Roadside Vegetation and Conservation Values in the Shire of Serpentine-Jarrahdale

Photo by P. Haro

December 2006

Roadside Conservation Committee

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Executive Summary

This report provides an overview of the conservation status of roadside remnant vegetation in the Shire of Serpentine-Jarrahdale. The report primarily provides detailed results of the roadside survey and is accompanied by management recommendations. It also briefly describes the natural environment in Serpentine-Jarrahdale, legislative considerations and threats to conservation values.

Aware of the need to conserve roadside remnants, the Shire of Serpentine-Jarrahdale, local community members and Serpentine-Jarrahdale Landcare liaised with the Roadside Conservation Committee (RCC) in 2005 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between October and November 2005. The majority, 67.2%, of the Shire's 646.8 km of roadsides were assessed by the RCC for their conservation status and maps were produced via a Geographic Information System (GIS). Roadside locations of six nominated weeds were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 23.8% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 20.5%. Medium-low and low conservation value roadsides occupied 14.1% and 41.6%, respectively. A more detailed analysis of results is presented in Part C of this report.

It is envisaged that the primary purpose of the roadside survey data and Roadside Conservation Value (RCV) map will be for use by Shire and community groups as a management and planning tool. Applications may range from prioritising work programs to formulating management strategies. Past experience has shown that this document and the accompanying maps are valuable in assisting with:

- formulating a roadside vegetation management plan for roads maintenance work;
- identifying degraded areas for strategic rehabilitation or specific management techniques and weed control programs;
- re-establishing habitat linkages throughout the Shire's overall conservation network;
- developing regional or district fire management plans;
- identifying potential tourist routes, i.e. roads with high conservation value would provide visitors with an insight into the remnant vegetation of the district; and
- incorporating into Landcare or similar projects for 'whole of' landscape projects.

Progressive surveys of some Shires have revealed an alarming decline in the conservation status of many roadside reserves. In some cases the conservation value has declined at a rate of approximately 10% in 9 years. This trend indicates that without appropriate protection and management, roadside reserves will become veritable biological wastelands within the near future. However, proactive and innovative management of roadside vegetation has the potential to abate and reverse this general decline. Opportunities exist for the Shire of Serpentine-Jarrahdale to utilise the RCV map in many facets of its Landcare, tourism, road maintenance operations and Natural Resource Management (NRM) strategy documents. In addition, the RCC is available to provide assistance with the development of roadside vegetation management plans and associated documents.

PART A

OVERVIEW OF ROADSIDE CONSERVATION

1.0 Why is Roadside Vegetation Important?

Since the settlement of Western Australia by Europeans, large areas of native vegetation in the south west of the state have been cleared for agriculture, roads, settlements, and other development. The fragmentation of the more or less continuous expanse of native vegetation communities by clearing has resulted in the isolation of plant and animal populations. This results in a mosaic of man-made biogeographical islands of small native vegetation remnants.

The flora and fauna in these areas are severely disadvantaged and these habitats are typically unreliable for sustaining wildlife due to limited and scarce food resources, increased disease risk and the reduced genetic diversity caused by a diminishing gene pool. Some habitat fragments may be too small to provide the requirements for even a small population, therefore it is essential to their survival that they have a means of dispersing throughout the landscape. The presence of native vegetation along roadsides often fulfils an important role in alleviating this isolation effect by providing connectivity between bush remnants. While many roadside reserves are inadequate in size to support many plant and animal communities, they are integral in providing connections between larger areas of potentially more suitable remnant patches. It is therefore important that all native vegetation is protected regardless of the apparent conservation value it contains. It is important to acknowledge that even degraded roadsides have the ability to act as corridors for the dispersal of a variety of fauna.

The *Falsistrellus mackenziei* (Western False Pipistrelle) hasbeen recorded in the Shire of Serpentine-Jarrahdale.

Photo by www.lochmantransparencies.com, **Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase.htm).**

Other important values of transport corridor remnants are that they:

- are often the only remaining example of original vegetation within extensively cleared areas;
- often contain rare and endangered plants and animals. Currently, roadside plants represent more than 80% of the known populations of Declared Rare Flora (DRF) and three species are known only to exist in roadside populations;
- provide the basis for our important wildflower tourism industry. The aesthetic appeal of well-maintained roadsides should not be overlooked, and they have the potential to improve local tourism and provide a sense of place;
- often contain sites of Aboriginal /European historic or cultural significance;
- provide windbreaks and stock shelter areas for adjoining farmland by helping to stabilise temperature and reduce evaporation;

Flora Roads are high conservation value roadside remnants.
Photo D. Lamont.

- assist with erosion and salinity control, in both the land adjoining the road reserve and further afield; and
- provide a valuable source of seed for regeneration projects. This is especially pertinent to shrub species, as clearing and grazing beneath farm trees often removes this layer. Approval of the local Shire and a Department of Environment and Conservation (DEC) permit are required prior to collection. Guidelines for seed and timber harvesting can be found in Appendix 6.

2.0 What are the Threats?

2.1 Lack of Awareness

The general decline of the roadside environment can, in many instances, be attributed to the lack of awareness of the functional and conservation value of the roadside remnants, both by the general community and those who work in the road reserve environment. As a consequence, there is a lack of knowledge of threatening processes (such as road maintenance and inappropriate use of fire) on the sustainability of the roadside reserve as a fauna corridor and habitat area. This situation can therefore act as a catalyst for decline in environmental quality.

2.2 Roadside Clearing

Western Australia's agricultural region, also known as the Intensive Land-use Zone (ILZ), covers an area of approximately 25,091,622 ha, of which only 29.8% is covered by the original native vegetation. Of the 87 rural Local Government Authorities in this zone, 21 carry less than 10% of the original remnant vegetation and a further 30 have less than 30% (Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. 2001).

Inappropriate road management practices, particularly the systematic and indiscriminate clearing of roadside vegetation in some areas has caused irreversible damage and impacted enormously upon the conservation value of roadsides in Western Australia. Clearing roadside vegetation reduces the viability of the roadside to act as a biological corridor, the diminished habitat width impeding the movement of wildlife throughout the surrounding landscape matrix. Roadside clearing activities have the potential to introduce and spread weeds, due to the movement and disturbance of soil, thus competing with native vegetation residing in the roadside. When coupled with poor site planning and preparation, road construction and maintenance projects can often introduce and spread weeds into previously undisturbed, weed-free roadsides. Roadsides are, in many cases, the only remaining example of remnant vegetation in agricultural areas, yet they are also at great risk due to ongoing inappropriate clearing.

Amendments to the *Environmental Protection Act* 1986 have put in place a permit application process designed to assess vegetation clearing based upon a number of clearing principles which ensure ecological, conservation and land degradation issues are considered. Under the Act clearing native vegetation requires a permit unless it is for exempt purposes. These amendments are design to provide improved protection for native vegetation, maintain biodiversity and allow for some incidental clearing activities to continue, such as day-to-day farming practices, without the need for a permit.

2.3 Fire

Although Western Australia's flora and fauna have evolved with a tolerance to pre-European fire regimes these are generally not present today. Fire in transport corridors will inevitably alter the native vegetation, however the extent of changes is dependent on a number of factors such as:

- species present;
- intensity of fire;
- frequency of fire; and
- seasonality of the fire.

The RCC's policy on fire management is:

- roadside burning should not take place without the consent of the managing authority;
- Local Government Authorities should adopt by-laws to control roadside burning;
- roadside burning should be planned as part of a total Shire/area Fire Management Plan;
- only one side of a road should be burnt in any one year;
- when designing a Fire Management Plan, the two principles which must be kept in mind are the ecological management of vegetation and the abatement of fire hazard;
- no firebreaks within the Road Reserve should be permitted unless the width of the roadside vegetation strip is greater than 20m;
- a firebreak on any road reserve should be permitted only when, in the opinion of the road manager, one is necessary for the protection of the roadside vegetation. The road manager shall specify the maximum width to which the break may be constructed; and
- in the case of any dispute concerning roadside fire management, the Fire and Emergency Services Authority (FESA) should be called in to arbitrate.

If a decision is made to use fire, only one side of a road should be burnt at a time, as this will ensure habitat retention for associated fauna and also retention of some of the scenic values associated with the road.

Fire can be particularly destructive to heritage sites, whether they are of Aboriginal or European origin. Before any decision is made to burn a road verge, particularly if threatened flora is present, the proponent should be aware of all values present and the impact the fire will have. It is illegal to burn roadsides where Declared Rare Flora (DRF) is present, without written permission from the Minister for the Environment.

Before a decision is made to burn a road verge, the impact on natural, cultural and landscape values should be carefully considered.
Photo D. Lamont

2.4 Weeds

Weeds are generally disturbance opportunists and as such the road verge often provides a vacant niche which is easily colonised. Their establishment can impinge on the survival of existing native plants, increase flammability of the vegetation and interfere with the engineering structure of the road. The effect of weed infestations on native plant populations can be severe, often with flow on effects for native fauna such as diminished habitat or food resources.

Once weeds become established in an area, they become a long-term management issue, costing considerable resources to control or eradicate. The WA Herbarium records 240 weed species in the Shire of Serpentine-Jarrahdale (Appendix 4). The roadside survey recorded populations of six significant weeds, and their locations were mapped by the RCC onto clear overlays. The six nominated weeds were:

- Cape Tulip *(Moraea flaccida)*;
- Kikuyu *(Pennisetum clandestinum)*;
- Evening Primrose *(Oenothera stricta)*;
- Lavender *(Lavendula dentata)*;
- Watsonia *(Watsonia meriana)*; and
- African Lovegrass (*Eragrostis curvula*).

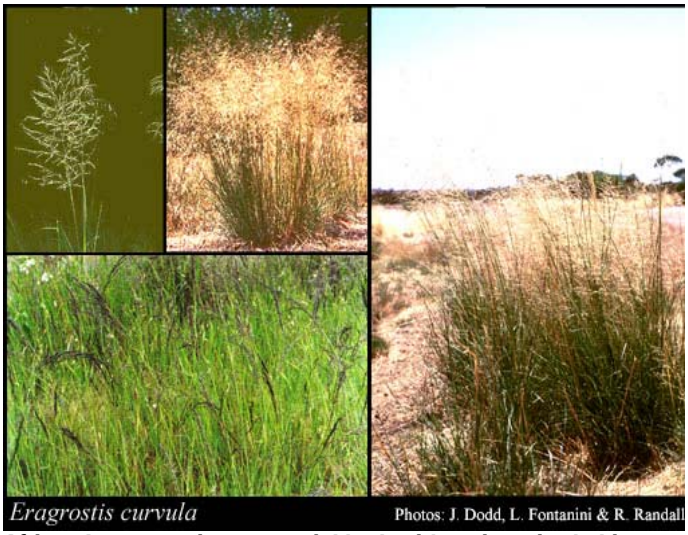
Cape Tulip is a serious pasture weed that is poisonous to stock, making any initial roadside populations a priority for control before it spreads into nearby farms

Photography by R. Randall. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse).

Roadside populations of these weeds can be observed on the weed overlays provided with the Serpentine-Jarrahdale RCV map (2006). The Roadside Conservation Value map and weed overlays will assist the Shire and community in planning, budgeting and coordinating strategic weed control projects. Further information on the presence of these nominated weeds is presented in Part C of this report.

Evening Primrose a common weed on many disturbed roadsides

Photography by L.Fontanini. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/help/photos#reuse



African Lovegrass is a perennial herb with an invasive habit found along the roadside in the shire of Serpentine-Jarrahdale.

Photography by J.D.Dodd, L.Fontanini & R.Randall. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/help/photos#reuse

2.5 Salinity

Salinity is one of the greatest environmental threats facing Western Australia's agricultural areas, with approximately 1.8 million hectares in the South West Agricultural Region already affected to some degree. Dryland salinity has occurred as a consequence of the heavy clearing undertaken in the past, namely the removal of perennial deep-rooted native vegetation and replacement by shallow rooted annual crops and the subsequent rising of the water table. The large amount of salt stored within the soil column in these areas of Western Australia is dissolved by the rising water and carried into the root-zone to the soil surface. Once at the surface the water evaporates leaving a white film of salt over the landscape, making it unproductive for current agricultural practices and severely impacting upon the remaining native vegetation. Without significant changes to the current land use it has been estimated that approximately 3 million hectares will be affected by salinity by 2010-2015 and 6 million hectares, or 30% of the region, affected by the time a new groundwater equilibrium is reached (Department of Agriculture WA, 2004).

The effect of salinity has not only been restricted to agriculture, but is also having a serious effect on rural townsites and the road network. The National Land and Resources Audit (2002) warned that across Australia some 19,800km of roads, 1,600km of railways and 306 towns are all at a high risk from dryland salinity (Department of Environment and Heritage and the Department of Agriculture, Fisheries and Forestry Australia, 2003). It has also been estimated that more than 4,000km (5%) of roads in the South West Land Division of Western Australia are at threat of being degraded by the effects of rising water tables and salinity.

Based on figures supplied by the Department of Agriculture WA for the *Salinity Investment Framework Interim Report* (2003), approximately 8.19%, or 112.45km of roads in the Shire of Serpentine-Jarrahdale are potentially under threat from salinity (Table 1). Half of these, 56.15 km, are local roads managed by the Shire.

Table 1. Road lengths potentially affected by salinity in the Shires of Boddington, Wandering, Serpentine-Jarrahdale, Beverley, York, Northam, Toodyay and Brookton.

Shire	Total road length assessed (km)	Roads potentially affected by salinity - length in km					
		Highways	Local roads	Main roads	Other roads	Total affected	% of total potentially affected
Boddington	440.16	0.48	8.33	1.53	37.68	48.00	10.91
Wandering	432.93	0.05	9.05		6.40	15.50	3.58
Serpentine-Jarrahdale	1,372.75		56.15	6.28	50.03	112.45	8.19
Beverley	750.51	0.73	20.28	1.65	7.85	30.50	4.06
York	700.85		18.95	4.23	6.30	29.48	4.21
Northam	23.97		0.38		0.55	0.93	3.86
Toodyay	581.79		4.80	0.83	3.18	8.80	1.51
Brookton	615.84	5.35	23.95	0.40	11.98	41.68	6.77

Adapted from material produced by the Department of Agriculture WA for Department of Environment 2003, Salinity Investment Framework Interim Report - Phase 1, 2003, Department of Environment, Salinity and Land Use Impacts Series No. SLUI 32

3.0 Legislative Requirements

Uncertainty often exists in the minds of many with regard to the ‘ownership’, control and management of 'the roadside'. This problem is also exacerbated by the multitude of legislative reference to activities within a transport corridor.

The Department of Environment and Conservation (DEC) has the legislative responsibility to manage and protect all native flora and fauna in Western Australia. It is important to note that all native flora and fauna is protected under provisions of the *Wildlife Conservation Act* 1950 and cannot be taken unless it is taken in a lawful manner. In addition to the general provisions relating to protected flora under the *Wildlife Conservation Act*, special protection is afforded to flora that is declared as rare or threatened under Section 23F of the *Wildlife Conservation Act.*

The legislation pertaining to the management of road reserves is complex and includes those listed below.

State legislation:

- *Aboriginal Heritage Act* 1972
- *Agriculture and Related Resources Protection Act* 1976
- *Bush Fires Act* 1954
- *Conservation and Land Management Act* 1984
- *Environmental Protection Act* 1986
- *Heritage of WA Act* 1990
- *Land Act* 1933
- *Local Government Act* 1995
- *Main Roads Act* 1930
- *Mining Act* 1978
- *Soil and Land Conservation Act* 1945
- *State Energy Commission Supply Act* 1979
- *Water Authority Act* 1987
- *Wildlife Conservation Act* 1950, 1979

Commonwealth legislation:

- *Environment Protection and Biodiversity Conservation Act* 1999

New legalisation has been introduced under the *Environmental Protection Act 1986* which specify that all clearing of native vegetation require a permit, unless it is for an exempt purpose. The *Environmental Protection (Clearing of Native Vegetation) Regulations* 2004 detail these requirements. Clearing applications are assessed against twelve clearing principles, which incorporate the:

- biological value of the remnant vegetation;
- potential impact on wetlands, water sources and drainage;
- existence of rare flora and threatened ecological communities; and
- likely land degradation impacts.

This assessment process is designed to provide a more comprehensive and stringent land clearing control system. There are two land clearing permits available: an area permit; and a purpose permit. For example, where clearing is for a once-off clearing event such as pasture clearing or an agricultural development, an area permit is required. Where ongoing clearing is necessary for a specific purpose, such as road widening programs, a purpose permit is needed. Shire road maintenance activities are exempt, to the width and height previously legally cleared for that purpose (refer to Schedule 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations* 2004).

It is recommended that a precautionary approach be taken when working within roadsides and that the relevant authority be contacted if there is any doubt about the management or protection of heritage or conservation values present in the roadsides.

4.0 Environmentally Sensitive Areas

An Environmentally Sensitive Area (ESA) is a section of roadside that requires special protection for the following reasons:

- protection of rare or threatened species of native plants;
- protection of sites that have other high conservation, scientific or aesthetic values; and/or
- protection of Aboriginal or European cultural sites.

Environmentally Sensitive Areas can be delineated by the use of site markers. See the RCC publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* for design and placement of ESA markers. Workers who come across an 'Environmentally Sensitive Area' marker in the field should not disturb the area between the markers unless specifically instructed. If in doubt, the Works Supervisor, Shire Engineer or CEO should be contacted. Western Power and WestNet Rail also have systems for marking sites near power or rail lines.

To ensure that knowledge of rare flora and other sites does not get lost due, perhaps, to staff changes, the Local Authority should establish an *Environmentally Sensitive Area Register.* This should outline any special treatment that the site should receive and be consulted prior to any work being initiated in the area.

The *Environmentally Sensitive Area Register* should be consulted by the appropriate person prior to work commencing on any particular road. This will ensure that inadvertent damage does not occur.

Roadside ESA markers are highly visible.
Photo by C. Wilson

Local Government is encouraged to permanently mark ESAs to prevent inadvertent or inappropriate damage to rare flora or other values being protected. Markers of a uniform shape and colour will make recognition easier for other authorities using road reserves.

5.0 Flora Roads

A Flora Road is one which has special conservation value because of the vegetation contained within the road reserve. The managing authority may decide to declare a Flora Road based on the results of the survey of roadside conservation value. The Roadside Conservation Committee has prepared *Guidelines for the Nomination and Management of Flora Roads* (Appendix 7). The Flora Road signs (provided by the RCC) draw the attention of both the tourist and those working in the road reserve to the roadside flora, indicating that it is special and worthy of protection. The program seeks to raise the profile of roadsides within both the community and road management authorities.

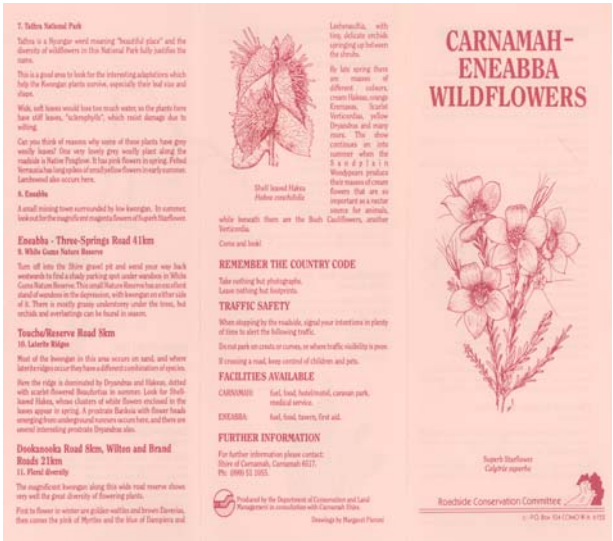
Roadsides are one of the most accessible places for tourists to view wildflowers.
Photo by DEC

Although presently there are no Flora Roads designated within the Shire of Serpentine-Jarrahdale, the roadside survey and the RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. These and other roads may be investigated further to see if they warrant a declaration as a Flora Road (see Part C of this report).

