



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1496/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Dundas

### 1.3. Property details

Property:  
 Local Government Area: Shire Of Dundas & Shire Of Kondinin  
 Colloquial name: Hyden-Norseman Road Reserve

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of:              |
|--------------------|-----------|--------------------|----------------------------------|
| 10                 |           | Mechanical Removal | Road construction or maintenance |
| 40                 |           | Mechanical Removal | Extractive Industry              |

## 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  |
|---|--|---|--|
| Medium woodland; salmon gum & gimlet;<br>Medium woodland; coral gum ( <i>Eucalyptus torquata</i> ) & goldfields blackbutt ( <i>E. le soufii</i> );<br>Bare areas; salt lakes;<br>Bare areas; rock outcrops;<br>Medium woodland; morrel & Dundas blackbutt ( <i>E. dundasii</i> );<br>Medium woodland; salmon gum & morrel;<br>Shrublands; mallee scrub, <i>Eucalyptus eremophila</i> ;<br>Medium woodland; redwood ( <i>Eucalyptus transcontinentalis</i> ) & merrit ( <i>E. floctoniae</i> );<br>Shrublands; Casuarina acutivalvus & calothamnus (also melaleuca) thicket on greenstone hills;<br>Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire;<br>Shrublands; acacia, casuarina & melaleuca thicket. | The areas under application are for the extension of existing gravel pits and road realignment. Of the 32 gravel pits inspected by DEC staff during a site visit on 18 October 2006, 21 are to be extended for the purpose of gravel extraction and 11 redundant pits have been identified by the Shire of Dundas for rehabilitation. The site inspection undertaken by DEC staff on 18 October 2006 found the areas under application generally to be in pristine condition with little or no signs of disturbance. Some of the areas proposed to be cleared have been previously disturbed by fire caused by lightning strikes, but this is a frequent and natural occurrence and regeneration of native vegetation appears to be a rapid process. Native vegetation along road verges is also in excellent condition with little evidence of weed invasion. | Pristine: No obvious signs of disturbance (Keighery 1994) | Interpretation based on site visit undertaken by DEC staff on 18 October 2006. |

## 3. Assessment of application against clearing principles

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

Comments: Proposal may be at variance to this Principle  
 The proposal is for the clearing of 50 hectares of native vegetation for the purpose of gravel extraction and road

realignment along the Norseman Hyden Road in the Shire of Dundas. There are a range of vegetation types present with acacia, casuarina & melaleuca shrublands, salmon gum woodland, redwood (*Eucalyptus transcristallina*) & merritt (*E. floetoniae*) woodland and morrell & Dundas blackbutt (*E. dundasii*) woodlands predominating. A site inspection by DEC staff found the area under application to be in pristine condition with little signs of disturbance other than from fires caused by lightning strikes. Although the percentage remaining of these vegetation types is above 50%, the area is considered to have high biodiversity values. Biodiversity coordination section (DEC) advised: "The area is believed to be relatively poorly surveyed, therefore the range and number of fauna, flora and vegetation records despite the low survey effort indicates that it is potentially an area of high biodiversity value."

Therefore, the proposal may be at variance to this principle.

To minimise any loss of biodiversity, conditions will be placed on the permit to ensure surveys are undertaken by a flora specialist prior to clearing to identify the presence of any DRF or priority species within the areas proposed for clearing; that clearing of vegetation be avoided, and where this is not possible, minimised; that gravel pits be revegetated once they have become exhausted; that previously abandoned gravel pits be revegetated to offset any loss of biodiversity resulting from the proposed clearing; and weed control measures be implemented.

**Methodology** DEC Site Visit (2006)  
Biodiversity Coordination Section, DEC (2006)  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Declared Rare and Priority Flora List - CALM 01/07/05

**(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 is not likely to be at variance to this Principle**

Biodiversity advice states that "Ortho-photography is not available for the application area, and the corporate Remnant Vegetation or Vegetation Mask (Land Monitor) datasets do not cover the application area. A site visit that was conducted on the 18th October 2006 indicated that a vast expanse of native vegetation occupied the greater area to the north and south of the Hyden-Norseman Road. Orthophotography and remnant vegetation datasets were not available for the local area or surrounds. Native vegetation of the existing uncleared areas predominantly appeared to be undisturbed and have a high level of cover and connectivity, except in areas where recent wildfires had occurred (although regeneration appeared to be healthy). It is therefore expected that the various habitat types of the area along the Hyden-Norseman Road are represented in relatively large tracts within the remnant vegetation to the north and south of the road. The lack of fauna records within the local area is likely to be due to a paucity of fauna surveys being conducted in the area. However, given the extent of uncleared conservation lands that are adjacent or in close proximity to the application area, there is a high probability that they will contain comparable habitat to the vegetation that is proposed to be cleared."

