose Permit, Gosnells

## 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                                |
| 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)                    |