In order to plan roadworks so that important areas of roadside vegetation are not disturbed, road managers should be aware of these areas. To ensure this is not overlooked it is suggested that areas declared as Flora Roads be included in the Shire's *Special Environmental Area Register*.

Attractive roadsides are an important focus in Western Australia, the "Wildflower State". Flora Roads will by their very nature be attractive to tourists and would often be suitable as part of a tourist drive network. Consideration should be given to:

- promoting the road by means of a small brochure or booklet;
- showing all Flora Roads on a map of the region or State; and
- using specially designed signs to delineate the Flora Road section (provided by the RCC).



Right: The RCC has assisted local communities to produce wildflower drive pamphlets.

PART B

THE NATURAL ENVIRONMENT IN SERPENTINE-JARRAHDALE

1.0 Flora

On a global scale Western Australia has almost ten times the amount of vascular plant varieties than countries such as Great Britain. In fact, Western Australia has some 4.8% of the 250,000 known vascular flora present on Earth. Western Australian flora is also unique, with the majority of species being endemic, that is, found nowhere else in the world. Up to 75% of the 6,000 species in the south west, are endemic.

The WA Herbarium lists over 1000 species of plants present in the Shire of Serpentine-Jarrahdale. The most prolific genera are *Acacia* (54 spp), *Eucalyptus* (20 spp), *Melaleuca* (23 spp), *Hibbertia (30 spp), Drosera (32 spp) Schoenus* (25 spp), *Stylidium (*46 spp) and *Xanthopamelia (20* spp). The complete list of recorded flora can bee seen in Appendix 4 of this report.

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***Grevillea pimeleoides* occurs on roadsides in the Shire of Serpentine-Jarrahdale.**
Photography by A.Ireland. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/browse/flora?f=090&level=s&id=13086

2.0 Declared Rare Flora (DRF)

Declared Rare Flora (DRF) species, or populations, are of great conservation significance and should therefore be treated with special care when road and utility service, construction or maintenance is undertaken. Populations of DRF along roadsides are designated Environmentally Sensitive Areas (ESAs) and should be delineated by yellow stakes with an identification plate attached. The RCC suggests using the publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* as a guideline for managing these sites. It is the responsibility of the road manager to ensure these markers are installed, and guides for this are available from the RCC. For information regarding DRF, contact the Department of Environment and Conservation (DEC) Flora Officer for the Merredin District. If roadworks are to be carried out near DRF sites, it is advisable to contact DEC at least six weeks in advance.

Declared Rare Flora (DRF) sites should be clearly marked with these yellow posts.
Photo K. Jackson.

Currently (as at July 2006), 17 locations of Declared Rare and Priority Flora are known to occur within roadsides in the Shire of Serpentine-Jarrahdale. All of these sites occur in roadsides vested in the Shire of Serpentine-Jarrahdale. In total, there are two species of Declared Rare Flora (DRF) and six species of Priority Flora that occur in these roadside

locations in the Shire, these are:

Declared rare Flora

- *Verticordia plumose var.pleiobotrya;*
- *Tetraria australiensis;*

Priority Flora

- *Acacia horridula;*
- *Anthotium junciforme;*
- *Baeckea sp. Perth Region* (R.J cranfield 444)
- *Caladenia huegelii;*
- *Drosera occidentalis subsp. occidentalis;*
- *Verticordia lindleyi subsp. lindleyi;*

Status Endangered *Verticordia plumose var. pleiobotrya* (Narrow-petalled featherflower). Flowers October to November. Threatened by road maintenance and other forms of habitat degradation.
Photography by R.M Evans. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse

Declared Rare Flora *Acacia horridula. Present on the roadsides in the Shire of Jarrahdale-Serpentine.*
Photography by S.J. Patrick & H. Bowler. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse

Caladenia huegelii* (Grand Spider orchid), *is endangered with much of its remaining habitat being threatened by increased development. This orchid flowers from September to October and is particularly affected by fire and competion by weed species.
Photography by L & M.G & J.L. Robson. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/help/photos#reuse

Status Vulnerable *Tetraria australiensis* (Southern tetraria). Present on the roadsides in the Shire of Jarrahdale-Serpentine flowering November to December.
Photography by G.J. Keighery. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/help/photos#reuse

Note: this information may have changed since the time of this report's release; therefore it is important to contact the relevant DEC District office or the Species and Communities Branch in Kensington for the most recent information.

3.0 Fauna

The Western Australian Museum records approximately 109 species of fauna from the Serpentine-Jarrahdale area (Appendix 5). WA Museum fauna records comprise specimen records, museum collections and observations from 1850 to present and therefore it is intended to act only as a general representation of the fauna in the area. Of the fauna species recorded in the Serpentine-Jarrahdale area, there were 8 bird, 14 amphibia, 30 mammal, 8 fish and 49 reptile species.

Many fauna species, particularly small birds need continuous corridors of dense vegetation to move throughout the landscape. Roadsides therefore are of particular importance to this avifauna because they usually contain the only continuous linear vegetation connection in some areas.

Chuditch (Dasyurus geoffroii) can be found in the Shire of Serpentine-Jarrahdale.

Photo by www.lochmantransparancies.com. Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase/prod/index.htm).

The Barking Gecko (*Underwoodisaurus milii*) can be found in the Shire of Serpentine-Jarrahdale.

Photo by R.E. Johnstone. Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase/prod/index.htm).

***Tarsipes rostratus (Honey Possum, Noolbenger)*, can be found in the Shire of Serpentine-Jarrahdale.**

Photo by B. G. Barron, Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase.htm).

The *Wildlife Conservation Act* 1950 provides for native fauna (and flora) to be specially protected where they are under identifiable threat of extinction, and as such, are considered to be "threatened". Based on distributional data from the Department of Environment and Conservation (DEC), 15 species of threatened and priority fauna have been recorded or sighted throughout the Shire of Serpentine-Jarrahdale, and these are listed below.

- **Chuditch (*Dasyurus geoffroii*)**

This carnivorous marsupial occupies large home ranges, is highly mobile and appears able to utilise bush remnants and corridors.

- **Numbat (*Myrmecobius fasciatus*)**

This diurnal marsupial feeds almost exclusively on termites and is very vulnerable to predation by foxes and cats. It occurs in a variety of habitats including woodland and shrubland where it shelters in hollow logs, tree hollows and burrows.

- **Western Brush Wallaby (*Macropus irma*)**

This species occurs in areas of forest and woodland supporting a dense shrub layer.

- **Quenda (*Isoodon obesulus fusciventer*)**

This species prefers areas with dense understorey vegetation, particularly around swamps and along watercourses, that provides ample protection from predators.

- **Brush-tailed Phascogale (*Phascogale tapoatafa ssp.)***

This arboreal marsupial occurs in forest and woodland where suitable tree hollows are available. Populations fluctuate dramatically in response to invertebrate prey abundance.

- **Western Ringtail Possum (Pseudocheirus occidentalis)**

This species occurs in areas of forest and dense woodlands and requires tree hollows and/or dense canopy for refuge and nesting.

- **Quokka (*Setonix brachyurus*)**

Mainland populations of this species are currently restricted to densely vegetated coastal heaths, swamps and riverine habitats where they

- **Malleefowl (*Leipoa ocellata*)**

This species was once widely distributed across southern Australia. It prefers woodland or shrubland with an abundant litter layer that provides essential material for the construction of its nest mound.

- **Carnaby's Black-Cockatoo (Calyptorhynchus latirostris)**

This species moves around seasonally in flocks to feeding areas in proteaceous scrubs and heaths and eucalypt woodlands as well as pine plantations. Breeding occurs in winter/spring, mainly in the

Brush-tailed Phascogale *(Phascogale tapoatafa ssp.)*can be found in the Shire of Serpentine-Jarrahdale.

Photo by www.lochmantransparancies.com. Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase/prod/index.htm).

The Malleefowl (above) is a vulnerable species that relies on remnant bushland for its survival.

Photo by M.J. Bamford, Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase.htm).

eastern woodlands and Wheatbelt where they can find mature hollow-bearing trees to nest in.

- **Peregrine Falcon (*Falco peregrinus*)**

This species is uncommon and prefers areas with rocky ledges, cliffs, watercourses, open woodland or margins with cleared land.

- **Forest Red-tailed Black Cockatoo (Calypyorhynchus banksii naso)**

This subspecies of the Red-tailed black Cockatoo is restricted to the forests of the south-west. It requires tree hollows to nest and bree and is totally dependant on jarrah-marri forests.

- **Baudin's Black-Cockatoo (Calyptorhynchus baudinii)**

This species is a seasonal visitor to the northern forests and adjacent eastern edge of the coastal plain, feeding on the seeds of eucalypts

- **Carpet Python (*Morelia spilota imbricata*)**

This species occurs in a variety of habitats including forest and heathland. It is often arboreal and preys on birds, other reptiles and small to medium size mammals. This species is listed under both Schedule 4 and Priority 4.

- **Glacidorbis occidentalis (Glacidorbis occidentalis)**

This species of freshwater snail is largely restricted to intermittent streams in the northern jarrah forest.

- **Water-rat (Rakali) (*Hydromys chrysogaster*)**

This species occurs in waterways and wetlands that support its main prey items such as molluscs and crustaceans.

The Carpet Python (*Morelia spilota imbricata*), has been found in the Serpentin-Jarrahdale area.

Photo by Ron E. Johnstone**, Photo used with the permission of the WA Museum, FaunaBase** (http://www.museum.wa.gov.au/faunabase.htm).

Water-rat (Rakali) (*Hydromys chrysogaster*) can be found in the Shire of Serpentine-Jarrahdale.

Photo by www.lochmantransparancies.com. Photo used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase/prod/index.htm).

4.0 Remnant Vegetation Cover

Only 4.6% of the original native vegetation remains in the Shire of Serpentine-Jarrahdale and this is located in a variety of tenures from nature reserves to privately owned land. *National Objectives and Targets for Biodiversity Conservation 2001-2005* (Environment Australia, 2001) stated that vegetation types represented by less than 30% are considered ecologically endangered and in need of protection and restoration wherever they are located. Serpentine-Jarrahdale has less than 27% remaining which is considered low. The remaining vegetation can easily be further depleted if proactive measures are not taken to manage this priceless resource.

Table 2. Remnant vegetation remaining in the agricultural areas of Serpentine-Jarrahdale and surrounding Shires (Shepherd, Beeston and Hopkins, 2001).

Shire	Total Area (ha)	Area inside Clearing Line (ha)	Vegetation Cover Remaining (inside clearing line)	
			(ha)	(%)
Boddington	195,281	195,281	138,327	70.8
Wandering	188,407	188,407	115,462	61.3
Serpentine-Jarrahdale	575,537	575,537	154,315	26.8
Beverley	239,896	239,896	76,566	31.9
York	214,693	214,693	66,264	30.8
Northam	141,410	141,410	31,229	22.1
Toodyay	173,440	173,440	88,082	50.8
Brookton	161,283	161,283	25,207	15.6

The continued presence of the flora and fauna living in these fragmented remnants is dependant on the connectivity throughout the landscape. This enables access to habitat and food resources essential for the survival of species and the overall biodiversity of the region. In many situations remnant native vegetation in transport corridors is of vital importance as it provides the only continuous link throughout the landscape.

Remnant roadside vegetation connects the landscape.
Photo by Main Roads WA

Tree hollows are of vital importance to breeding birds.
Photo by L. McMahon, Birds Australia

PART C

ROADSIDE SURVEYS IN THE SHIRE OF SERPENTINE-JARRAHDALE

1.0 Introduction

The roadside survey and mapping program was developed to provide a method of readily determining the conservation status of roadsides. Using this method, community volunteers are able to participate in a 'snap-shot' survey of roadside vegetation to identify a range of attributes that when combined, give an overall indication of the conservation status of the vegetation.

The majority (434.53 km, or 67.2%) of the Shire of Serpentine-Jarrahdale's 646.80 km of roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of September 2005. The enthusiastic effort of the roadside surveyors, Landcare Coordinator Kristy Gregory, Shire of Serpentine-Jarrahdale Reserves Officer Jenni Andrews and the support provided by Serpentine-Jarrahdale Shire Council ensured that this project was successfully completed. The roadside surveyors were:

- Jenni Andrews
- Kristy Gregory
- Jacinta Pleiter
- Adrian Stubbings
- Colleen Rankin
- Janis Pool

1.1 Methods

Roadside surveys are undertaken in a vehicle, generally with two people per vehicle. The passenger records the roadside attributes using the RCC's iPAQ hand-held personal computers. At the end of the survey, the iPAQs are returned to the RCC, where the survey information is analysed and mapped.

The methods to assess and calculate the conservation value of the roadside reserves are described in *Assessing Roadsides: A Guide for Rating Conservation Value* (Jackson, 2002). The process involves scoring a set of pre-selected attributes, which when combined, represent a roadside's conservation status. A list of these attributes is presented on a standard survey sheet (Appendix 1). This provides both a convenient and uniform method of scoring.

The following 6 attributes were used to produce a quantitative measure of conservation value:

- structure of native vegetation on roadside;
- extent of native vegetation along roadside;
- number of native species;
- level of weed infestation;
- value as a biological corridor; and
- predominant adjoining land use.

Each of these 6 attributes was given a score ranging from 0 to 2 points. Their combined scores provided a conservation value score ranging from 0 to 12. The conservation values, in the form of conservation status categories, are represented on the roadside conservation value map by the following colour codes.

Conservation Value	Conservation Status	Colour Code
9 – 12	High	Dark Green
7 – 8	Medium High	Light Green
5 – 6	Medium Low	Dark Yellow
0 – 4	Low	Light Yellow

The following attributes were also noted but did not contribute to the conservation value score:

- width of road reserve;
- width of vegetated roadside;
- presence of utilities/disturbances;
- general comments;
- presence of 4 nominated weeds;
- presence of salt affected roadside; and
- presence of habitat trees.

It is felt that the recording of these attributes will provide a dataset capable of being used by a broad range of community land management interests.

1.2 Mapping Roadside Conservation Values

The RCC produced a computer-generated map (using a Geographic Information System, or GIS), at a scale of 1:100,000 for the Shire of Serpentine-Jarrahdale. Known as the Roadside Conservation Value map (RCV map), it depicts the conservation status of the roadside vegetation and the width of the road reserves within the Shire of Serpentine-Jarrahdale. The data used to produce both the map and the following figures and tables are presented in Appendix 2. Road names and length information can be found in Appendix 3.

Digital information was obtained from the Department of Environment and Conservation (DEC), Main Roads WA and the Department of Agriculture and Food WA and used in the map, depicting the location of remnant vegetation on both the Crown estate and privately owned land. Watercourses are also depicted on the RCV map.

1.3 Roadside Conservation Value Categories

High conservation value roadsides are those with a score between 9 and 12, and generally display the following characteristics:

- intact natural structure consisting of a number of layers, i.e. ground, shrub, tree layers;
- extent of native vegetation greater than 80%, i.e. little or no disturbance;
- high diversity of native flora, i.e. greater than 20 different species;
- few weeds, i.e. less than 20% of the total plants; and
- high value as a biological corridor, i.e. may connect uncleared areas, contain flowering shrubs, tree hollows and/or hollow logs for habitat.

This high conservation value roadside in Wongan-Ballidu contains relatively intact, undisturbed and diverse remnant vegetation.
Photo K. Jackson.

Medium-high conservation value roadsides are those with a score between 7 and 8, and generally have the following characteristics:

- generally intact natural structure, with one layer disturbed or absent;
- extent of native vegetation between 20 and 80%;
- medium to high diversity of native flora, i.e. between 6 and 19 species;
- few to half weeds, i.e. between 20 and 80% of the total plants; and
- medium to high value as a biological corridor.

Medium-high conservation value roadsides contains a moderate number of native species, some disturbance and weed invasion, but have relatively intact natural structure.
Photo RCC.

Medium-low conservation value roadsides are those with a score between 5 and 6, and generally have the following characteristics:

- natural structure disturbed, i.e. one or more vegetation layers absent;
- extent of native vegetation between 20 and 80%;
- medium to low diversity of native flora, i.e. between 0 and 5 species;
- half to mostly weeds, i.e. between 20-80% of total plants; and
- medium to low value as a biological corridor.

Medium-low conservation value roadsides may contain Declared Rare Flora (DRF).
Photo by RCC

Low conservation value roadsides are those with a score between 0 and 4, and generally have the following characteristics:

- no natural structure i.e. two or more vegetation layers absent;
- low extent of native vegetation, i.e. less than 20%;
- low diversity of native flora, i.e. between 0 and 5 different species;
- mostly weeds, i.e. more than 80% of total plants, or ground layer totally weeds; and
- low value as a biological corridor.

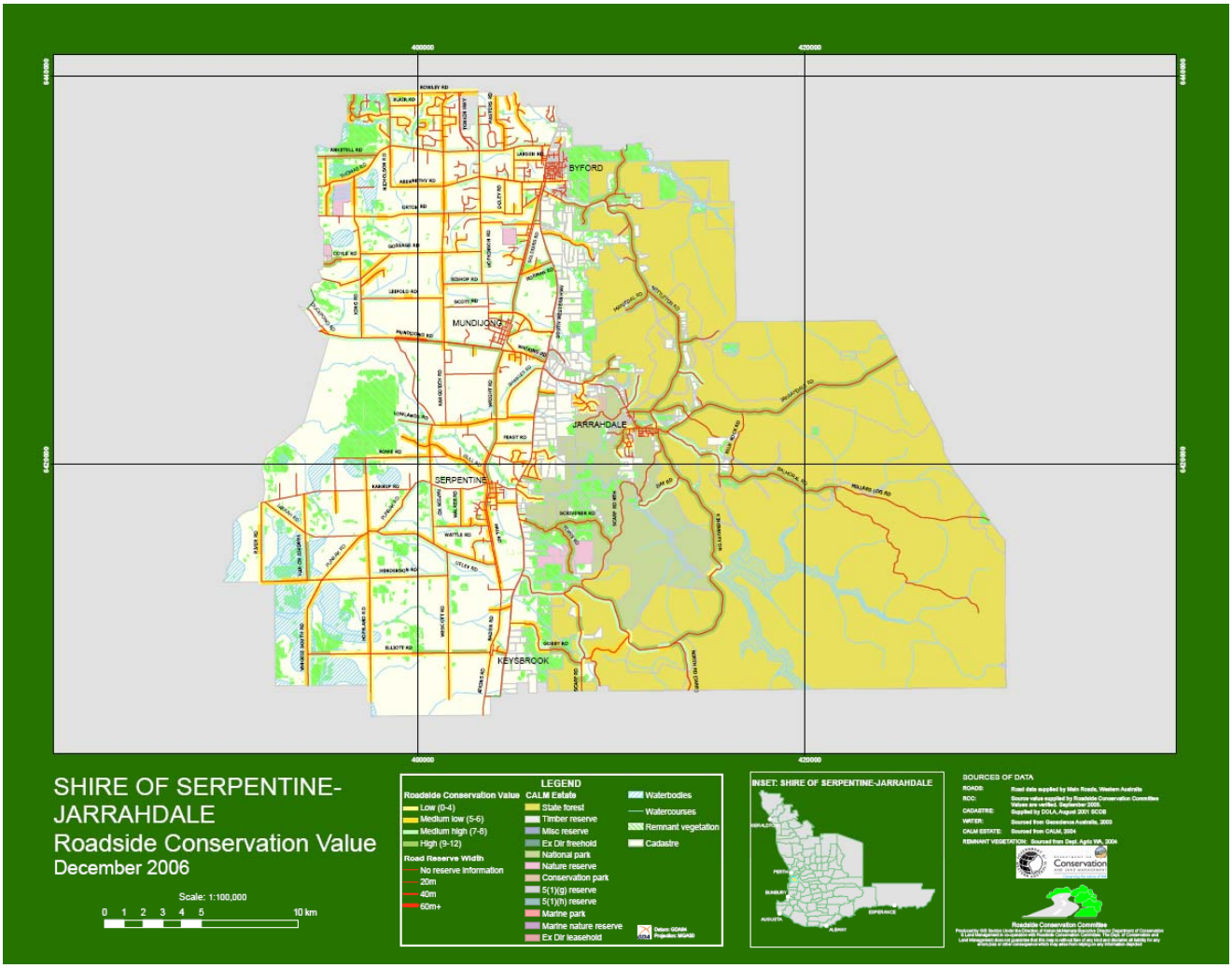
Low conservation value roadsides are typically dominated by weeds and have little or no native vegetation.
Photo by K. Jackson.