This vegetation is therefore unlikely to provide a significant habitat for indigenous fauna.

**Methodology** Biodiversity Coordination Section, DEC (2006)

**(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**

Two species of DRF were identified within the local area:

*Eucalyptus platydisca* (Jimberlana mallee. Current name: *Eucalyptus* sp. *Norseman*): No current description. Previous description of *Eucalyptus platydisca*: "Flowering occurs from March to June, with flowers being white in colour. This mallee resembles karri but has fruit with a level disc, slightly larger buds, and a very restricted habitat. Jimberlana mallee is known only from north-east of Norseman, over a geographic range of 18km. It grows in dark brown, sand loam amongst granite boulders, in open shrub mallee (*Eucalyptus oleosa*), spinifex (*Triodia*) and speargrass (*Stipa*)" (Western Australia's Threatened Flora, Department of Conservation and Land Management, 1998, Eds: Brown, A., Thomson-Dans, C. and Marchant, N.).

*Eremophila viscida* (Varnish Bush): This species is listed as a Schedule 1 (Extant Taxa) in Wildlife Conservation (Rare Flora) Notice 2006, of the Wildlife Conservation Act and as an Endangered Species within the EPBC Act 1986. This species was recorded at a site within the local area in 1979, and the recorded location is approximately 1.6 kilometres east of Gravel Pit 21 and approximately 600 metres south of the Hyden-Norseman Road. Given the date of the record the exact location may not be accurate. The recorded location of this DRF species is within the same Beard vegetation type as Gravel Pit 21.

This species is described in Florabase as: Shrub, 1.2-4 m high. Fl. green, white, yellow, Sep-Nov. Granitic soils, sandy loam. Stony gullies, sandplains. The habitat of this species is further described in Interim Recovery Plan No. 137: Varnish Bush (*Eremophila viscida*) - Interim Recovery Plan 2003-2008 (Phillimore, R., Evans, R., Brown, A., and English V, 2003). The preferred habitat of Varnish Bush is described in this Interim Recovery Plan (IRP) as "areas of brown, sandy loam or red brown clay loam soils, in open woodland in association with

*Eucalyptus loxophleba* and scrub vegetation often near areas of exposed granite or alongside saline lake systems." The IRP also states that "The critical habitat for *Eremophila viscida* comprises the area of occupancy of the known population; similar habitat within 200 metres of the known population; - as described above - "remnant vegetation that links subpopulations; and additional nearby occurrences of similar habitat that do not currently contain the species but may have done so in the past and may be suitable for translocations" and that "Given that this species is Critically Endangered it is considered that all known habitat is critical." The IRP describes threats to this species which include weed invasion, soil erosion (as a result of increased water flows channeling down a creekline and eroding soil along its banks [Phillimore et. al., 2003]), and road maintenance, which threatens most populations. Threats associated with road maintenance include grading, chemical spraying, construction of drainage channels and mowing of roadside vegetation, with some of these actions also encouraging weed invasion (Phillimore et. al., 2003). Some of this road maintenance activities, or similar activities, may occur as a result of the proposed road works. The IRP also states that "No developments should be approved unless the proponents can demonstrate that they will not have a deleterious impact on the species, or its habitat or potential habitat, or the local surface and ground water hydrology".

Biodiversity advice states that "The area is believed to be relatively poorly surveyed, therefore the range and number of fauna, flora and vegetation records despite the low survey effort indicates that it is potentially an area of high biodiversity value. Given the identification of records for two DRF species within the local area, a flora survey should be conducted of the application area to determine the potential significance of impacts to flora values of the area. Population estimates of any DRF (and its critical habitat) and Priority Flora identified within the application area will need to be provided, along with expected levels of impact from the proposed gravel pit works."

CALM's Declared Rare and Priority database (2005) indicates there are many Priority species within the Shire of Dundas.

To ensure all DRF and priority species are identified and managed accordingly, a condition will be imposed to ensure surveys are undertaken by a flora specialist prior to clearing to identify the presence of any DRF or priority species within the areas proposed for clearing. Where DRF species are identified the Shire will be required to submit the records to the Department of Environment and Conservation ensuring no clearing occurs within 50m of identified DRF and within 10m of Priority flora, unless approved by the CEO.