2.0 USING THE ROADSIDE CONSERVATION VALUE MAP (RCV MAP)

The Roadside Conservation Value map (RCV map) initially provides an inventory of the condition of the roadside vegetation. This is important as the quality of roadside vegetation has far reaching implications for sustaining biodiversity, tourism and Landcare values.

Moreover, the data and map can be incorporated as a management and planning tool for managing the roadsides, as it enables the condition of roadside vegetation to be easily assessed. This information can then be used to identify environmentally sensitive areas, high conservation roadsides or strategically important areas, and thus ensure their conservation. Conversely, it enables degraded areas to be identified as areas important for strategic rehabilitation or in need of specific management techniques or weed control programs.

The map can also be used as a reference to overlay transparencies of other information relevant to roadside conservation. This enables the roadside vegetation to be assessed in the context of its importance to the Shire's overall conservation network. Other overlays, such as the degree of weed infestation, or the location of environmentally sensitive areas or future planned developments, could also be produced as an aid to roadside management.



The RCV map depicts roadside conservation values in the Shire of Serpentine-Jarrahdale.

As well as providing a road reserve planning and management tool, the RCV map can also be used for developing:

- Regional or District fire management plans;
- Landcare and/or Bushcare projects that would be able to incorporate the information from this survey into 'whole of' landscape projects; and
- Tourist Routes, i.e. roads depicted as high conservation value would provide visitors to the district with an insight to the flora of the district.

Weed control along a roadside.
Photo MRWA

Catchment recovery projects, such as revegetation programs can utilise the information conveyed on roadside conservation value maps.
Photo by RCC

The road manager can declare high conservation value roads as Flora Roads.
Photo by D. Lamont.

The survey data and map can be used in developing regional or district fire management plans.
Photo by DEC

3.0 RESULTS

Using the information collected by the roadside survey, totals of the attributes used to calculate roadside conservation values in the Shire of Serpentine-Jarrahdale are presented (Table 3). The survey data has been combined to provide the total kilometres and percentages of roadside occupied by each of the conservation status categories and the attributes used to calculate the conservation values. As roadsides occur on both sides of the road, roadside distances (km) are equal to *twice* the actual distance of road travelled.

Summary Information: Shire of Serpentine-Jarrahdale 2006

Length of roadsides surveyed: 869.06 km (434.53 km of road)

Roadside Conservation Status

	Total (km)	(%)
High (9-12)	103.61	23.8
Medium-high (7-8)	88.9	20.5
Medium-low (5-6)	61.34	14.1
Low (0-4)	180.7	41.6
Total	434.6	100.0

Native Vegetation in Roadsides

	Total (km)	(%)
2-3 vegetation layers	542.0	62.4
1 vegetation layer	213.9	24.6
0 vegetation layers	113.2	13.0
Total	869.1	100.0

Number of Native Plant Species

	Total (km)	(%)
Over 20 species	169.5	19.5
6 to 19 species	252.2	29.0
0 to 5 species	447.3	51.5
Total	869.1	100.0

Predominant Adjoining Land Use

	Total (km)	(%)
Agricultural: completely cleared	323.1	37.2
Agricultural: scattered vegetation	268.3	30.9
Uncleared native vegetation	207.5	23.9
Drain	15.0	1.7
Plantation of non-natives	1.5	0.2
Railway	34.7	4.0
Urban or Industrial	15.9	1.8
Other	3.1	0.4
Total	869.1	100.0

Weed Infestation

	Total (km)	(%)
Light <20% weeds	251.4	28.9
Medium 20-80% weeds	249.5	28.7
Heavy >80% weeds	368.1	42.4
Total	869.1	100.0

Roadside Conservation Values

Score	Total (km)	(%)
0	2.0	0.2
1	40.7	4.7
2	91.0	10.5
3	118.1	13.6
4	92.2	10.6
5	78.9	9.1
6	82.1	9.4
7	83.2	9.6
8	76.3	8.8
9	71.4	8.2
10	121.0	13.9
11	12.3	1.4
12	0.0	0.0
Total	869.1	100.0

Width of Vegetated Roadside

	Total (km)	(%)
1 to 5 m	661.8	76.2
5 to 20 m	39.3	4.5
Over 20 m	0.0	0.0
Unknown	167.9	19.3
Total	869.1	100.0

Extent of Native Vegetation

	Total (km)	(%)
Over 80%	200.6	23.1
20% to 80%	242.7	27.9
Less than 20%	425.8	49.0
Total	869.1	100.0

Value as a Biological Corridor

	Total (km)	(%)
High	292.1	33.6
Medium	251.4	28.9
Low	325.5	37.5
Total	869.1	100.0

Roadside surveys were carried out in Serpentine-Jarrahdale Shire in September 2005

Table 3. Summary of results from the roadside survey in the Shire of Serpentine-Jarrahdale.

Width of Road Reserve

The width of road reserves in the Shire of Serpentine-Jarrahdale was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 410.75km (94.5%) of roads falling into this category. Of the remaining roads, 14.26km (3.3%) were 40 metres in width, 1.63km (0.4%) of road reserves were 60 meters wide and 7.9km (1.8%) were an unknown width.

Table 4. Width of road reserves in the Shire of Serpentine-Jarrahdale.

	Total km	%
20 m	410.75	94.5
40 m	14.26	3.3
60 m	1.63	0.4
Unknown	7.9	1.8
Total	434.54	100.0

Width of Vegetated Road Reserve

The width of vegetated roadside was recorded by selecting one of three categories, 1-5 metres, 5-20 metres or over 20 metres in width. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 661.8m (76.2%), was between 1 to 5 metres in width, followed by 167.9km (19.3%) of roadsides where the width of vegetation was unknown. 39.3km (4.5%) of roadside vegetation fell between 5 to 20 metres in width and there was no record of roadside vegetation over 20 metres.

Table 5. Width of vegetation on roadsides in the Shire of Serpentine-Jarrahdale.

	Total km	%
1-5 m	661.8	76.2
5-20 m	39.3	4.5
Over 20 m	0.0	0.0
Unknown	167.9	19.3
Total	869.1	100.0

Native Vegetation on Roadsides

The number of native vegetation layers present, i.e. tree, shrub and/or ground layers, determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 62% of roadsides (542.0km), 25% (213.9km) of roadsides had only one layer and 133% (113.2km) had no layers of native vegetation (Table 3 and Figure 1).

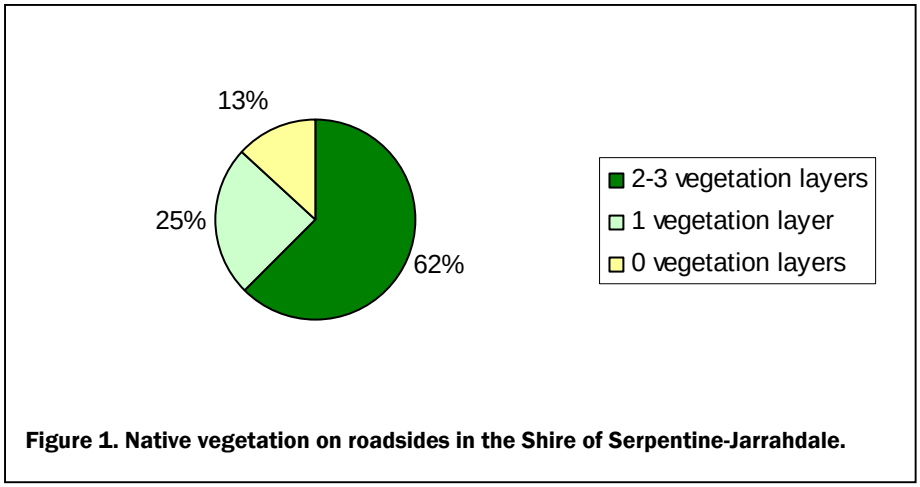


Figure 1. Native vegetation on roadsides in the Shire of Serpentine-Jarrahdale.

Number of Native Plant Species

The 'number of native plant species' score provided a measure of the diversity of the roadside vegetation. Survey sections with over 20 plant species spanned 20% (169.5km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 29% (252.2km) of the roadside. Over half of the roadsides, 51.5% (447.3km) contained less than 5 plant species (Table 3 and Figure 2).

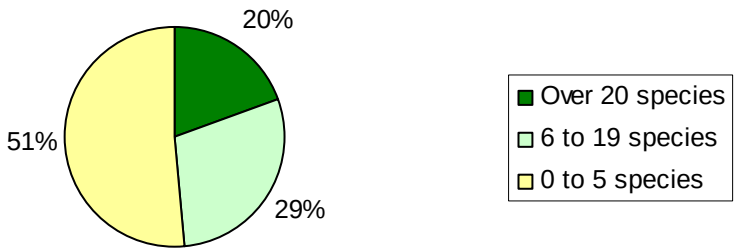


Figure 2. Number of native plant species in roadsides in the Shire of Serpentine-Jarrahdale.

Extent of Native Vegetation

The 'extent of native vegetation' cover refers to the continuity of the roadside vegetation and takes into account the presence of disturbances such as weeds. Roadsides with extensive vegetation cover, i.e. greater than 80%, occurred along 23% (200.6km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 28% (242.7km) of the roadsides. The remaining 49% (425.8km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and Figure 3).

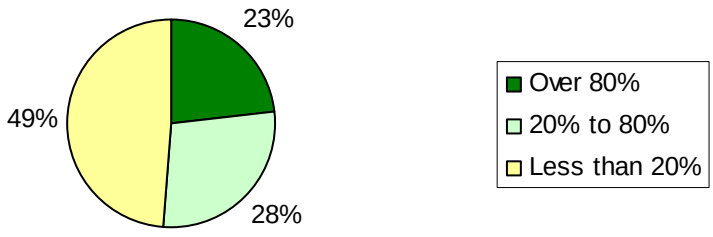


Figure 3. Extent of native vegetation in roadsides in the Shire of Serpentine-Jarrahdale.

Value as a Biological Corridor

This characteristic considered the presence of four attributes: connection of uncleared areas; presence of flowering shrubs; presence of large trees with hollows; and presence of hollow logs. Roadsides determined to have high value as a biological corridor were present along 34% (292.1km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 29% (251.4km), and roadsides with low value as a biological corridor occurred along 37% (325.5km) of the roadsides surveyed (Table 3 and Figure 4).

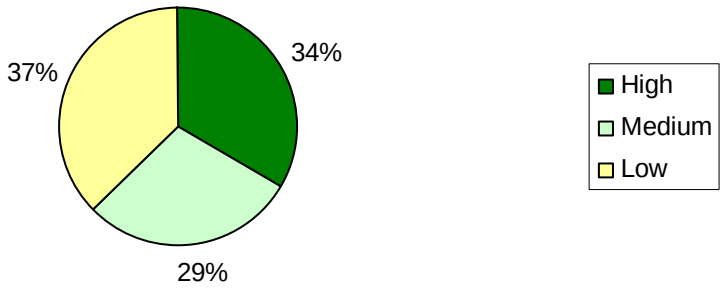


Figure 4. Roadside vegetation value as a biological corridor in the Shire of Serpentine-Jarrahdale.

Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 29% (251.4km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 29% (249.5km) of the roadsides and 42% of roadsides (368.1km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 5).

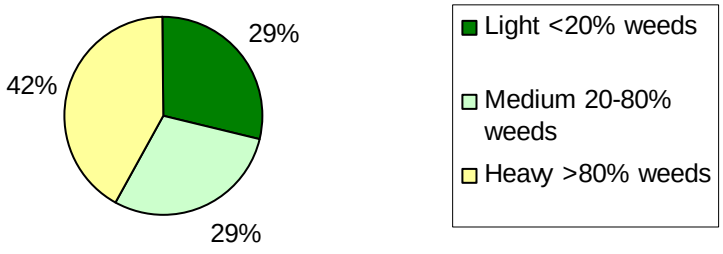


Figure 5. Weed infestation along roadsides in the Shire of Serpentine-Jarrahdale.

Predominant Adjoining Land Use

Uncleared native vegetation was present on 24% (207.5km) of the land adjoining roadsides, whilst 37% (323.1km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, containing a scattered distribution of native vegetation comprised 31% (268.3km) of the roadsides. Land containing plantation of non-natives was recorded along 0% (actually 0.2% - 1.5km) of the roadside. Railway reserves adjoined 4% (34.78km) of the roadsides, urban or industrial land uses adjoined 2% (15.9km), drains were found on 2% (15.0km) and other land uses were found on >1% (actually 0.4% - 3.1km) of the roadsides (Table 3 and Figure 6).

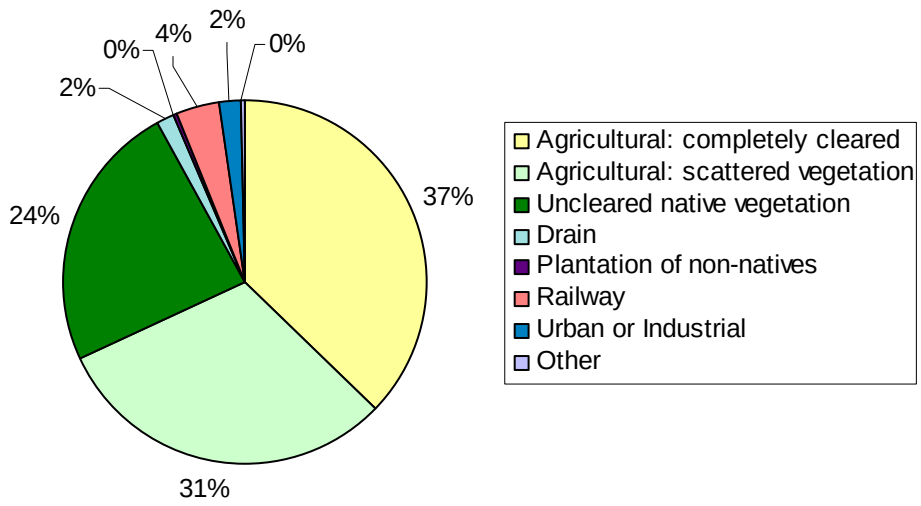


Figure 6. Predominant adjoining land use in the Shire of Serpentine-Jarrahdale.

Nominated Weeds

The following weeds are depicted on clear overlays accompanying the 2006 Roadside Conservation Value map:

- African Lovegrass (*Eragrostis curvula*);
- Cape Tulip (*Moraea flaccida and Moraea miniata)*;
- Evening Primrose *(Oenothera glazioviana)*;
- Kikuyu (*Pennisetum clandestinum*);
- Lavender (*Lavandula stoechas*); and
- Watsonia *(Watsonia spp)*.

Roadside populations of nominated weeds were recorded as being present in the road reserve, and were not recorded specifically for the left and/or right hand sides. Therefore, the occurrence of each weed (in kilometres) indicates the presence of the weed within the road reserve generally, and may need to be doubled where present on both sides of the road.

Of the nominated weeds species, African Lovegrass was the most prevalent, recorded along 315.3km of the roads surveyed. The next most commonly recorded weeds were Watsonia, recorded along 254.82km of roads, and Cape Tulip, recorded along 119.64km of roads. Kikuyu was the next most commonly recorded weed, occurring along 100.73km of roads, then Lavender, recorded along 44.03km of roads and Evening Primrose was recorded along 1.35km (Figure 7).

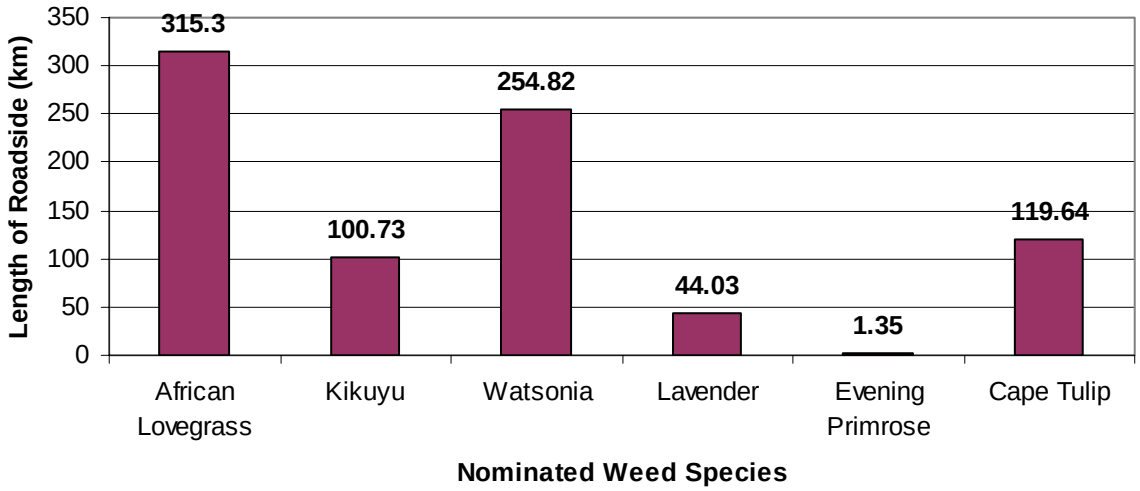


Figure 7. Presence of nominated weed groups along roads in the Shire of Serpentine-Jarrahdale.

Conservation Value Scores

Conservation value scores were calculated for each section of roadside surveyed. Scores range from 0 to 12, from lowest to highest conservation value respectively (Figure 8). The most occurring roadside conservation value score was 10, with 121.0km of roadsides recording this score. Following this, 118.1km of roadsides recorded a score of 3, 92.2km recorded a score of 4 and 91.0km recorded a score of 2. Roadsides with a score of 7 covered 83.2km, a score of 6 covered 82.1km, and roadsides with a score of 5 spanned 78.9km. Roadsides with a score of 8 spanned 76.3km, a score of 9 spanned 71.4km, roadsides scoring 1 covered 40.7km, a score of 11 spanned 12.3km, a score of 0 covered 2.0km, and 0km of roadsides scored 12.

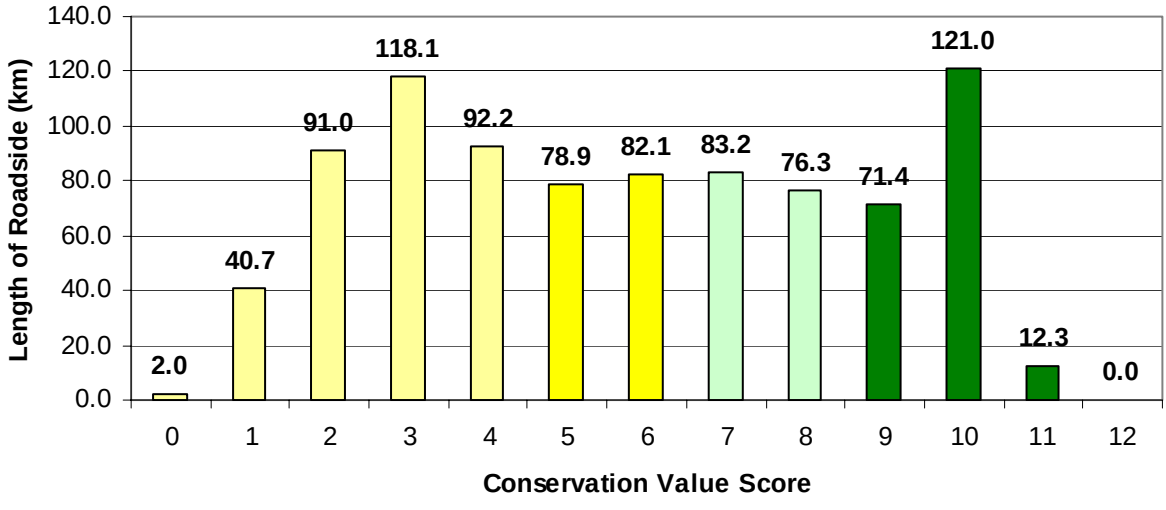


Figure 8. Conservation value scores of all roadsides surveyed in the Shire of Serpentine-Jarrahdale.

Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Serpentine-Jarrahdale. Roadside sections of high conservation value covered 24% (103.61km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 20% of the total surveyed (88.9km), medium-low conservation roadside covered 14% (61.34km) of the total roadsides surveyed. Roadsides of low conservation value occupied 42% (180.7km) of the roadsides surveyed (Table 3 and Figure 9).

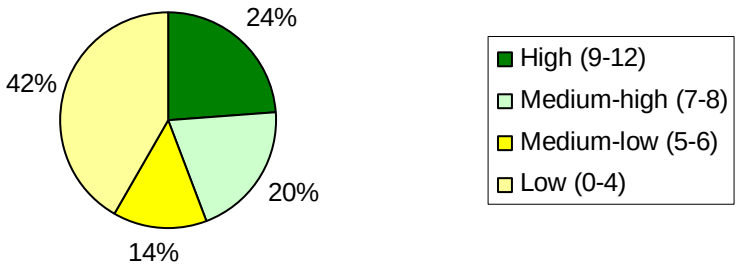


Figure 9. Conservation status of roadsides in the Shire of Serpentine-Jarrahdale.

Flora Roads

A Flora Road is one which has special conservation value because of the vegetation contained within the road reserve. The Roadside Conservation Committee has prepared *Guidelines for the Nomination and Management of Flora Roads* (Appendix 7).

There are presently five Flora Roads designated within the Shire of Serpentine-Jarrahdale. These roads are:

- Lightbody Road
- Mundijong Road
- Norman Road
- Soldiers Road
- Webb Road

The roadside survey and the 2006 RCV map also highlighted a number of roadsides that have the potential to be declared as additional Flora Roads. Roadsides, or large sections of roadsides, determined as having high conservation value in the Shire of Serpentine-Jarrahdale include:

- Anketell Road
- Wright Road

PART D

ROADSIDE MANAGEMENT RECOMMENDATIONS

1.0 Management Recommendations

The primary aim of road management is the creation and maintenance of a safe, efficient road system. However, there are often important conservation values within the road reserve and thus this section provides general management procedures and recommendations that will assist in retaining and enhancing roadside conservation values.

The Executive Officer of the Roadside Conservation Committee is also available to provide assistance on all roadside conservation matters, and can be contacted on (08) 9423 2423. The following RCC publications provide guidelines and management recommendations that will assist Local Government Authorities:

- *Guidelines for Managing Special Environmental Areas in Transport Corridors*; and
- *Handbook of Environmental Practice for Road Construction and Maintenance Works.*

1.1 Protect high conservation value roadsides by maintaining and enhancing the native plant communities. This can be achieved by:

- retaining remnant vegetation;
- minimising disturbance to existing roadside vegetation;
- minimising disturbance to soil; and
- preventing or controlling the introduction of weeds.

1.2. Promote and raise awareness of the conservation value associated with roadside vegetation by:

- establishing a register of Shire roads important for conservation;
- declaring suitable roadsides as Flora Roads; and
- incorporating them into tourist, wildflower and/or scenic drives.

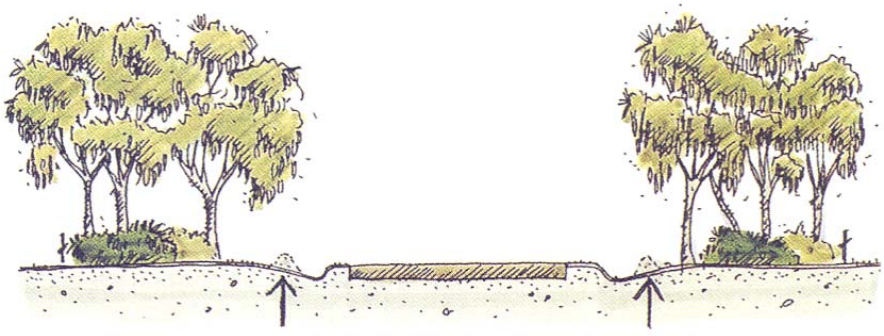
1.3 Improve roadside sections of medium to low conservation value by:

- minimising disturbance caused by machinery, adjoining land practices and incidences of fire;
- carrying out a targeted weed control program;
- retaining remnant trees and shrubs;
- allowing natural regeneration;
- spreading local native seed to encourage regeneration; and
- encouraging revegetation projects by adjacent landholders.

2.0 Minimising Disturbance

Minimal disturbance can be achieved by:

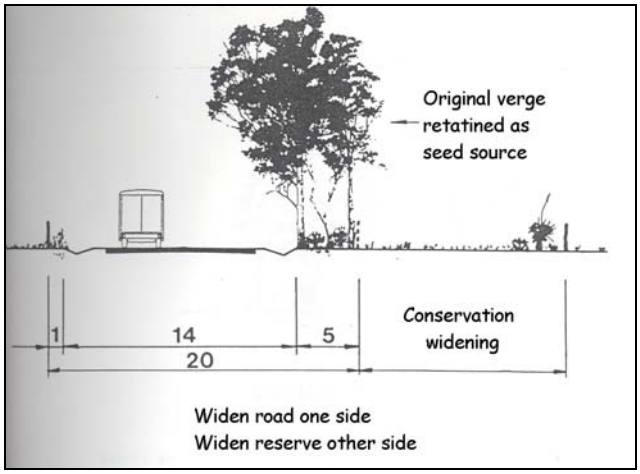
- adopting a road design that occupies the minimum space;
- diverting the line of a table drain to avoid disturbing valuable flora;
- pruning branches, rather than removing the whole tree or shrub;
- not dumping spoil on areas of native flora;
- applying the Fire Threat Assessment (see RCC Roadside Manual) before burning roadside vegetation, using methods other than fuel reduction burns to reduce fire threat;
- encouraging adjacent landholders to set back fences to allow roadside vegetation to proliferate;
- encouraging adjacent landholders to plant windbreaks or farm tree lots adjacent to roadside vegetation to create a denser windbreak or shelterbelt; and
- encouraging revegetation projects by adjacent landholders.



Avoid windrowing drain material into vegetation

Below right: Widening a road to one side only so that a wider section of roadside vegetation is retained on the other side of the road reserve.

Above: A high value road reserve in Tammin. The road was built on adjoining farmland in order to retain the important remnant bushland existing in the undeveloped road reserve.



3.0 Planning for Roadsides

The RCC is able to provide comprehensive models of Roadside Management Plans and encourages all Shires to adopt this practice of planning for roadside conservation.

The following actions greatly enhance likelihood of a plan that changes behaviour and results in on-ground actions:

- Community support - encourage ongoing community involvement and commitment by establishing a local Roadside Advisory Committee or working group within the Shire Environmental Committee;
- Contract specifications - maintain roadside values by developing environmental specifications for inclusion in all tender documents or work practices;
- Community education - use of innovative and pertinent material can increase community understanding of roadside values; and
- Training - promote local roadside planning initiatives and gain acceptance and understanding by involving Shire staff, contractors, utility provider staff and the community in workshops, seminars or training days. The Roadside Conservation Committee can provide this training.

Training develops recognition and understanding of roadside values and highlights best work practices. Workshops are developed to ensure that local issues and environments are dealt with and they include site visits to high conservation remnants, current projects and works. For training enquiries please contact the RCC Executive Officer on (08) 9423 2423.

4.0 Setting Objectives

The objective of all roadside management should be to:

- **Protect**
  - native vegetation
  - rare or threatened flora or fauna
  - cultural and heritage values
  - community assets from fire
- **Maintain**
  - safe function of the road
  - native vegetation communities
  - fauna habitats and corridors
  - visual amenity and landscape qualities
  - water quality
- **Minimise**
  - land degradation
  - spread of weeds and vermin
  - spread of soil borne pathogens
  - risk and impact of fire
  - disturbance during installation and maintenance of service assets
- **Enhance**
  - indigenous vegetation communities
  - fauna habitats and corridors

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Appendix

1

SURVEY TO DETERMINE THE CONSERVATION VALUE OF ROADSIDES IN THE SHIRE OF ______________________________

Roadside Conservation Committee
C/- Locked Bag 104
Bentley Delivery Centre WA 6983

Phone: (08) 9334 0423
Fax: (08) 9334 0199

Date ______________________

Observer(s) ______________________

Road Name ______________________

Shire ______________________

Nearest named place ______________________

Direction of travel (N,S,E,W) ______________________

Section No. ______________________

Starting Point ______________________

Odometer reading ______________________

Ending Point ______________________

Odometer reading ______________________

Length of section ______________________

WIDTH OF ROAD RESERVE (m) ________

Side of the road	Left	Right

WIDTH OF VEGETATED ROADSIDE

1 – 5 m	☐	☐
5 – 20 m	☐	☐
Over 20 m	☐	☐

NATIVE VEGETATION ON ROADSIDE

Tree layer	☐	☐
Shrub layer	☐	☐
Ground layer	☐	☐

EXTENT OF NATIVE VEGETATION ON ROADSIDE

Less than 20%	☐	☐
20 – 80%	☐	☐
Over 80%	☐	☐

No. OF DIFFERENT NATIVE SPECIES

0 – 5	☐	☐
6 – 19	☐	☐
Over 20	☐	☐

VALUE AS A BIOLOGICAL CORRIDOR

Connects uncleared areas	☐	☐
Flowering shrubs	☐	☐
Large trees with hollows	☐	☐
Hollow logs	☐	☐

PREDOMINANT ADJOINING LANDUSE

Agricultural crop or pasture:		
- Completely cleared	☐	☐
- Scattered	☐	☐
Uncleared land	☐	☐
Plantation of non-native trees	☐	☐
Urban or industrial	☐	☐
Railway Reserve parallel to road	☐	☐
Drain Reserve parallel to road	☐	☐
Other:	☐	☐

____

UTILITIES

Utility Present	☐	☐
Utility Absent	☐	☐
Type:		

____

GENERAL WEEDS

Few weeds (<20% total plants)	☐	☐
Half weeds (20 - 80% total)	☐	☐
Mostly weeds (>80% total)	☐	☐
Ground layer totally weeds	☐	☐

SALT AFFECTED ROADSIDE

< 20% salt affected	☐	☐
20 – 80% salt affected	☐	☐
> 80% salt affected	☐	☐

NOMINATED WEEDS

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
> 80% total weeds	☐	☐

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
> 80% total weeds	☐	☐

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
> 80% total weeds	☐	☐

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
> 80% total weeds	☐	☐

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
> 80% total weeds	☐	☐

____

< 20% total weeds	☐	☐
20 – 80% total weeds	☐	☐
80% total weeds	☐	☐

GENERAL COMMENTS

____

____

OFFICE USE ONLY

Conservation value score	☐	☐

Appendix

2

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080002	1	6.07	8.73	2.66	JARRAHDALE RD	East	9/16/05	cint	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	LAVENDER AFRICAN_LOVEGRASS WATSONIA
1080002	2	8.73	9.56	0.83	JARRAHDALE RD	East	9/16/05	cint	20	2	2	1	2	1	2	1	1	1	2	1	0	7	9	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080002	3	9.56	21.39	11.83	JARRAHDALE RD	East	9/16/05	cint	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	AFRICAN_LOVEGRASS WATSONIA
1080003	1	0.00	1.18	1.18	WATKINS RD	East	9/23/05	jenni	40	1	1	1	0	0	0	0	1	0	0	1	1	3	3	AFRICAN_LOVEGRASS WATSONIA
1080003	2	1.18	1.68	0.50	WATKINS RD	East	9/23/05	jenni	20	2	1	1	0	0	0	1	2	2	0	0	0	6	3	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080003	3	1.68	2.38	0.70	WATKINS RD	East	9/23/05	jenni	20	2	2	2	0	1	0	2	0	1	0	1	1	9	3	AFRICAN_LOVEGRASS WATSONIA
1080004	1	0.00	3.93	3.93	MUNDIJONG RD	West	9/16/05	cint	40	2	2	2	1	2	1	1	1	2	1	1	1	10	7	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080004	2	3.93	5.56	1.63	MUNDIJONG RD	West	9/16/05	cint	60	2	2	2	1	2	1	2	0	2	0	1	1	11	5	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080004	3	5.56	8.99	3.43	MUNDIJONG RD	West	9/16/05	cint	20	2	1	1	0	1	0	1	0	2	1	1	2	8	4	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080004	4	8.99	9.52	0.53	MUNDIJONG RD	West	9/16/05	cint	20	2	2	1	1	1	1	1	1	2	1	1	0	8	6	AFRICAN_LOVEGRASS WATSONIA
1080005	1	0.00	5.46	5.46	WRIGHT RD	South	9/15/05	jenni	20	1	2	0	1	0	2	0	1	0	2	2	1	3	9	AFRICAN_LOVEGRASS WATSONIA
1080006	1	0.00	1.07	1.07	NETTLETON RD	East	9/16/05	Cint	20	2	1	0	0	1	1	1	0	1	2	2	0	7	4	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080006	2	1.07	2.63	1.57	NETTLETON RD	East	9/16/05	Cint	20	2	2	1	1	2	2	1	1	1	2	1	1	8	9	AFRICAN_LOVEGRASS WATSONIA LAVENDER
1080006	3	2.63	4.20	1.57	NETTLETON RD	East	9/16/05	Cint	20	2	2	1	1	1	1	2	2	2	1	1	0	9	7	AFRICAN_LOVEGRASS WATSONIA
1080006	4	4.20	5.07	0.87	NETTLETON RD	East	9/16/05	Cint	20	2	2	1	1	2	2	2	2	2	1	0	0	9	8	LAVENDER
1080006	5	5.07	6.24	1.17	NETTLETON RD	East	9/16/05	Cint	20	2	2	2	2	2	2	2	2	2	2	1	0	11	10	LAVENDER WATSONIA
1080006	6	6.24	7.80	1.57	NETTLETON RD	East	9/16/05	Cint	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WATSONIA
1080006	7	7.80	9.17	1.37	NETTLETON RD	East	9/16/05	Cint	20	2	2	2	2	2	2	2	2	2	1	1	0	11	9	LAVENDER
1080006	8	9.17	11.44	2.27	NETTLETON RD	South	9/16/05	Cint	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	LAVENDER

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080006	9	11.44	12.20	0.77	NETTLETON RD	South	9/16/05	Cint	20	2	2	2	2	2	2	2	2	1	1	1	0	10	9	LAVENDER
1080006	10	12.20	17.87	5.67	NETTLETON RD	South	9/16/05	Cint	20	2	2	2	2	2	2	2	2	2	2	2	2	10	10	LAVENDER WATSONIA
1080009	1	0.00	3.35	3.35	KARGOTICH RD	south	9/16/05	cint	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	KIKUYU AFRICAN_LOVEGRASS CAPE_TULIP
1080009	2	3.35	4.70	1.35	KARGOTICH RD	south	9/20/05	colleen r	20	1	0	1	0	0	0	0	0	1	0	1	1	4	1	EVENING_PRIMROSE
1080009	3	4.70	6.85	2.15	KARGOTICH RD	south	9/20/05	colleen r	20	2	2	1	1	0	0	1	1	0	1	1	1	5	6	CAPE_TULIP
1080009	4	6.85	8.20	1.35	KARGOTICH RD	south	9/20/05	colleen r	20	1	1	0	0	0	0	0	0	1	0	1	1	3	2	CAPE_TULIP
1080009	5	8.20	10.35	2.15	KARGOTICH RD	south	9/20/05	colleen r	20	2	2	1	1	0	0	1	1	1	1	2	2	6	6	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080009	6	10.35	13.40	3.05	KARGOTICH RD	south	9/20/05	colleen r	20	1	2	0	0	0	0	0	0	0	1	2	2	2	5	CAPE_TULIP
1080010	1	0.00	2.82	2.82	GOSSAGE RD	West	9/22/05	jan	20	2	2	0	0	0	0	0	0	1	1	1	1	4	4	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080010	2	2.82	4.05	1.22	GOSSAGE RD	West	9/22/05	jan	20	0	1	0	0	0	0	0	0	0	0	1	1	1	2	KIKUYU AFRICAN_LOVEGRASS
1080010	3	4.05	5.87	1.82	GOSSAGE RD	West	9/22/05	jan	20	1	2	0	0	0	0	0	0	0	0	1	1	2	3	KIKUYU WATSONIA
1080010	4	5.87	6.29	0.42	GOSSAGE RD	West	9/22/05	jan	20	2	1	1	1	1	1	1	1	2	2	0	0	7	6	KIKUYU WATSONIA
1080012	1	0.00	1.08	1.08	BISHOP RD	North	9/22/05	jan	20	2	1	1	1	1	1	0	0	2	0	1	1	7	4	AFRICAN_LOVEGRASS KIKUYU CAPE_TULIP
1080012	2	1.08	3.86	2.78	BISHOP RD	North	9/22/05	jan	20	2	2	1	0	1	0	1	0	2	0	1	1	8	3	AFRICAN_LOVEGRASS KIKUYU CAPE_TULIP
1080013	1	0.00	2.56	2.56	HOPKINSON RD	North	9/20/05	colleen r	20	2	1	0	0	0	0	1	0	2	1	2	2	7	3	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080013	2	2.56	3.42	0.86	HOPKINSON RD	North	9/20/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	KIKUYU CAPE_TULIP WATSONIA AFRICAN_LOVEGRASS
1080013	3	3.42	4.98	1.56	HOPKINSON RD	North	9/20/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080013	4	4.98	6.34	1.36	HOPKINSON RD	North	9/20/05	colleen r	20	2	1	0	1	1	0	1	0	1	1	1	1	7	3	CAPE_TULIP WATSONIA AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080013	5	6.34	9.10	2.76	HOPKINSON RD	North	9/16/05	jacinta	20	2	2	0	0	2	2	1	1	1	1	2	2	8	8	AFRICAN_LOVEGRASS KIKUYU
1080014	1	0.00	0.16	0.16	RAPIDS RD	South	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
1080014	2	0.16	1.92	1.76	RAPIDS RD	South	9/16/05	jenni	20	1	1	1	1	0	0	0	0	2	2	2	2	6	6	
1080014	3	1.92	2.98	1.06	RAPIDS RD	South	9/16/05	jenni	20	0	2	0	0	0	0	0	0	0	0	2	2	2	4	
1080014	4	2.98	3.64	0.66	RAPIDS RD	South	9/16/05	jenni	20	1	2	0	2	0	1	0	2	1	1	2	0	4	8	AFRICAN_LOVEGRASS
1080014	5	3.64	6.10	2.46	RAPIDS RD	South	9/16/05	jenni	20	1	2	0	1	0	0	0	2	1	1	2	2	4	8	AFRICAN_LOVEGRASS WATSONIA
1080016	1	0.00	0.60	0.60	ELLIOTT RD	south	9/16/05	jenni	20	2	2	1	1	1	1	1	1	2	0	2	0	9	5	AFRICAN_LOVEGRASS WATSONIA
1080016	2	0.60	1.20	0.60	ELLIOTT RD	south	9/16/05	jenni	20	1	2	0	1	0	1	0	1	0	2	2	1	3	8	AFRICAN_LOVEGRASS WATSONIA
1080016	3	1.20	4.70	3.50	ELLIOTT RD	west	9/16/05	jenni	20	1	2	0	1	0	1	0	2	1	1	2	2	4	9	AFRICAN_LOVEGRASS WATSONIA
1080016	4	4.70	5.30	0.60	ELLIOTT RD	West	9/16/05	jenni	20	2	2	0	1	1	1	1	2	0	2	1	1	5	9	AFRICAN_LOVEGRASS WATSONIA
1080016	5	5.30	9.50	4.20	ELLIOTT RD	West	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS WATSONIA
1080016	6	9.50	10.00	0.50	ELLIOTT RD	West	9/16/05	jenni	20	2	2	2	2	1	2	2	2	1	1	0	0	8	9	
1080016	7	10.00	10.65	0.65	ELLIOTT RD	West	9/16/05	jenni	20	2	2	2	2	1	1	2	2	1	1	0	2	8	10	
1080017	1	0.00	0.80	0.80	HOPELAND RD	south	9/16/05	jenni	20	2	2	2	2	1	1	2	2	1	2	0	0	8	9	AFRICAN_LOVEGRASS
1080017	2	0.80	1.70	0.90	HOPELAND RD	south	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080017	3	1.70	3.80	2.10	HOPELAND RD	south	9/16/05	jenni	20	2	1	1	0	0	0	0	0	0	0	2	1	5	2	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080017	4	3.80	6.30	2.50	HOPELAND RD	south	9/16/05	jenni	20	1	1	0	1	0	0	0	0	0	1	2	2	3	5	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080017	5	6.30	10.30	4.00	HOPELAND RD	south	9/16/05	jenni	20	1	1	0	1	0	0	0	1	0	0	2	2	3	5	AFRICAN_LOVEGRASS WATSONIA
1080017	6	10.30	12.50	2.20	HOPELAND RD	south	9/16/05	jenni	20	0	1	0	0	0	0	0	0	0	1	2	2	2	4	AFRICAN_LOVEGRASS
1080019	1	0.00	1.50	1.50	HALL RD	south	9/23/05	colleen r	20	2	2	1	1	1	1	0	0	2	0	2	2	7	5	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080019	2	1.50	2.00	0.50	HALL RD	south	9/23/05	colleen r	20	2	2	0	1	1	1	0	1	1	1	1	0	5	6	WATSONIA AFRICAN_LOVEGRASS
1080019	3	2.00	5.50	3.50	HALL RD	south	9/23/05	colleen r	20	1	2	0	0	1	1	0	1	1	1	1	1	4	6	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP
1080019	4	5.50	6.80	1.30	HALL RD	south	9/23/05	colleen r	20	2	1	0	0	1	0	1	1	1	0	1	1	6	3	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP
1080020	1	0.00	1.46	1.46	FALLS RD	East	9/15/05	jonathan	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080021	1	0.00	0.70	0.70	JOHNSON RD	East	10/4/05	colleen r	20	2	2	2	2	1	1	0	0	2	2	0	0	7	7	
1080021	2	0.70	1.60	0.90	JOHNSON RD	East	10/4/05	colleen r	20	2	2	2	2	1	1	0	0	2	2	0	1	7	8	
1080022	1	0.00	0.60	0.60	SHANLEY RD	East	9/23/05	jenni	20	1	2	0	1	0	0	0	1	0	0	2	2	3	6	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080022	2	0.60	2.20	1.60	SHANLEY RD	East	9/23/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080022	3	2.20	4.10	1.90	SHANLEY RD	East	9/23/05	jenni	20	2	0	1	0	1	0	1	0	1	0	2	2	8	2	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080023	1	0.00	1.74	1.74	LEIPOLD RD	North	9/22/05	jan	20	1	2	1	1	1	1	1	1	2	1	1	1	7	7	CAPE_TULIP KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080023	2	1.74	2.28	0.54	LEIPOLD RD	North	9/22/05	jan	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080023	3	2.28	2.72	0.44	LEIPOLD RD	North	9/22/05	jan	20	1	1	0	0	0	0	1	1	2	0	1	1	5	3	KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080023	4	2.72	3.06	0.34	LEIPOLD RD	North	9/22/05	jan	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080023	5	3.06	4.30	1.24	LEIPOLD RD	North	9/22/05	jan	20	2	0	0	0	0	0	0	0	0	0	1	1	3	1	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA KIKUYU
1080024	1	0.00	0.30	0.30	ROMAN RD	North West	9/13/05	jenni	20	2	2	1	1	0	1	1	1	2	1	2	2	8	8	WATSONIA AFRICAN_LOVEGRASS
1080024	2	0.30	0.60	0.30	ROMAN RD	North West	9/13/05	jenni	20	1	2	0	1	0	1	0	1	0	2	2	0	3	7	WATSONIA AFRICAN_LOVEGRASS
1080024	3	0.60	0.95	0.35	ROMAN RD	North West	9/13/05	jenni	20	1	1	0	0	0	0	0	0	0	1	2	0	3	2	WATSONIA AFRICAN_LOVEGRASS
1080025	1	0.00	0.68	0.68	PUNRAK RD	South West	9/16/05	jenni	20	2	2	1	0	1	0	2	0	1	0	2	2	8	4	AFRICAN_LOVEGRASS WATSONIA

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080025	2	0.68	0.96	0.28	PUNRAK RD	South West	9/16/05	jenni	20	0	2	0	0	0	0	0	0	0	0	1	2	1	4	AFRICAN_LOVEGRASS WATSONIA
1080025	3	0.96	2.74	1.78	PUNRAK RD	South West	9/16/05	jenni	20	2	0	1	0	1	0	1	0	2	0	1	2	8	2	AFRICAN_LOVEGRASS WATSONIA
1080025	4	2.74	3.22	0.48	PUNRAK RD	South West	9/16/05	jenni	20	1	1	1	1	0	0	1	1	0	0	1	2	4	5	AFRICAN_LOVEGRASS WATSONIA
1080025	5	3.22	4.70	1.48	PUNRAK RD	South West	9/16/05	jenni	20	2	1	1	0	0	0	1	0	0	0	1	2	5	3	AFRICAN_LOVEGRASS WATSONIA
1080025	6	4.70	6.78	2.08	PUNRAK RD	South West	9/16/05	jenni	20	0	0	0	0	0	0	0	0	1	0	1	2	2	2	AFRICAN_LOVEGRASS WATSONIA
1080025	7	6.78	7.16	0.38	PUNRAK RD	South West	9/16/05	jenni	20	1	0	1	0	0	0	1	0	0	0	1	2	4	2	AFRICAN_LOVEGRASS WATSONIA
1080025	8	7.16	8.44	1.28	PUNRAK RD	South West	9/16/05	jenni	20	1	1	1	0	0	0	2	1	0	0	1	2	5	4	AFRICAN_LOVEGRASS WATSONIA
1080026	1	0.00	3.54	3.54	KING RD	south	9/28/05	c0lleen r	20	2	2	0	0	1	1	1	1	2	1	1	0	7	5	AFRICAN_LOVEGRASS WATSONIA KIKUYU
1080026	2	3.54	5.97	2.44	KING RD	south	9/28/05	c0lleen r	20	2	1	0	0	0	0	0	0	0	1	1	1	3	3	AFRICAN_LOVEGRASS KIKUYU
1080026	3	5.97	6.91	0.94	KING RD	south	9/28/05	c0lleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA KIKUYU
1080026	4	6.91	8.44	1.54	KING RD	south	9/28/05	c0lleen r	20	2	1	1	0	1	1	0	1	2	1	0	1	6	5	AFRICAN_LOVEGRASS
1080028	1	0.00	1.18	1.18	WESCOTT RD	south	9/16/05	jenni	20	2	2	1	1	0	0	2	2	0	0	2	2	7	7	AFRICAN_LOVEGRASS
1080028	2	1.18	3.38	2.20	WESCOTT RD	south	9/16/05	jenni	20	1	0	1	0	0	0	2	0	1	0	2	2	7	2	AFRICAN_LOVEGRASS WATSONIA
1080028	3	3.38	3.78	0.40	WESCOTT RD	south	9/16/05	jenni	20	1	2	0	1	0	0	0	2	0	0	2	2	3	7	AFRICAN_LOVEGRASS WATSONIA
1080028	4	3.78	5.28	1.50	WESCOTT RD	south	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS WATSONIA
1080028	5	5.28	7.68	2.40	WESCOTT RD	south	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
1080029	1	0.00	0.25	0.25	SCRIVENER RD	East	9/15/05	jenni	20	1	1	1	0	0	0	0	0	0	0	2	0	4	1	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080029	2	0.25	6.00	5.75	SCRIVENER RD	East	9/15/05	jenni	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WATSONIA
1080030	1	0.00	6.56	6.56	UTLEY RD	West	9/23/05	c0lleenr	20	2	2	0	0	1	1	1	1	2	1	1	1	7	6	AFRICAN_LOVEGRASS KIKUYU CAPE_TULIP WATSONIA

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080031	1	0.00	0.80	0.80	HARDEY RD	South	1/30/06	Jenni		2	2	1	2	1	1	1	2	2	2	2	1	9	10	
1080031	2	0.80	2.10	1.30	HARDEY RD	South	1/30/06	Jenni		1	1	0	1	0	0	0	1	2	2	2	1	5	6	AFRICAN_LOVEGRASS
1080031	3	2.10	2.70	0.60	HARDEY RD	South	1/30/06	Jenni		0	1	0	0	0	0	0	0	0	0	2	1	2	2	AFRICAN_LOVEGRASS
1080032	1	0.00	2.00	2.00	HENDERSON RD	West	9/16/05	jenni	20	1	2	0	1	0	0	1	2	0	0	2	2	4	7	AFRICAN_LOVEGRASS WATSONIA
1080032	2	2.00	5.10	3.10	HENDERSON RD	West	9/16/05	jenni	20	0	1	0	0	0	0	0	0	0	0	2	2	2	3	AFRICAN_LOVEGRASS WATSONIA
1080032	3	5.10	6.10	1.00	HENDERSON RD	West	9/16/05	jenni	20	0	1	0	0	0	0	0	0	0	0	2	2	2	3	AFRICAN_LOVEGRASS WATSONIA
1080032	4	6.10	7.10	1.00	HENDERSON RD	West	9/16/05	jenni	20	1	1	0	0	0	0	0	0	0	1	2	1	3	3	AFRICAN_LOVEGRASS WATSONIA
1080032	5	6.38	7.18	0.80	HENDERSON RD	West	9/19/05	jenni	20	0	1	0	0	0	0	0	0	0	0	1	1	1	2	CAPE_TULIP WATSONIA AFRICAN_LOVEGRASS
1080032	6	7.18	8.58	1.40	HENDERSON RD	West	9/19/05	jenni	20	2	2	1	1	1	1	1	1	1	1	0	0	6	6	CAPE_TULIP KIKUYU WATSONIA AFRICAN_LOVEGRASS
1080032	7	8.58	9.58	1.00	HENDERSON RD	West	9/19/05	jenni	20	2	2	1	1	0	1	1	1	1	1	1	1	6	7	CAPE_TULIP WATSONIA AFRICAN_LOVEGRASS
1080033	1	0.00	0.53	0.53	GORDON RD	East	9/15/05	jenni	20	2	2	0	0	1	0	0	0	1	0	0	2	4	4	WATSONIA AFRICAN_LOVEGRASS
1080036	1	0.00	1.05	1.05	ARNOLD RD	East	9/15/05	jenni	20	2	1	0	0	1	0	0	0	0	0	2	2	5	3	AFRICAN_LOVEGRASS WATSONIA
1080037	1	0.00	0.90	0.90	SCARP RD	South	9/23/05	adrian	20	2	2	1	1	1	1	0	2	2	2	0	0	6	8	LAVENDER
1080037	2	0.90	1.60	0.70	SCARP RD	South	9/23/05	adrian	20	2	2	2	0	1	0	0	2	2	0	0	1	7	5	
1080037	3	1.60	2.40	0.80	SCARP RD	South	9/23/05	adrian	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	
1080037	4	2.40	2.60	0.20	SCARP RD	South	9/23/05	adrian	20	2	2	0	0	0	0	0	0	0	0	0	0	2	2	LAVENDER
1080037	5	2.60	4.00	1.40	SCARP RD	South	9/23/05	adrian	20	2	2	2	2	2	2	0	0	2	2	0	0	8	8	WATSONIA
1080037	6	4.00	4.90	0.90	SCARP RD	South	9/23/05	adrian	20	2	2	0	1	1	1	0	2	0	2	1	0	4	8	WATSONIA
1080037	7	4.90	5.20	0.30	SCARP RD	South	9/23/05	adrian	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080039	1	0.00	1.10	1.10	RIVER RD	South	9/19/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	CAPE_TULIP WATSONIA KIKUYU AFRICAN_LOVEGRASS
1080039	2	1.10	2.60	1.50	RIVER RD	South	9/19/05	jenni	20	2	1	2	1	0	0	2	0	0	1	2	2	8	5	CAPE_TULIP WATSONIA KIKUYU AFRICAN_LOVEGRASS
1080039	3	2.60	4.05	1.45	RIVER RD	South	9/19/05	jenni	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	CAPE_TULIP WATSONIA KIKUYU
1080040	1	0.00	1.34	1.34	COOGLY RD	West	9/23/05	jenni	20	2	2	1	1	0	0	0	0	0	1	2	2	5	6	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080041	1	0.00	1.97	1.97	WALKER RD	south	9/23/05	colleen r	20	2	2	0	0	1	1	1	1	1	2	1	1	6	7	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP
1080042	1	0.00	0.69	0.69	YANGEDI RD NTH	South	9/19/05	jenni	20	2	0	1	0	0	0	0	0	0	0	2	2	5	2	AFRICAN_LOVEGRASS
1080042	2	0.69	2.48	1.79	YANGEDI RD NTH	South	9/19/05	jenni	20	0	0	0	0	0	0	0	0	0	1	2	2	2	3	AFRICAN_LOVEGRASS
1080042	3	2.48	4.48	2.00	YANGEDI RD NTH	South	9/19/05	jenni	20	2	2	2	2	1	1	2	2	1	1	1	0	9	8	AFRICAN_LOVEGRASS WATSONIA
1080043	1	0.00	2.70	2.70	DAY RD	East	10/4/05	colleen r	20	2	2	2	2	1	1	0	0	2	2	0	0	7	7	WATSONIA
1080044	1	0.00	0.79	0.79	CASTLE RD	West	9/23/05	jenni	20	1	2	0	0	0	1	0	1	0	0	2	2	3	6	AFRICAN_LOVEGRASS
1080045	1	0.00	0.80	0.80	JUBB RD	North	9/15/05	TWINE	20	2	1	2	0	1	0	2	1	2	0	0	2	9	4	
1080045	2	0.80	2.30	1.50	JUBB RD	North	9/15/05	TWINE	20	2	2	0	2	2	2	2	2	2	2	0	0	8	10	
1080046	1	0.00	0.60	0.60	NORMAN RD	West	9/15/05	colleen	20	2	2	1	1	1	1	1	2	2	1	2	2	7	9	AFRICAN_LOVEGRASS
1080046	2	0.60	1.79	1.20	NORMAN RD	West	9/15/05	colleen	20	2	2	1	1	0	0	1	1	2	2	0	0	6	6	AFRICAN_LOVEGRASS CAPE_TULIP
1080047	1	0.00	0.62	0.62	CHESTNUT RD	South East	9/22/05	twine	20	2	2	1	2	1	1	2	2	1	2	2	0	9	9	LAVENDER
1080047	2	0.62	0.84	0.22	CHESTNUT RD	South East	9/22/05	twine	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	LAVENDER
1080048	1	0.00	1.36	1.36	LYSTER RD	East	10/4/05	c0lleen r	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	
1080048	2	1.36	2.12	0.76	LYSTER RD	East	10/4/05	c0lleen r	20	2	2	2	2	1	1	2	2	2	2	0	1	9	10	AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080048	3	2.12	2.38	0.26	LYSTER RD	East	10/4/05	c0lleen r	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	AFRICAN_LOVEGRASS
1080049	1	2.65	3.95	1.30	ROWE RD	East	9/16/05	jenni	20	2	1	1	1	0	0	2	1	2	1	0	1	7	5	CAPE_TULIP
1080049	2	3.95	5.45	1.50	ROWE RD	East	9/16/05	jenni	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080049	3	5.45	5.95	0.50	ROWE RD	East	9/16/05	jenni	20	2	1	2	0	1	0	1	0	0	0	2	2	8	3	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080050	1	0.00	5.07	5.07	GULL RD	North	9/23/05	kristy	20	2	2	1	1	0	0	0	0	1	1	1	1	5	5	WATSONIA AFRICAN_LOVEGRASS
1080052	1	0.00	2.10	2.10	WATTLE RD	West	9/23/05	0.0	20	2	2	1	1	1	0	1	1	2	0	1	1	8	5	WATSONIA AFRICAN_LOVEGRASS
1080053	1	0.00	0.92	0.92	TRANSIT RD	East	9/23/05	jenni	20	2	2	1	2	1	1	0	1	1	2	1	1	6	9	AFRICAN_LOVEGRASS
1080054	1	0.00	1.84	1.84	BUCKLAND RD	North East	10/4/05	colleen r	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	LAVENDER WATSONIA
1080055	1	0.00	2.20	2.20	BOOMERANG RD	North East	9/28/05	jenni	20	2	2	0	1	0	0	1	1	0	1	1	1	4	6	AFRICAN_LOVEGRASS
1080055	2	2.20	3.30	1.10	BOOMERANG RD	East	9/28/05	colleen	20	1	0	0	0	0	0	0	0	0	1	2	2	2	2	AFRICAN_LOVEGRASS
1080056	1	0.00	2.00	2.00	GOBBY RD	West	9/23/05	adrian	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WATSONIA
1080056	2	2.00	2.50	0.50	GOBBY RD	West	9/23/05	adrian	20	2	2	1	1	1	1	1	1	1	1	0	1	6	7	WATSONIA
1080056	3	2.50	3.00	0.50	GOBBY RD	West	9/23/05	adrian	20	2	2	0	1	0	1	1	1	0	2	1	1	4	8	WATSONIA
1080056	4	3.00	3.90	0.90	GOBBY RD	West	9/23/05	adrian	20	2	2	1	0	2	1	2	0	1	1	0	1	8	5	WATSONIA
1080056	5	3.90	4.40	0.50	GOBBY RD	West	9/23/05	adrian	20	2	2	0	0	1	1	0	0	1	1	1	1	5	5	WATSONIA
1080056	6	4.40	5.10	0.70	GOBBY RD	West	9/23/05	adrian	20	2	2	0	0	0	0	0	0	1	1	1	1	4	4	WATSONIA CAPE_TULIP
1080058	1	0.00	1.10	1.10	SELKIRK RD	East	9/15/05	jonathan	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	AFRICAN_LOVEGRASS
1080058	2	1.10	1.63	0.53	SELKIRK RD	East	9/15/05	jonathan	20	2	1	1	0	1	0	2	0	2	0	0	2	8	3	AFRICAN_LOVEGRASS
1080060	1	0.00	1.00	1.00	LEWIS RD	East	9/23/05	jenni	20	1	2	0	1	0	1	0	2	0	2	1	1	2	9	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080061	1	0.00	1.22	1.22	DIRK RD	West	9/16/05	jenni	20	1	1	1	1	0	0	0	0	1	1	2	2	5	5	AFRICAN_LOVEGRASS
1080067	1	0.00	2.70	2.70	JARRAH RD	south	9/19/05	jenni	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	CAPE_TULIP WATSONIA AFRICAN_LOVEGRASS
1080069	1	0.00	1.20	1.20	FIRNS RD	South	9/15/05	jenni	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	LAVENDER WATSONIA
1080069	2	1.20	3.12	1.92	FIRNS RD	South	9/15/05	jenni	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	LAVENDER WATSONIA
1080071	1	0.00	0.64	0.64	FEAST RD	East	9/23/05	jenni	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	AFRICAN_LOVEGRASS WATSONIA
1080071	2	0.64	1.97	1.33	FEAST RD	East	9/23/05	jenni	20	2	0	1	0	1	0	1	0	1	0	2	2	8	2	CAPE_TULIP AFRICAN_LOVEGRASS WATSONIA
1080072	1	0.00	0.49	0.49	LOWLANDS RD	West	9/23/05	kristy	20	2	1	1	0	0	0	0	0	1	1	2	2	6	4	AFRICAN_LOVEGRASS WATSONIA
1080072	2	0.49	2.98	2.49	LOWLANDS RD	West	9/23/05	kristy	20	2	2	1	1	0	0	0	0	1	1	2	2	6	6	AFRICAN_LOVEGRASS WATSONIA
1080072	3	2.98	3.37	0.39	LOWLANDS RD	West	9/23/05	kristy	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS
1080072	4	3.37	5.15	1.78	LOWLANDS RD	West	9/23/05	kristy	20	2	2	1	1	0	0	1	1	2	2	2	2	8	8	AFRICAN_LOVEGRASS
1080076	1	0.00	0.30	0.30	ROBERTSON RD	North	9/16/05	jenni	20	0	0	0	0	0	0	0	0	0	0	1	2	1	2	AFRICAN_LOVEGRASS WATSONIA
1080076	2	0.30	0.60	0.30	ROBERTSON RD	North	9/16/05	jenni	20	2	2	1	1	2	1	1	1	1	0	1	2	8	7	AFRICAN_LOVEGRASS WATSONIA
1080077	1	0.00	1.18	1.18	KARNUP CREEK RD	South	9/19/05	enni	20	2	0	1	0	0	0	0	2	0	0	2	2	5	4	AFRICAN_LOVEGRASS
1080078	1	0.00	0.60	0.60	WEBB RD	South	9/16/05	jenni	20	2	2	1	1	1	1	0	1	0	1	2	2	6	8	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP KIKUYU
1080082	1	0.00	0.95	0.95	ALCOA RD	East	9/16/05	cint	20	2	2	2	2	2	2	2	2	1	1	2	2	9	9	AFRICAN_LOVEGRASS
1080083	1	0.00	2.20	2.20	BALMORAL RD	East	9/22/05	twine	20	2	2	1	1	1	1	2	2	2	2	2	2	8	8	AFRICAN_LOVEGRASS
1080083	2	2.20	2.80	0.60	BALMORAL RD	South East	9/22/05	twine	20	2	2	1	2	1	1	2	2	2	2	2	0	10	9	
1080083	3	2.80	4.00	1.20	BALMORAL RD	South East	9/22/05	twine	20	2	2	2	2	1	1	0	0	2	2	2	2	7	7	
1080083	4	4.00	4.70	0.70	BALMORAL RD	South East	9/22/05	twine	20	2	2	2	2	1	1	2	2	2	2	2	2	9	11	WATSONIA