**Methodology** Biodiversity Coordination section, DEC (2006)  
GIS databases:  
- Declared Rare and Priority Flora List - CALM 01/07/05  
- Pre-European Vegetation - DA 01/01

**(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**

Of 32 gravel pits inspected by DEC staff during a site visit on 18 October 2006, 22 were to be extended for the purpose of gravel extraction and 10 redundant pits were identified by the Shire of Dundas as requiring rehabilitation. Biodiversity coordination section advises: "A Priority Ecological Community (PEC) intersects the application area. It is believed that there are no active pits within the area classified as the Bremer Range PEC (only two pits which are to be rehabilitated), however one pit was identified on the eastern boundary (Pit 10) of the PEC. Conducting a flora survey of the application area will determine whether or not the proposed extension of Gravel Pit 10 will occur within the Bremer Range PEC."

The proponent has since removed Pit 10 from the clearing application, and its status has been amended to 'rehabilitate without dam'. The amended clearing application includes clearing for the extension of 21 gravel pits, and 11 pits assigned for rehabilitation.

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

**Methodology** DEC Site Visit (2006)  
Biodiversity Coordination Section, DEC (2006)  
GIS Databases:  
- 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 is not likely to be at variance to this Principle**

The proposed clearing occurs within the Coolgardie IBRA Region, where the area of vegetation remaining is 98.5% (Shepherd et al. 2001). The area predominantly traverses vegetation types 1413, 491, 936 and 522 where there is 60.6%, 84.4%, 89.2% and 89.6% remaining respectively, all of which are considered of 'Least concern' (Department of Natural Resources and Environment 2002). This proposal is considered unlikely to be at variance to this principle.

| IBRA Bioregion ***           | Pre - European<br>(ha)* | Current Extent<br>(ha)* | Remaining<br>% | Conservation Status ** |
|------------------------------|-------------------------|-------------------------|----------------|------------------------|
| - Coolgardie<br>Beard Unit - | 12,917,718              | 12,719,084              | 98.5           | Least concern          |
| 1413                         | 2,296,506               | 1,390,609               | 60.6           | Least concern          |
| 491                          | 79,779                  | 67,365                  | 84.4           | Least concern          |
| 936                          | 1,016,210               | 906,826                 | 89.2           | Least concern          |
| 522                          | 759,523                 | 680,641                 | 89.6           | Least concern          |
| 1148                         | 320,705                 | 271,706                 | 84.7           | Least concern          |
| 125                          | 3,940,746               | 3,536,992               | 89.8           | Least concern          |
| 128                          | 412,121                 | 325,830                 | 79.1           | Least concern          |
| 511                          | 409,458                 | 219,324                 | 53.6           | Least concern          |
| 519                          | 2,221,704               | 1,346,958               | 60.6           | Least concern          |
| 552                          | 40,252                  | 36,688                  | 91.1           | Least concern          |
| 8                            | 1,238,672               | 675,472                 | 54.5           | Least concern          |
| 9                            | 250,894                 | 250,183                 | 99.7           | Least concern          |

\* (Shepherd et al. 2001)

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

\*\*\* Within the Intensive Landuse Zone

**Methodology** Shepherd et al (2001)  
 Department of Natural Resources and Environment (2002)  
 GIS Databases:  
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00  
 - Pre-European Vegetation - DA 01/01

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

Biodiversity advice states: "A number of large lakes and wetlands occur within the local area, with the Lake Johnston wetland system occurring approximately 89 kilometres from the western end, near the intersection of the Hyden-Norseman Road and Victoria Rock Road (which is a track heading in the northerly direction). These lakes and wetlands are classified as non-perennial salt lakes (The Western Australian Wetlands Database, accessed 26th September 2006). The proposed works, particularly the creation of pits and dams, if they are to occur in proximity to this lake system may adversely impact on the drainage, water quality and environmental values of those lakes. Threats could include the destruction of wetland dependent habitat, including buffer areas surrounding wetlands and vegetation providing connectivity between wetlands; potential changes to hydrology as a result of gravel pit and dam construction and road drainage works; the potential for increased turbidity in adjacent wetlands; and, the spread of weeds. Three pits that are in reasonable proximity to wetlands or drainage lines are:

- Pit 17 is approximately 350 metres north-east of a lake, and,
- Pits 15 and 14 are located approximately 500 metres and 900 metres, respectively, from a drainage line that runs to a lake located approximately 1.5 kilometres to the north.

Rehabilitation criteria should be developed that incorporate the landform being returned to as near to its original contour as possible."