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080083	5	4.70	10.70	6.00	BALMORAL RD	South East	9/22/05	twine	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	
1080086	1	0.00	1.00	1.00	ATKINS RD	South	9/16/05	jenni	20	1	0	0	0	0	0	0	0	1	0	1	2	3	2	AFRICAN_LOVEGRASS WATSONIA
1080093	1	0.00	0.10	0.10	KEIRNAN ST	North	9/15/05	jenni	40	1	2	0	0	0	0	0	0	0	0	2	2	3	4	CAPE_TULIP AFRICAN_LOVEGRASS LAVENDER WATSONIA
1080093	2	0.10	2.60	2.50	KEIRNAN ST	North	9/15/05	jenni	40	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS WATSONIA
1080093	3	2.60	3.75	1.15	KEIRNAN ST	North	9/15/05	jenni	40	1	1	0	0	0	0	0	0	0	0	0	2	1	3	AFRICAN_LOVEGRASS WATSONIA
1080099	1	0.00	0.70	0.70	ADAMSON ST	South	9/23/05	colleen r	20	2	2	0	0	0	0	1	1	0	0	1	1	4	4	CAPE_TULIP AFRICAN_LOVEGRASS
1080100	1	0.00	0.50	0.50	ATKINS ST	East	10/4/05	colleen r	20	2	2	2	2	1	1	2	2	2	1	0	0	9	8	WATSONIA
1080100	2	0.50	1.00	0.50	ATKINS ST	East	10/4/05	colleen r	20	2	0	1	0	0	0	1	0	1	0	0	0	5	0	LAVENDER AFRICAN_LOVEGRASS
1080107	1	0.00	0.15	0.15	CURO ST	South	9/19/05	jenni	20	1	1	0	0	0	0	2	2	1	1	0	0	4	4	
1080115	1	0.00	0.40	0.40	BALDWIN RD	South West	9/23/05	jenni	20	2	2	1	1	0	0	0	0	0	0	0	1	3	4	AFRICAN_LOVEGRASS WATSONIA LAVENDER
1080115	2	0.40	0.60	0.20	BALDWIN RD	South West	9/23/05	jenni	20	1	0	0	0	0	0	0	0	0	0	0	1	1	1	AFRICAN_LOVEGRASS WATSONIA
1080117	1	0.00	2.10	2.15	RICHARDSON ST	South	9/15/05	jenni	20	1	2	0	1	0	2	0	1	0	2	2	1	3	9	AFRICAN_LOVEGRASS WATSONIA
1080121	1	0.00	0.50	0.50	LEFROY ST	south	9/15/05	jenni	40	1	1	0	0	0	0	0	0	0	0	0	0	1	1	AFRICAN_LOVEGRASS WATSONIA
1080121	2	0.50	0.70	0.20	LEFROY ST	south	9/15/05	jenni	40	2	2	1	2	1	2	1	1	0	1	0	0	5	8	AFRICAN_LOVEGRASS WATSONIA
1080121	3	0.70	1.30	0.60	LEFROY ST	south	9/15/05	jenni	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	AFRICAN_LOVEGRASS WATSONIA
1080122	1	0.00	0.40	0.40	TONKIN ST (SERP)	West	9/15/05	jennu	20	1	2	0	0	0	1	0	0	0	1	0	0	1	4	LAVENDER WATSONIA
1080125	1	0.00	0.40	0.40	CHATFIELD RD	East	9/15/05	jenni	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WATSONIA AFRICAN_LOVEGRASS
1080129	1	0.00	2.80	2.80	NICHOLSON RD	South	9/16/05	cint	20	2	2	0	1	2	2	1	2	1	2	2	2	8	11	AFRICAN_LOVEGRASS KIKUYU
1080129	2	2.80	3.90	1.10	NICHOLSON RD	South	9/16/05	cint	40	1	1	0	0	1	0	0	0	1	0	2	2	5	3	AFRICAN_LOVEGRASS KIKUYU
1080129	3	3.90	4.84	0.94	NICHOLSON RD	South	9/16/05	cint	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	AFRICAN_LOVEGRASS KIKUYU

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080130	1	0.00	3.20	3.20	KILN RD	East	10/4/05	colleen r	20	1	2	1	1	0	1	1	1	1	1	1	1	5	7	AFRICAN_LOVEGRASS CAPE_TULIP KIKUYU
1080132	1	0.00	0.73	0.73	SOLDIERS RD	south	9/15/05	colleen r	20	2	0	2	0	2	0	2	0	2	0	2	2	11	2	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA
1080132	2	0.73	1.44	0.71	SOLDIERS RD	south	9/15/05	colleen r	20	2	1	2	0	2	0	2	0	2	2	1	0	11	3	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA
1080132	3	1.44	2.25	0.81	SOLDIERS RD	south	9/15/05	colleen r	20	2	1	2	0	2	0	2	1	2	1	1	1	11	4	AFRICAN_LOVEGRASS CAPE_TULIP
1080132	4	2.25	3.11	0.86	SOLDIERS RD	South	9/23/05	colleen r	20	2	0	0	2	2	0	2	0	1	0	1	0	8	2	AFRICAN_LOVEGRASS
1080132	5	3.11	6.81	3.70	SOLDIERS RD	South	9/23/05	colleen r	20	2	2	1	1	2	2	1	1	2	1	1	1	9	8	AFRICAN_LOVEGRASS LAVENDER WATSONIA CAPE_TULIP
1080132	6	6.81	8.17	1.36	SOLDIERS RD	South	9/23/05	colleen r	20	2	0	2	0	0	0	1	0	2	2	1	0	8	2	AFRICAN_LOVEGRASS WATSONIA
1080132	7	8.17	8.85	0.68	SOLDIERS RD	South	9/23/05	colleen r	20	0	0	0	0	0	0	2	2	0	0	1	0	3	2	AFRICAN_LOVEGRASS WATSONIA
1080133	1	0.00	3.00	3.00	ABERNETHY RD	West	1/30/06	Jenni	40	0	1	0	1	0	0	2	1	0	0	1	1	4	4	AFRICAN_LOVEGRASS
1080133	2	3.00	3.60	0.60	ABERNETHY RD	West	1/30/06	Jenni		0	0	0	0	0	0	1	1	0	0	2	2	3	3	AFRICAN_LOVEGRASS
1080133	3	3.60	4.70	1.10	ABERNETHY RD	West	1/30/06	Jenni		2	1	1	0	1	0	0	1	2	1	0	1	8	4	AFRICAN_LOVEGRASS
1080133	4	4.70	7.80	3.10	ABERNETHY RD	West	1/30/06	Jenni		1	2	0	1	0	0	1	1	0	0	1	1	3	5	AFRICAN_LOVEGRASS
1080133	5	7.80	8.20	0.40	ABERNETHY RD	West	1/30/06	Jenni		0	0	0	0	0	0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS
1080135	1	0.00	1.13	1.13	BEENYUP RD	East	9/28/05	jenni	20	1	1	0	0	0	0	2	2	1	0	0	0	4	3	WATSONIA LAVENDER
1080137	1	1.85	2.35	0.50	ORTON RD	East	9/14/05	jan	20	1	1	0	0	0	0	1	1	0	0	1	0	3	2	CAPE_TULIP AFRICAN_LOVEGRASS
1080137	2	2.35	2.65	0.30	ORTON RD	East	9/14/05	jan	20	1	1	0	0	0	0	1	1	0	0	1	0	3	2	AFRICAN_LOVEGRASS
1080137	3	2.65	3.05	0.40	ORTON RD	East	9/14/05	jan	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	AFRICAN_LOVEGRASS KIKUYU
1080137	4	3.05	3.55	0.50	ORTON RD	East	9/14/05	jan	20	2	2	1	1	0	0	1	1	0	0	1	1	5	5	AFRICAN_LOVEGRASS KIKUYU
1080137	5	3.55	4.45	0.90	ORTON RD	East	9/14/05	jan	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	AFRICAN_LOVEGRASS KIKUYU
1080137	6	4.45	5.05	0.60	ORTON RD	East	9/14/05	jan	20	0	1	0	0	0	0	1	1	0	0	1	1	2	3	AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080137	7	5.05	8.35	3.30	ORTON RD	East	9/14/05	jan	20	2	2	1	1	1	1	1	1	1	0	1	1	7	6	WATSONIA AFRICAN_LOVEGRASS KIKUYU
1080137	8	8.35	10.65	2.30	ORTON RD	East	9/14/05	jan	20	2	2	0	0	0	0	1	1	0	0	1	1	4	4	WATSONIA AFRICAN_LOVEGRASS KIKUYU
1080143	1	0.00	1.50	1.50	ADMIRAL RD	south	9/16/05	cint	20	2	2	2	2	2	2	2	2	2	2	2	2	10	10	WATSONIA AFRICAN_LOVEGRASS
1080143	2	1.50	3.00	1.50	ADMIRAL RD	south	9/16/05	cint	20	2	2	1	1	2	2	2	2	2	1	1	1	10	9	WATSONIA AFRICAN_LOVEGRASS
1080145	1	0.00	0.50	0.50	CARDUP SIDING RD	West	9/20/05	colleen r	20	0	2	0	1	0	1	0	1	0	1	1	1	1	7	WATSONIA AFRICAN_LOVEGRASS
1080145	2	0.50	1.30	0.80	CARDUP SIDING RD	West	9/20/05	colleen r	20	1	2	0	1	0	0	1	1	1	1	2	2	4	6	AFRICAN_LOVEGRASS KIKUYU
1080145	3	1.30	2.00	0.70	CARDUP SIDING RD	West	9/20/05	colleen r	20	2	2	2	1	1	1	1	1	2	1	2	2	8	8	AFRICAN_LOVEGRASS
1080145	4	2.00	3.20	1.20	CARDUP SIDING RD	West	9/20/05	colleen r	20	1	1	1	1	0	0	1	1	0	0	2	2	4	4	CAPE_TULIP WATSONIA KIKUYU AFRICAN_LOVEGRASS
1080154	1	0.00	3.00	3.00	MASTERS RD	South	9/16/05	Jacinta	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	AFRICAN_LOVEGRASS KIKUYU CAPE_TULIP
1080158	1	0.00	0.20	0.20	BRIGGS RD	North	9/20/05	colleen r	20	1	0	0	0	0	0	0	0	0	0	2	2	2	1	AFRICAN_LOVEGRASS
1080158	2	0.20	0.50	0.30	BRIGGS RD	North	9/20/05	colleen r	20	1	0	0	0	0	0	0	0	0	0	2	2	1	1	AFRICAN_LOVEGRASS
1080158	3	0.50	1.75	1.25	BRIGGS RD	North	9/20/05	colleen r	20	2	1	0	0	0	0	0	0	0	1	1	1	3	3	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080165	1	0.00	0.50	0.50	WARRINGTON RD	North	9/14/05	jan	20	1	0	1	0	0	0	1	1	0	0	1	1	4	2	AFRICAN_LOVEGRASS KIKUYU WATSONIA
1080165	2	0.50	0.70	0.20	WARRINGTON RD	North	9/14/05	jan	20	1	0	0	0	0	0	1	1	0	0	1	1	3	2	AFRICAN_LOVEGRASS KIKUYU
1080165	3	0.70	1.00	0.30	WARRINGTON RD	North	9/14/05	jan	20	1	2	0	1	0	2	1	1	0	2	1	0	3	8	AFRICAN_LOVEGRASS
1080165	4	1.00	1.63	0.63	WARRINGTON RD	North	9/14/05	jan	20	1	0	0	0	0	0	0	0	0	0	1	1	2	1	AFRICAN_LOVEGRASS KIKUYU
1080166	1	0.00	0.50	0.50	WOLFE RD	South	9/19/05	jacinta	20	1	2	1	0	1	1	1	0	1	1	0	0	5	4	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080168	1	0.00	1.64	1.64	LARSEN RD	West	9/20/05	colleen	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	LAVENDER AFRICAN_LOVEGRASS KIKUYU

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080169	1	0.00	1.70	1.70	MANJEDAL RD	West	9/16/05	cint	20	2	2	2	2	2	2	2	2	2	2	2	2	10	10	
1080170	1	0.00	1.00	1.00	COYLE RD	East	9/19/05	jacinta	20	2	2	1	2	1	1	2	2	2	1	1	1	9	9	AFRICAN_LOVEGRASS KIKUYU
1080170	2	1.00	2.00	1.00	COYLE RD	East	9/19/05	jacinta	20	1	1	0	0	0	0	0	0	1	0	1	1	3	2	AFRICAN_LOVEGRASS KIKUYU
1080171	1	0.00	2.20	2.20	BLAIR RD	North	9/28/05	colleen r	20	1	2	0	0	0	0	0	0	0	1	1	1	2	4	AFRICAN_LOVEGRASS CAPE_TULIP
1080174	1	0.00	0.60	0.60	REDCLIFFE RD	West	9/20/05	colleen r	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	AFRICAN_LOVEGRASS
1080177	1	0.00	1.74	1.74	KINGSBURY DR	East	9/23/05	adrian	20	2	2	1	1	1	1	2	1	1	1	1	1	8	7	
1080177	2	1.74	2.88	1.14	KINGSBURY DR	East	9/23/05	adrian	20	2	2	1	1	1	1	2	2	1	1	0	1	7	8	
1080177	3	2.88	7.62	4.74	KINGSBURY DR	East	9/23/05	adrian	20	2	2	2	1	2	1	2	2	2	2	0	0	10	8	
1080177	4	7.62	8.36	0.74	KINGSBURY DR	East	9/23/05	adrian	20	2	2	0	0	0	0	2	2	0	0	0	0	4	4	
1080177	5	8.36	10.01	1.64	KINGSBURY DR	East	9/23/05	adrian	20	2	2	1	0	2	1	2	2	2	1	0	1	9	7	
1080177	6	10.01	10.65	0.64	KINGSBURY DR	East	9/23/05	adrian	20	2	2	1	1	0	0	2	2	1	0	1	1	7	6	
1080177	7	10.65	16.09	5.44	KINGSBURY DR	East	9/23/05	adrian	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
1080177	8	16.09	16.53	0.44	KINGSBURY DR	North	9/23/05	adrian	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
1080177	9	16.53	17.07	0.54	KINGSBURY DR	North	9/23/05	adrian	20	2	2	0	0	1	1	2	2	1	1	1	1	7	7	LAVENDER WATSONIA
1080177	10	17.07	25.11	8.04	KINGSBURY DR	North	9/23/05	adrian	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	LAVENDER WATSONIA
1080178	1	0.00	1.70	1.70	CUMMING RD	South	9/19/05	jacinta	20	2	1	1	0	1	0	1	1	0	0	1	1	6	3	AFRICAN_LOVEGRASS
1080179	1	0.00	1.79	1.79	DOLEY RD	North	9/20/05	c0lleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA KIKUYU
1080186	1	0.00	1.80	1.80	ANKETELL RD	North West	9/19/05	jacinta	20	2	2	2	2	1	1	2	2	2	2	1	0	10	9	AFRICAN_LOVEGRASS WATSONIA
1080186	2	1.80	2.00	0.20	ANKETELL RD	North	9/19/05	jacinta	20	2	2	2	2	2	2	2	2	1	1	0	0	9	9	AFRICAN_LOVEGRASS WATSONIA
1080186	3	2.00	3.08	1.08	ANKETELL RD	North	9/19/05	jacinta	20	2	1	1	1	1	1	2	2	2	1	1	1	9	7	AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080188	1	0.00	1.40	1.40	TUART RD	North	9/19/05	jacinta	20	1	1	0	0	0	0	0	0	2	1	1	1	4	3	AFRICAN_LOVEGRASS WATSONIA
1080189	1	0.00	0.20	0.20	SHALE RD	East	9/15/05	jenni	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
1080200	1	0.00	7.90	7.90	THOMAS RD	West	10/4/05	colleen r	20	1	2	0	0	0	1	0	1	0	1	2	2	3	7	CAPE_TULIP KIKUYU AFRICAN_LOVEGRASS WATSONIA
1080200	2	7.90	8.20	0.30	THOMAS RD	West	10/4/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	CAPE_TULIP KIKUYU AFRICAN_LOVEGRASS WATSONIA
1080200	3	8.20	9.80	1.60	THOMAS RD	West	10/4/05	colleen r	20	0	2	0	0	0	0	0	0	0	0	1	1	1	3	CAPE_TULIP KIKUYU AFRICAN_LOVEGRASS WATSONIA
1080200	4	9.80	11.00	1.20	THOMAS RD	West	10/4/05	colleen r	20	1	2	0	1	0	0	0	1	0	1	1	0	2	5	AFRICAN_LOVEGRASS
1080200	5	11.00	12.50	1.50	THOMAS RD	West	10/4/05	colleen r	20	0	1	0	0	0	1	0	1	1	2	0	0	1	5	WATSONIA AFRICAN_LOVEGRASS CAPE_TULIP
1080206	1	0.00	1.44	1.44	PETERS WY	North	9/28/05	colleen r	20	1	2	0	0	0	0	0	0	0	1	1	1	2	4	AFRICAN_LOVEGRASS KIKUYU
1080207	1	0.00	0.98	0.98	CRAGHILL WY	North	9/28/05	colleen r	20	0	0	0	0	0	0	0	0	0	1	1	1	1	2	AFRICAN_LOVEGRASS KIKUYU
1080208	1	0.00	0.30	0.30	MILLARS RD	North East	10/4/05	c0lleen r	20	0	0	0	0	0	0	0	0	0	0	0	2	0	2	AFRICAN_LOVEGRASS
1080208	2	0.30	0.90	0.60	MILLARS RD	North East	10/4/05	c0lleen r	20	2	2	2	2	1	1	2	2	2	1	0	0	9	8	LAVENDER WATSONIA
1080209	1	0.00	2.60	2.60	YANGEDI SOUTH RD	South	9/16/05	jenni	20	1	2	0	0	0	0	1	1	0	0	2	2	4	5	AFRICAN_LOVEGRASS WATSONIA
1080209	2	2.60	4.60	2.00	YANGEDI SOUTH RD	South	9/16/05	jenni	20	2	2	2	1	0	0	2	1	2	0	0	2	8	6	AFRICAN_LOVEGRASS WATSONIA
1080216	1	0.00	0.50	0.50	ROBINSON ST	South	9/23/05	colleen r	20	2	2	1	1	0	0	1	1	1	1	1	1	6	6	CAPE_TULIP KIKUYU AFRICAN_LOVEGRASS
1080220	1	0.00	0.40	0.40	LESLIE ST	East	9/15/05	jenni	20	1	2	0	0	1	0	2	2	1	0	0	0	5	4	AFRICAN_LOVEGRASS WATSONIA
1080232	1	0.00	1.00	1.00	BARGE DR	South	9/28/05	jenni	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	LAVENDER AFRICAN_LOVEGRASS
1080235	1	0.00	0.50	0.50	LAWRENCE WY	North	9/20/05	c0lleen r	20	1	2	0	0	0	0	1	1	1	1	1	1	4	5	AFRICAN_LOVEGRASS
1080238	1	0.00	0.71	0.71	ALLUM WAY	East	9/23/05	jenni	20	1	0	0	0	0	0	2	2	0	0	1	1	4	3	AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080239	1	0.00	0.90	0.90	MCKAY DR	North	9/23/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS
1080243	1	0.00	1.40	1.40	GLADSTONE DR	North	9/23/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS WATSONIA
1080249	1	0.00	0.76	0.76	BERNBOROUGH WY	South	9/16/05	Jacinta	20	2	2	0	0	0	1	0	0	0	0	2	2	4	5	AFRICAN_LOVEGRASS KIKUYU
1080250	1	0.00	1.80	1.80	MEDULLA RD	South	9/15/05	TWINE	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	AFRICAN_LOVEGRASS
1080252	1	0.00	0.37	0.37	MILLBROOK CL	South	9/15/05	TWINE	20	1	1	0	0	0	1	1	2	1	1	2	2	5	7	AFRICAN_LOVEGRASS LAVENDER
1080253	1	0.00	0.59	0.59	MARSH CT	East	9/15/05	TWINE	20	2	0	0	0	0	0	0	0	2	1	2	2	6	3	AFRICAN_LOVEGRASS
1080254	1	0.00	0.67	0.67	JARRAHGLEN RI	East	9/15/05	TWINE	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	AFRICAN_LOVEGRASS
1080255	1	0.00	0.62	0.62	BULLARA RA	South	9/15/05	TWINE	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	AFRICAN_LOVEGRASS
1080260	1	0.00	1.13	1.13	KARBRO DR	West	9/28/05	jenni	20	0	1	0	0	0	0	0	1	0	0	1	1	1	3	CAPE_TULIP AFRICAN_LOVEGRASS
1080263	1	0.00	0.60	0.60	EVELYN ST	North East	9/16/05	jenni	20	2	2	2	0	2	0	2	0	2	0	0	2	10	4	AFRICAN_LOVEGRASS WATSONIA
1080263	2	0.60	1.36	0.76	EVELYN ST	North East	9/16/05	jenni	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	AFRICAN_LOVEGRASS WATSONIA
1080270	1	0.11	1.61	1.50	WUNGONG STH RD	North	9/16/05	Jacinta	20	2	2	0	0	1	1	0	0	0	1	1	1	4	5	AFRICAN_LOVEGRASS KIKUYU
1080271	1	0.00	0.76	0.76	PHAR LAP DR	South	9/16/05	Jacinta	20	1	1	0	0	0	1	0	0	0	2	2	2	3	6	AFRICAN_LOVEGRASS LAVENDER
1080272	1	0.00	0.40	0.40	DALRAY CT	South East	9/16/05	Jacinta	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	KIKUYU AFRICAN_LOVEGRASS
1080279	1	0.00	0.30	0.30	JACKSON RD	North	9/28/05	c0lleen r	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	
1080279	2	0.30	1.50	1.20	JACKSON RD	North	9/28/05	c0lleen r	20	2	2	1	1	1	1	1	1	0	1	1	0	6	6	AFRICAN_LOVEGRASS KIKUYU WATSONIA
1080281	1	0.00	0.33	0.33	LONGRIDGE RD	North	9/16/05	jenni	20	1	0	0	0	0	0	0	0	0	0	2	2	3	2	AFRICAN_LOVEGRASS WATSONIA
1080294	1	0.00	0.36	0.36	BIRD RD	South	9/28/05	colleen r	20	1	0	0	0	0	0	0	0	1	0	1	1	3	1	KIKUYU
1080296	1	0.00	0.30	0.30	HICKS ST	West	9/23/05	colleen r	20	2	1	1	0	0	0	1	1	1	0	1	1	6	3	CAPE_TULIP AFRICAN_LOVEGRASS
1080302	1	0.00	4.71	4.71	ROWLEY RD	East	9/19/05	jacinta	20	1	2	0	0	0	0	1	1	0	1	1	1	3	5	AFRICAN_LOVEGRASS

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080304	1	0.00	0.30	0.30	THREE KANGROOS WY	North	9/28/05	jenni	20	1	0	1	0	0	0	2	0	0	0	1	1	5	1	
1080310	1	0.00	1.00	1.00	PONY PL	North East	9/19/05	jacinta	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	CAPE_TULIP
1080311	1	0.00	1.20	1.20	SALMON BARK RD	West	9/23/05	colleen r	20	2	1	1	0	1	0	1	0	1	0	1	1	7	2	CAPE_TULIP
1080311	2	1.20	1.86	0.66	SALMON BARK RD	West	9/23/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	CAPE_TULIP
1080316	1	0.00	0.27	0.27	BARRATT PL	East	9/19/05	cint	20	2	2	1	1	1	1	2	2	0	0	0	0	6	6	AFRICAN_LOVEGRASS CAPE_TULIP
1080320	1	0.00	0.53	0.53	BROCKWELL PL	West	9/19/05	jacinta	20	2	1	0	1	1	1	1	1	1	1	0	0	5	5	AFRICAN_LOVEGRASS CAPE_TULIP
1080321	1	0.00	1.60	1.60	FOXTON DR	West	9/19/05	jacinta	20	1	1	1	1	0	0	1	1	1	1	0	0	4	4	AFRICAN_LOVEGRASS CAPE_TULIP WATSONIA
1080321	2	1.60	3.20	1.60	FOXTON DR	North	9/19/05	jacinta	20	2	2	2	2	1	2	2	2	2	2	0	0	9	10	AFRICAN_LOVEGRASS CAPE_TULIP
1080325	1	0.00	1.10	1.10	TURNER RD (BY)	North	9/20/05	colle3n r	20	2	2	1	0	1	1	2	1	2	2	0	0	8	6	WATSONIA CAPE_TULIP AFRICAN_LOVEGRASS LAVENDER
1080333	1	0.00	0.50	0.50	OLD DAIRY CT	North	9/28/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	CAPE_TULIP AFRICAN_LOVEGRASS
1080333	2	0.50	1.68	1.18	OLD DAIRY CT	North	9/28/05	colleen r	20	2	2	1	0	1	1	1	1	1	1	1	1	7	6	AFRICAN_LOVEGRASS
1080342	1	0.00	0.20	0.20	FINCH ME	East	9/15/05	jenni	20	0	0	0	0	0	0	2	2	0	0	0	0	2	2	AFRICAN_LOVEGRASS
1080343	1	0.00	0.48	0.48	WINDMILL AVE	North	9/23/05	colleen r	20	2	2	0	0	0	0	1	1	1	1	1	1	5	5	AFRICAN_LOVEGRASS
1080349	1	0.00	2.39	2.39	COUNTRY DR	West	9/19/05	jenni	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	KIKUYU CAPE_TULIP
1080352	1	0.00	0.85	0.85	REED RD	North	9/15/05	TWINE	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
1080355	1	0.00	1.76	1.76	CUNNINGHAM DR	West	9/19/05	jenni	20	0	1	0	0	0	0	0	0	0	0	2	2	2	3	KIKUYU CAPE_TULIP AFRICAN_LOVEGRASS
1080360	1	0.00	0.74	0.74	KING JARRAH CI	North East	9/22/05	twine	20	0	1	0	0	0	0	0	0	0	1	2	1	2	3	
1080371	1	0.00	0.72	0.72	OLD CHESTNUT LA	South	9/22/05	twine	20	2	2	2	2	1	1	2	2	2	2	2	2	9	9	
1080371	2	0.72	1.24	0.52	OLD CHESTNUT LA	South	9/22/05	twine	20	0	2	0	2	0	1	0	2	0	1	2	0	2	8	LAVENDER CAPE_TULIP WATSONIA
1080373	1	0.00	0.30	0.30	BADEN RD	North	9/16/05	jenni	20	2	0	1	0	0	0	1	0	2	0	2	2	7	2	AFRICAN_LOVEGRASS WATSONIA

Road#	Sect#	ODStart	ODFinish	Section Length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weed cover		Value as a Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed of present)
1080373	2	0.30	2.30	2.00	BADEN RD	South	9/16/05	jenni	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	AFRICAN_LOVEGRASS WATSONIA CAPE_TULIP
1080381	1	0.00	1.10	1.10	BOURNBROOK AVE	North	10/4/05	colleen r	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	CAPE_TULIP KIKUYU
1080396	1	0.00	0.40	0.40	BARIP PL	East	9/19/05	jenni	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	CAPE_TULIP KIKUYU
1080397	1	0.00	0.60	0.60	SCARPVIEW DR	South	9/15/05	jonathan	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS
1085014	1	0.00	0.80	0.80	NORTH RD (JARR)	South	9/23/05	kristy	20	2	2	2	2	1	1	2	2	0	1	0	1	7	9	
1085014	2	0.80	1.20	0.40	NORTH RD (JARR)	South	9/23/05	kristy	20	2	2	2	2	1	1	2	2	1	2	0	0	8	9	
1085014	3	1.20	1.80	0.60	NORTH RD (JARR)	South	9/23/05	kristy	20	2	2	1	2	0	0	2	2	2	2	0	1	7	9	
1085016	1	0.00	0.40	0.40	MYARA RD	East	9/23/05	adrian	20	2	2	1	1	1	1	0	0	2	1	1	0	7	5	
1085016	2	0.40	3.14	2.74	MYARA RD	East	9/23/05	adrian	20	2	2	1	1	1	1	0	0	2	2	0	0	6	6	

Appendix

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APPENDIX 3

Road names and lengths: Shire of Serpentine-Jarrahdale

(Source: Main Roads WA 2004)

Road Number	Road Name	Length (km)
1080133	ABERNETHY RD	9.13
1080332	ABSOLON ST	0.28
1080092	ADAMS ST	0.87
1080099	ADAMSON ST	0.58
1080143	ADMIRAL RD	3.00
1080091	ADONIS ST	0.87
1080082	ALCOA RD	2.13
1080193	ALEXANDER RD	0.98
1080109	ALFORD RD	0.13
1080155	ALICE RD	0.60
1080238	ALLUM WAY	0.76
1080144	AMY ST	0.34
1080274	ANDERSON CT	0.30
1080256	ANGUS CL	0.16
1080186	ANKETELL RD	3.08
1080094	ANSTEY ST	0.74
1080224	ARMSTRONG RD	0.15
1080036	ARNOLD RD	1.05
1080086	ATKINS RD	3.00
1080100	ATKINS ST	1.00
1080079	ATWELL RD	0.52
1080373	BADEN RD	2.30
1080115	BALDWIN RD	0.48
1080395	BALLAK PL	0.22
1080083	BALMORAL RD	22.75
1080409	BAMBEE CT	0.16
1080407	BANGAP PL	0.84
1080074	BANKSIA RD	1.20
1080232	BARGE DR	1.06
1080396	BARIP PL	0.43
1080316	BARRATT PL	0.27
1080098	BASKERVILLE RD	0.82
1080345	BATE RD	0.47
1080134	BATEMAN ST	0.23
1080135	BEENYUP RD	1.13
1080249	BERNBOROUGH WY	0.76
1080225	BERWICK ST	0.10
1080221	BEVIS CT	0.24
1080384	BILYA AVE	0.59
1080194	BINSHAW AVE	0.53
1080294	BIRD RD	0.36
1080012	BISHOP RD	3.86
1080171	BLAIR RD	2.21
1080277	BLUE ROCK RD	3.45
1080203	BLUE WREN CL	0.07
1080136	BLYTHESWOOD AVE	0.30
1080172	BLYTHESWOOD RD	0.43
1080055	BOOMERANG RD	4.13
1080381	BOURNBROOK AVE	1.10
1080284	BOWYER PL	0.08
1080375	BRADLEY CL	0.10
1080156	BRADSHAW RD	0.41
1080101	BRADY RD	0.40
1080158	BRIGGS RD	1.75

1080320	BROCKWELL PL	0.53
1080226	BROOK RD	0.12
1080159	BROWN ST	0.33
1080404	BRUNS DR	1.56
1080054	BUCKLAND RD	1.84
1080255	BULLARA RA	0.62
1080363	BULLICH RT	0.30
1080258	BULLOCK DR	1.58
1080327	BUNNEY PL	0.09
1080211	BURRELL ST	0.28
1080204	BURTO CL	0.08
1080233	BUSHLARK CL	0.42
1080201	BUTCHER RD (BY)	0.11
1080096	BUTCHER ST (MUND)	0.74
1080398	BUTTERGUM CL	0.19
1080187	BYFORD DR	0.20
1080127	BYFORD MEADOWS DR	1.66
1080145	CARDUP SIDING RD	3.19
1080044	CASTLE RD	0.79
1080147	CATHERINE ST	0.37
1080084	CEMETERY RD	0.13
1080148	CHARLES ST	0.18
1080119	CHAROLAIS CT	0.29
1080125	CHATFIELD RD	0.40
1080047	CHESTNUT RD	0.84
1080149	CLARA ST	0.18
1080141	CLIFTON ST	0.50
1080008	CLOON CT	0.40
1080089	COCKRAM ST	0.78
1080299	COFFEY RD	0.46
1080240	COLLEGE CT	0.30
1080298	COMIC COURT CC	2.15
1080040	COOGLY RD	1.34
1080231	COOK CL	0.10
1080362	CORAL VINE LP	1.10
1080349	COUNTRY DR	2.39
1080104	COUSENS ST	0.40
1080217	COWEN ST	0.33
1080170	COYLE RD	1.98
1080317	CRADDON RD	2.10
1080207	CRAGHILL WY	0.98
1080223	CRAIG ST	0.12
1080340	CROSSING VW	0.24
1080178	CUMMING RD	1.73
1080355	CUNNINGHAM DR	1.76
1080107	CURO ST	0.15
1080319	CYPRIAN PL	0.10
1080167	DAISY RD	0.16
1080215	DALLEY ST	0.59
1080272	DALRAY CT	0.40
1080368	DARWINIA CT	0.13
1080244	DAVEY RD	0.17
1080043	DAY RD	3.47
1080248	DELTA CT	0.20
1080118	DEVON CT	0.45
1080061	DIRK RD	1.22
1080350	DITTON RD	0.36
1080179	DOLEY RD	1.79
1080236	DOUGALL ST	0.18
1080073	DUCKPOND RD	1.76

1080085	DUCKPOND RD "A"	0.30
1080150	EDWARD CR	0.36
1080344	EGERTON DR	0.80
1080262	EILEEN AVE	0.32
1080016	ELLIOTT RD	10.65
1080387	ELSTON COURT	0.05
1080322	EMPIRE ROSE CT	0.56
1080192	EVANS WY	0.85
1080263	EVELYN ST	1.36
1080265	EVENING PEAL CT	0.50
1080020	FALLS RD	1.46
1080267	FARINA RD	0.67
1080370	FARM VW	0.01
1080071	FEAST RD	1.97
1080346	FIELDER RD	1.18
1080359	FIELDVIEW CH	0.79
1080342	FINCH ME	0.20
1080069	FIRNS RD	3.12
1080068	FISHER RD	1.36
1080229	FOREST AVE	0.27
1080111	FOSTER WY	0.56
1080321	FOXTON DR	3.20
1080259	FRIESIAN CL	0.22
1080382	GALLAGHER WAY	0.42
1080011	GALVIN RD	0.79
1080195	GEORGE ST (BY)	1.37
1080103	GEORGE ST (JARR)	0.60
1080367	GHOSTGUM HTS	0.32
1080124	GIBLETT ST	0.14
1080402	GIBSON TOP	0.64
1080243	GLADSTONE DR	1.54
1080287	GLOAMING WY	0.93
1080056	GOBBY RD	5.10
1080269	GOORALONG RD	0.90
1080190	GORDIN WAY	0.44
1080033	GORDON RD	0.53
1080010	GOSSAGE RD	6.29
1080383	GREENHILL GR	0.31
1080050	GULL RD	5.07
1080297	GURNERS LA	0.45
1080019	HALL RD	10.92
1080031	HARDEY RD	4.70
1080323	HARRIS PL	0.17
1080222	HART RD	0.15
1080406	HARWOOD PASS	0.60
1080181	HAWK WY	0.20
1080151	HELEN CR	0.36
1080173	HELLA KIPPER DR	0.78
1080032	HENDERSON RD	9.58
1080251	HETHERINGTON CL	0.28
1080366	HIBBERTIA CT	0.08
1080296	HICKS ST	0.30
1080293	HILBERT RD	0.10
1080354	HILLVIEW CL	0.27
1080191	HOLMES RD	0.49
1080017	HOPELAND RD	12.50
1080013	HOPKINSON RD	9.09
1080374	HUGHES RD	0.79
1080315	ISMA CT	0.18
1080230	JACARANDA AVE	0.24

1080279	JACKSON RD	1.50
1080219	JAMIESON RI	0.13
1080067	JARRAH RD	5.56
1080002	JARRAHDALE RD	21.39
1080254	JARRAHGLEN RI	0.67
1080152	JESSIE ST	0.15
1080182	JOHN CR	0.32
1080021	JOHNSON RD	1.62
1080241	JONES CT	0.21
1080045	JUBB RD	2.14
1080260	KARBRO DR	1.13
1080009	KARGOTICH RD	17.35
1080077	KARNUP CREEK RD	1.18
1080007	KARNUP RD	13.70
1080093	KEIRNAN ST	3.75
1080372	KELLET DR	0.94
1080301	KENTISH RD	0.27
1080341	KENTUCKY DVE	0.44
1080391	KENTUCKY DVE WEST	0.44
1080257	KERSHAW ST	0.10
1080064	KIELY LA	1.03
1080130	KILN RD	3.55
1080360	KING JARRAH CI	0.74
1080026	KING RD	8.44
1080177	KINGSBURY DR	25.11
1080377	KOWIN CT	0.89
1080369	KUNZEA RI	0.18
1080403	LAKEMAN PL	0.52
1080070	LANG RD (MUND)	0.36
1080228	LANG ST (JARR)	0.10
1080168	LARSEN RD	1.64
1080235	LAWRENCE WY	0.56
1080386	LAZENBY DRIVE	0.37
1080339	LEAVER WY	1.12
1080121	LEFROY ST	1.41
1080023	LEIPOLD RD	4.30
1080220	LESLIE ST	0.45
1080060	LEWIS RD	1.00
1080038	LIGHTBODY RD	5.25
1080291	LIMOUSINE PL	0.38
1080283	LINGDON LA	0.82
1080153	LINTON ST	0.45
1080303	LINTON ST NTH.	1.54
1080185	LIONEL ST	0.22
1080261	LITTLE PL	0.59
1080095	LIVESEY ST	1.02
1080080	LIVINGSTONE RD	0.36
1080281	LONGRIDGE RD	0.33
1080266	LORD FURY CT	0.38
1080356	LORENZ WY	0.45
1080285	LOVEGROVE CT	0.16
1080072	LOWLANDS RD	5.15
1080218	LUPINO ST	0.23
1080048	LYSTER RD	2.38
1080214	MADER RD	0.31
1080306	MAKIN CT	0.18
1080313	MALARKEY RD	0.90
1080353	MALEK DR	1.32
1080169	MANJEDAL RD	1.73
1080065	MANNING RD	1.70