Given the above, the proposal may be at variance to this principle.

However, to mitigate any potential impacts from the clearing of native vegetation, while acknowledging the issues raised, a condition will be placed on the permit requiring that clearing of vegetation be avoided, and where this is not possible, minimised. The Shire of Dundas is proposing to construct catchment dams within some of the gravel pits which should reduce surface water runoff from site. In addition, revegetation conditions of Gravel Extraction sites, offset conditions for previously abandoned gravel pits, and weed management conditions will be placed on the permit to ensure a reduction in long-term net loss of vegetation within the Shire of Dundas.

**Methodology** Biodiversity Coordination Section, DEC (2006)  
 GIS Databases:  
 - Rivers 250K - GA  
 - ANCA, Wetlands - CALM 08/01  
 - Geodata, Lakes - GA 28/06/02  
 - Environmentally Sensitive Areas - DOE 22/10/04

**(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**

DAFWA advises that "the proposed clearing of 108 hectares along the Hyden-Norseman Road is unlikely to cause appreciable land degradation if the guidelines in the 'Shire of Dundas Vegetation Management Plan' are adhered to during both the gravel extraction and pit rehabilitation phases. Therefore, this clearing is unlikely to be at variance with Principle (g)."

NB. DAFWA advice preceded the proposal being amended from 108 hectares to 50 hectares.

**Methodology** DAFWA (2006)

**(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**

The areas proposed to be cleared are not within or adjacent to conservation areas. The closest conservation areas are Lake Cronin (14 km) and Jilbadji Nature Reserve (28 km). These areas are also identified on the Register of National Estate and are therefore environmentally sensitive areas. The vegetation types found within these reserves are the same as those found within the area proposed to be cleared (511, 1413, 125, 128, 8). However, as the percentage remaining of these types are all above 50% it is unlikely that the proposed clearing will have a significant impact on the environmental values of these conservation areas.

Two proposed nature reserves occur across the application area, recommended in the South Coast Region Regional Management Plan 1992. These proposed reserves are two of three areas that have been selected to 'represent the diversity of communities found in outcrop areas of the southern Goldfields' (CALM, 1992).

Biodiversity advice

(9 November 2006) states: "the three (existing) gravel pits for which extensions have been proposed, that occur in proximity to or within the proposed reserves, are not expected to cause a problem given the existing status of the pits and the 'proposed' state of the reserves."

Biodiversity advice (14 November 2006) states: "It is expected that, provided the works involved in the gravel extraction are conducted and managed in an appropriate way, that small incursions into the proposed nature reserve will be of minimal impact so long as rehabilitation is undertaken immediately after the raw material has been extracted."

Therefore, the proposal is considered not likely to be at variance to this principle.

Conditions will be placed on the permit to ensure that clearing of vegetation be avoided, and where this is not possible, minimised; that gravel extraction sites are revegetated once extraction ceases; and that previously abandoned gravel pits are revegetated to offset any impacts from the proposed clearing.

**Methodology** Biodiversity coordination Section, DEC (2006)

GIS Databases:

- CALM Managed Lands and Waters - CALM 1/07/05\_1
- Register of National Estate - EA 28/01/03\_1
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- Pre-European Vegetation - DA 01/01

**(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 static groundwater level within the proposed area to be cleared ranges from 23 metres to 44 metres below ground level, with a mapped groundwater salinity of 14 000 to greater than 35 000 milligrams per litre.

The proposed clearing for gravel extraction may cause some short term water quality issues in terms of localised surface water sedimentation during works. However, these issues should be minimised as the Shire of Dundas is proposing to construct catchment dams within some of the gravel pits to retain surface water runoff on site. In the longer term exhausted gravel pits will be closed and rehabilitated. Conditions have been imposed on the permit to ensure revegetation of gravel extraction sites and the revegetation of previously abandoned pits to offset any impacts from the proposed clearing.

**Methodology** GIS Databases:

- Groundwater Salinity, Statewide - 22/02/00
- WIN Groundwater Sites, Monitoring - DEWCP (Current)\_1

**(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**  
 Due to the scale and the nature of the proposed clearing it is unlikely to exacerbate flooding in the local area. In addition, the Shire of Dundas is proposing to construct catchment dams within the gravel pits to retain surface water runoff on site.

**Methodology**      GIS Database:  
 Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**  
 Three submissions have been received from conservation groups in relation to the proposal. All expressed concern over what they considered excessive clearing of native vegetation for road widening, and the paucity of comprehensive flora and fauna surveys in the region. One submission referred to the large number of Declared Rare Flora and Priority flora identified by both CALM and a recent report by Paul Armstrong and Associates (March 2006). Concerns included the lack of information on the distribution and populations of these species. One submission stated that the alignment of the road is incorrect and questioned whether the Shire will adequately implement their Vegetation Management Plan. Another concern considered the potential impact of dams (within gravel extraction sites) on wildlife within the area, specifically kangaroos, by providing additional water sources.

As a result of the DEC site visit undertaken on 18 October 2006, the area under application has been amended from 108 hectares to 50 hectares for the extension of existing gravel pits and road realignment (40 hectares and 10 hectares respectively). The Shire of Dundas has acknowledged that road widening is not required, but that realignment is necessary for certain sections considered to be hazardous. The Hyden-Norseman road has now been correctly aligned and gravel pits correctly sited using GPS waypoints by DEC staff during the site visit. A condition will be placed on the permit requiring flora surveys to be conducted over the areas under application prior to clearing. DEC's Biodiversity Coordination Section advised that fauna surveys are not required due to the extent of uncleared conservation lands that are adjacent or in close proximity to the application area, and the high probability that they will contain comparable habitat to the vegetation that is proposed to be cleared. Additional conditions to be placed on the permit include the rehabilitation of gravel pits once they become exhausted; revegetation of previously abandoned gravel pits to offset any potential loss of biodiversity; avoidance of the clearing of native vegetation, and where this is not possible, to minimise the clearing of native vegetation; and weed management and control. Although construction of dams within gravel extraction sites may increase the incidence of local wildlife temporarily, the environmental benefits will include a reduction in localised flooding, soil movement and erosion, and will ameliorate dependence on the local wetlands as a water supply for road maintenance. The water extracted from these wetlands is hypersaline, and detrimental to the health of roadside native vegetation.

There are two Native Title Claims over the areas under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

There are six Aboriginal Sites of Significance within the vicinity of the areas under application; Maggie Hays Archaeological Site 7, Maggie Hays Archaeological Site 8, Maggie Hays Archaeological Site 9, Maggie Hays Ethnographic Site 3, Lake Johnson 1 and Lake Johnson West.

There is no RIWI Act Licence or Works approval required for the proposed works.

**Methodology**      GIS Databases:  
 - Aboriginal Sites of Significance - DIA 28/02/03  
 - Native Title Claims - DLI 07/11/05

**4. Assessor's comments**

| Purpose             | Method             | Applied area (ha)/ trees | Comment   |
|---------------------|--------------------|--------------------------|---|
| Extractive Industry | Mechanical Removal | 40                       | Gravel extraction: The assessable criteria have been addressed, and the proposal is not likely to be at variance to Principles (b), (d), (e), (g), (h), (i) and (j); and may be at variance to Principles (a), (c), and (f).<br><br>Principles (a), (c) and (f): Given the high biodiversity values and paucity of flora records within the local area, and the potential impacts of clearing on wetlands and associated vegetation, there is the potential for the removal of native vegetation in the area to be at variance to Principles (a), (c) and (f). Conditions in the permit requiring that flora surveys be conducted prior to clearing; that clearing of native vegetation be avoided; that redundant gravel pits be revegetated; that previously abandoned gravel pits be revegetated to offset any loss of biodiversity; and that weed control measures be implemented should minimise any potential effects from the proposed clearing. |
| Road                | Mechanical         | 10                       | Road realignment: The assessable criteria have been addressed, and the proposal is not likely to be at  |

construction or Removal  
maintenance

variance to Principles (b), (d), (e), (g), (h), (i) and (j); and may be at variance to Principles (a), (c), and (f).

Principles (a), (c) and (f): Given the high biodiversity values and paucity of flora records within the local area, and the potential impacts of clearing on wetlands and associated vegetation, there is the potential for the removal of native vegetation in the area to be at variance to Principles (a), (c) and (f). Conditions in the permit requiring that flora surveys be conducted prior to clearing; that clearing of native vegetation be avoided; that redundant gravel pits be revegetated; that previously abandoned gravel pits be revegetated to offset any loss of biodiversity; and that weed control measures be implemented should minimise any potential effects from the proposed clearing.

## 5. References

- Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC9226
- DAFWA Land degradation assessment report (2006). Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref DOC8051.
- DEC Site Visit Photos (October 2006). DEC TRIM Ref DOC7945
- DEC Site Visit Report (October 2006). DEC TRIM Ref DOC8036
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., 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.

## 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)                    |