1080199	MAREE CL	0.16
1080361	MARGINATA PDE	0.76
1080385	MARJA LOOP	0.49
1080253	MARSH CT	0.59
1080142	MARY ST	0.38
1080242	MASON CT	0.31
1080154	MASTERS RD	3.00
1080348	MATHEWS CL	0.21
1080120	MAXWELL ST	0.51
1080307	MCGURK CT	0.14
1080239	MCKAY DR	0.92
1080408	MCKENNA DR	0.60
1080337	MCNEIL GR	0.20
1080160	MEAD ST	0.99
1080357	MEADOWBROOK RT	0.72
1080389	MEADOWS WAY	0.48
1080250	MEDULLA RD	1.80
1080237	MICHAEL ST	0.09
1080347	MIDDLETON CL	0.14
1080205	MILLARS LOG RD	8.48
1080208	MILLARS RD	1.00
1080146	MILLBRACE GLN	0.12
1080252	MILLBROOK CL	0.37
1080004	MUNDIJONG RD	9.50
1080268	MUNDLIMUP PLOT RD	2.00
1080105	MUNRO ST (JARR)	0.28
1080295	MUNRO ST (MUND)	0.30
1085016	MYARA RD	3.14
1080006	NETTLETON RD	17.87
1080129	NICHOLSON RD	4.84
1080046	NORMAN RD	1.79
1080161	NORTH CR	0.36
1080292	NORTH RD (BY)	0.63
1085014	NORTH RD (JARR)	2.92
1080112	OAK WY	0.16
1080326	OLD BRICKWORKS RD	1.05
1080371	OLD CHESTNUT LA	1.24
1080333	OLD DAIRY CT	1.68
1080264	OLD NETTLETON RD	1.60
1080066	O'NEIL RD	0.75
1080196	ORANA PL	0.16
1080137	ORTON RD	10.65
1080034	PAGE RD	0.81
1080131	PARK RD	1.15
1080051	PARRY RD	0.44
1080282	PARSONS RD	0.37
1080126	PATERSON ST	2.00
1080057	PERRETT RD	0.60
1080206	PETERS WY	1.44
1080388	PETHICK CL	0.16
1080180	PEVERETT RD	0.68
1080271	PHAR LAP DR	0.76
1080162	PHILLIPS RD	1.88
1080163	PINEBROOK RD	0.30
1080234	POLLARD CRO	0.46
1080245	POLLARD CRO WEST	0.50
1080310	PONY PL	1.00
1080197	POUND CL	0.09
1080365	POWDERBARK CL	0.22
1080081	PRUDEN RD	1.26

1080025	PUNRAK RD	8.44
1080380	PURE STEEL LANE	0.91
1080338	RACY PRINCE CT	0.75
1080288	RAIN LOVER CT	0.80
1080015	RANDELL RD	2.67
1080393	RANGEVIEW LP	0.01
1080014	RAPIDS RD	6.10
1080305	RAY CL	0.30
1080308	RAY CL "A"	0.10
1080329	RECREATION RD	0.40
1080174	REDCLIFFE RD	0.62
1080352	REED RD	0.85
1080286	REILLY RD	0.41
1080275	RENAUD WY	0.42
1080227	RHODES PL	0.34
1080184	RICE RD	0.72
1080088	RICHARDSON ST	1.07
1080117	RICHARDSON ST	2.15
1080213	RIGOLL CT	0.17
1080039	RIVER RD	4.05
1080076	ROBERTSON RD	3.33
1080216	ROBINSON ST	0.53
1080059	ROBINSWOOD RD	3.47
1080024	ROMAN RD	0.95
1080027	RONAN RD	0.56
1080157	ROSE RD (CARD)	0.11
1080300	ROSE RD (MUND)	0.11
1080049	ROWE RD	5.95
1080302	ROWLEY RD	4.71
1080324	RUDALL ST	0.39
1080358	RUSTIC PL	0.11
1080311	SALMON BARK RD	1.86
1080037	SCARP RD	5.69
1080035	SCARP RD NTH	11.45
1080397	SCARPVIEW DR	0.33
1080063	SCOTT RD	2.25
1080029	SCRIVENER RD	6.00
1080058	SELKIRK RD	1.63
1080212	SENIOR CT	0.14
1080189	SHALE RD	0.02
1080022	SHANLEY RD	4.11
1080164	SHELLEY ST	0.18
1080106	SIFORD WY	0.34
1080390	SILICH RD	0.25
1080128	SIMMENTAL PL	0.32
1080110	SLADDEN ST	0.47
1080132	SOLDIERS RD	6.90
1080138	SOUTH CR	0.36
H009	SOUTH WESTERN HWY	30.66
1080075	SPARKMAN ST	0.20
1080334	SPEARS DR	1.74
1080379	SPENCER RD	0.01
1080198	STANLEY RD	0.59
1080210	STEVENSON PL	0.19
1080246	STOCKMANS CL	0.87
1080018	SUMMERFIELD RD	4.54
1080335	SWAMP GUM RD	0.89
1080312	TALLAGANDRA CT	0.24
1080062	TAYLOR RD	1.51
1080175	THATCHER RD	1.31

1080140	THE RAMPART	0.08
1080200	THOMAS RD	12.75
1080304	THREE KANGROOS WY	0.30
1080331	TIARA CT	0.42
1080097	TONKIN ST (MUND)	1.17
1080122	TONKIN ST (SERP)	0.72
1080392	TRANBY AVE	0.52
1080053	TRANSIT RD	0.92
1080188	TUART RD	1.53
1080247	TULLOCH WY	0.76
1080276	TUNNEY RD	0.36
1080325	TURNER RD (BY)	1.11
1080330	TURNER ST (SERP)	0.18
1085017	U5017	1.50
1080351	UPTON CL	0.33
1080030	UTLEY RD	6.56
1080336	VORTILLA CT	0.48
1080041	WALKER RD	1.97
1080087	WALKER ST	0.58
1080378	WALLACE ST	0.14
1080202	WALTERS RD	0.92
1080314	WALTON CR	0.20
1080273	WALTON ST	0.31
1080102	WANLISS ST	0.58
1080376	WARBURTON COURT	0.74
1080165	WARRINGTON RD	1.63
1080139	WATERSIDE PS	0.60
1080003	WATKINS RD	2.38
1080052	WATTLE RD	2.80
1080078	WEBB RD	0.66
1080176	WEDGETAIL DR	1.04
1080116	WELLARD ST	0.69
1080309	WENDOWIE PL	0.19
1080328	WENDOWIE PL"WEST"	0.03
1080028	WESCOTT RD	7.68
1080090	WHITBY ST	0.28
1080123	WHITE GUM RI	0.33
1080183	WILLIAM ST	0.21
1080318	WILLS PL	0.40
1080343	WINDMILL AVE	0.48
1080166	WOLFE RD	0.50
1085030	WOLLOMBI RD	0.80
1080108	WOODLAND ST	0.19
1080405	WOODSTOCK PL	0.12
1080005	WRIGHT RD	5.46
1080270	WUNGONG STH RD	2.34
1080042	YANGEDI RD NTH	4.48
1080209	YANGEDI SOUTH RD	3.98
1080364	YARRI ME	0.04

Appendix

4

APPENDIX 4

Flora species in the Shire of Serpentine-Jarrahdale

(Source- WA Herbarium)

Note: not a comprehensive list and may not be the most up to date information available.
* = Weed species
P = Priority species
R = Rare species

THIS DATA HAS BEEN PROVIDED BY THE WESTERN AUSTRALIAN HERBARIUM ON 17 July 2006.

Acacia ? alata var. alata x applanata
Acacia ? browniana
Acacia alata R.Br.
Acacia alata R.Br. var. alata
Acacia applanata Maslin
Acacia barbinervis Benth. subsp. barbinervis
Acacia browniana H.L.Wendl.
Acacia browniana H.L.Wendl. var. browniana
Acacia celastrifolia Benth.
Acacia cochlearis (Labill.) H.L.Wendl.
Acacia cyclops G.Don
**Acacia decurrens Willd.*
Acacia dentifera Benth.
Acacia divergens Benth.
Acacia drewiana W.Fitzg. subsp. drewiana
Acacia drummondii subsp. elegans Maslin
Acacia drummondii Lindl. subsp. drummondii
Acacia ephedroides Benth.
Acacia extensa Lindl.
Acacia horridula Meisn. P3
Acacia huegelii Benth.
Acacia incrassata Hook.
Acacia incurva Benth.
**Acacia iteaphylla Benth.*
Acacia lasiocarpa var. bracteolata Maslin
Acacia lasiocarpa var. bracteolata long peduncle variant (G. PN P1
Acacia lateriticola Maslin
Acacia latipes Benth. subsp. latipes
Acacia microbotrya Benth.
Acacia mollifolia
Acacia multispicata Benth.
Acacia nervosa DC.
Acacia obovata Benth.
Acacia oncinophylla subsp. patulifolia R.S.Cowan & Maslin P2
Acacia oncinophylla Lindl. subsp. oncinophylla P3
**Acacia podalyriifolia G.Don*
Acacia preissiana (Meisn.) Maslin
Acacia pulchella var. ? glaberrima x pulchella
Acacia pulchella var. glaberrima
Acacia pulchella var. glaberrima Meisn.
Acacia pulchella var. goadbyi (Domin) Maslin
Acacia pulchella var. reflexa Maslin
Acacia pulchella R.Br. var. pulchella
Acacia saligna (Labill.) H.L.Wendl.
Acacia sessilis Benth.
Acacia sp.Juliflorae - terete South West Region
Acacia stenoptera Benth.
Acacia subflexuosa Maiden subsp. subflexuosa
Acacia teretifolia Benth.
Acacia tetragonocarpa Meisn.
Acacia trigonophylla Meisn.
Acacia urophylla Lindl.
Acacia varia Maslin var. varia
Acacia willdenowiana H.L.Wendl.
**Acaena echinata Nees*
Acanthocarpus canaliculatus A.S.George
**Acetosella vulgaris Fourr.*
Actinostrobus acuminatus Parl.
Actinostrobus pyramidalis Miq.
Actinotus glomeratus Benth.
Actinotus leucocephalus Benth.
Adenanthos barbiger Lindl.
Adenanthos barbiger Lindl. subsp. barbiger ms
Adenanthos meisneri Lehm.
Adenanthos obovatus Labill.
Adiantum aethiopicum L.
Agaricus langei
Agonis flexuosa (Willd.) Sweet var. flexuosa
Agrostis plebeia R.Br.
Agrostocrinum hirsutum (Lindl.) Keighery
**Aira caryophyllea L.*
**Aira cupaniana Guss.*
Albugo candida
Albugo tragopogonis
Aleuria rhenana
Aleurina asperulus
Aleurodiscus sp.
Allocasuarina fraseriana (Miq.) L.A.S.Johnson
Allocasuarina humilis (Otto & F.Dietr.) L.A.S.Johnson
Allocasuarina microstachya (Miq.) L.A.S.Johnson
Amanita brunnea
Amanita ochroterrea
Amanita preissii
Amanita sp.
Amanita xanthocephala
Amblysperma sp.

**Ammophila arenaria (L.) Link*
Amperea simulans R.J.F.Hend.
Amphibromus nervosus (Hook.f.) Baill.
Amphipogon amphipogonoides (Steud.) Vickery
Amphipogon debilis R.Br.
Amphipogon laguroides R.Br.
Amphipogon laguroides R.Br. subsp. laguroides
Amphipogon strictus R.Br.
Amphipogon turbinatus R.Br.
Amyema miquelii (Miq.) Tiegh.
Anacolia cf. breutelii
**Anagallis arvensis var. caerulea Gouan*
**Anagallis arvensis L. var. arvensis*
Anarthria humilis Nees
Andersonia aristata Lindl.
Andersonia audax Lemson ms
Andersonia involucrata Sond.
Andersonia lehmanniana Sond.
Andersonia lehmanniana Sond. subsp. lehmanniana
Andersonia saxatilis Lemson ms P1
Angianthus preissianus (Steetz) Benth.
Anigozanthos humilis Lindl. subsp. humilis
Anigozanthos humilis x manglesii
Anigozanthos manglesii var. x angustifolius Lindl.
Anigozanthos manglesii D.Don
Anigozanthos manglesii D.Don subsp. manglesii
Anigozanthos sp.
Anigozanthos viridis Endl.
Anigozanthos viridis Endl. subsp. viridis
Anthocercis gracilis Benth. R
Anthoceros sp.
Anthotium junciforme (de Vriese) D.A.Morrison P4
Anthotium sp. Darling Range (F. Hort & B. Hort 2431) PN
**Anthoxanthum odoratum L.*
Aotus cordifolia Benth. P3
Aotus gracillima Meisn.
Aotus procumbens Meisn.
Aphelia brizula F.Muell.
Aphelia cyperoides R.Br.
Aponogeton hexatepalus H.Bruggen P4
**Arctotheca calendula (L.) Levyns*
Arcyria cinerea
Arcyria incarnata
Aristida ? contorta
**Aristida ramosa R.Br.*
Aristida sp.
Armillaria luteobubalina
Armillaria sp.
Arnocrinum preissii Endl.
Arthropodium sp.
**Arundo donax L.*
**Asclepias curassavica L.*
**Asparagus asparagoides (L.) Druce*
Astartea affinis (Endl.) Rye ms
Astartea leptophylla Schauer
Astartea scoparia Schauer
Astartea sp.
Astartea sp. Brixton Rd (G.J. Keighery 5389) PN
Astartea sp. Gingalup (N. Gibson & M. Lyons 119) PN
Asterella drummondii (Hook.f. & Tayl.) R.M.Schust.
Asteridea pulverulenta Lindl.
Asterolasia pallida Benth.
Asterolasia pallida Benth. subsp. pallida
Astroloma ciliatum (Lindl.) Druce
Astroloma glaucescens Sond.
Astroloma pallidum R.Br.
**Atriplex prostrata DC.*
Austrodanthonia acerosa (Vickery) H.P.Linder
Austrodanthonia caespitosa (Gaudich.) H.P.Linder
Austrodanthonia occidentalis (Vickery) H.P.Linder
Austrodanthonia pilosa (R.Br.) H.P.Linder
Austrodanthonia setacea (R.Br.) H.P.Linder
Austrodanthonia sp.
Austrogautieria manjimupana
Austrostipa ? tenuifolia
Austrostipa campylachne (Nees) S.W.L.Jacobs & J.Everett
Austrostipa compressa (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa elegantissima (Labill.) S.W.L.Jacobs & J.Everett
Austrostipa flavescens (Labill.) S.W.L.Jacobs & J.Everett
Austrostipa juncifolia subsp. Southern River (B.J. Keighery 2160) PN
Austrostipa mollis (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa semibarbata (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa sp.
Austrostipa tenuifolia (Steud.) S.W.L.Jacobs & J.Everett
Austrostipa trichophylla (Benth.) S.W.L.Jacobs & J.Everett
Austrostipa variabilis (Hughes) S.W.L.Jacobs & J.Everett
**Avena barbata Link*
**Avena fatua L.*
**Avena sativa L.*
Azolla ? filiculoides
**Babiana angustifolia Sweet*
**Babiana nana (Andr.) Spreng.*
Baeckea camphorosmae Endl.

Baeckea sp. Perth Region (R.J. Cranfield 444) PN P3
Baeckea tenuifolia (Turcz.) Domin
Banksia attenuata R.Br.
Banksia grandis Willd.
Banksia ilicifolia R.Br.
Banksia littoralis R.Br.
Banksia menziesii R.Br.
Banksia telmatiaea A.S.George
Barbula calycina
Bartramia pseudostricta
Bartramidula pusilla
**Bartsia trixago L.*
Baumea acuta (Labill.) Palla
Baumea arthrophylla (Nees) Boeck.
Baumea articulata (R.Br.) S.T.Blake
Baumea juncea (R.Br.) Palla
Baumea preissii subsp. laxa (Nees) K.L.Wilson ms
Baumea preissii Nees
Baumea riparia (Nees) Boeck.
Baumea rubiginosa (Spreng.) Boeck.
Baumea vaginalis (Benth.) S.T.Blake
Beaufortia macrostemon Lindl.
Beyeria lechenaultii (DC.) Baill.
Billardiera floribunda (Putt.) F.Muell.
Billardiera fraseri (Hook.) F.Muell.
Billardiera fusiformis Labill.
Billardiera variifolia DC.
Bipolaris zeae
Blancoa canescens Lindl.
Blennospora drummondii A.Gray
Bolboschoenus caldwellii (V.J.Cook) Sojak
Boletellus ananas
Boletellus obscure-coccineus
Boletus caesareus
Boletus sinape-cruentus
Boletus sp.
Boronia crenulata subsp. viminea
Boronia crenulata subsp. viminea (Lindl.) Paul G.Wilson
Boronia crenulata Sm.
Boronia crenulata Sm. var. crenulata
Boronia fastigiata Bartl.
Boronia juncea Bartl. subsp. juncea P1
Boronia molloyae J.Drumm.
Boronia ramosa subsp. anethifolia (Bartl.) Paul G.Wilson
Boronia ramosa (Lindl.) Benth.
Boronia ramosa (Lindl.) Benth. subsp. ramosa
Boronia scabra Lindl.
Boronia scabra Lindl. subsp. scabra
Boronia sp.
Boronia tenuis (Lindl.) Benth. P4
Borya constricta Churchill
Borya scirpoidea Lindl.
Borya sphaerocephala R.Br.
Bossiaea aquifolium Benth.
Bossiaea aquifolium Benth. subsp. aquifolium
Bossiaea eriocarpa Benth.
Bossiaea modesta J.H.Ross P2
Bossiaea ornata (Lindl.) Benth.
Bossiaea rufa R.Br.
Bossiaea sp. Waroona (B.J. Keighery & N. Gibson 229) PN
Brachyloma preissii Sond.
**Brachypodium distachyon (L.) P.Beauv.*
Brachyscome iberidifolia Benth.
Brachyscome sp.
Breutelia affinis
**Briza maxima L.*
**Briza minor L.*
Bromus arenarius Labill.
**Bromus diandrus Roth*
**Bromus hordeaceus L.*
Bromus sp.
Bryum australe
Bryum billardieri
Bryum caespiticium
Bryum campylothecium
Bryum capillare
Bryum sullivanii
Buellia sp.
Bulbine semibarbata (R.Br.) Haw.
Burchardia bairdiae Keighery
Burchardia congesta Lindl.
Burchardia multiflora Lindl.
Burchardia sp.
Burchardia umbellata R.Br.
Byblis gigantea Lindl. P2
Caesia micrantha Lindl.
Caesia occidentalis R.Br.
Caladenia ? latifolia
Caladenia arenicola Hopper & A.P.Br.
Caladenia denticulata Lindl.
Caladenia discoidea Lindl.
Caladenia ferruginea Nicholls
Caladenia flava R.Br. subsp. flava
Caladenia hirta Lindl. subsp. hirta
Caladenia latifolia R.Br.
Caladenia longicauda subsp. calcigena Hopper & A.P.Br.
Caladenia longicauda Lindl. subsp. longicauda
Caladenia marginata Lindl.
Caladenia nobilis Hopper & A.P.Br.
Caladenia reptans Lindl. subsp. reptans
Caladenia serotina Hopper & A.P.Br.
Caladenia sp.
Caladenia speciosa Hopper & A.P.Br. P4
Caladenia splendens Hopper & A.P.Br.
Calandrinia granulifera Benth.

Calandrinia sp. Kenwick (G.J. Keighery 10905) PN
Calectasia grandiflora L.Preiss subsp. grandiflora ms
Calectasia narragara R.L.Barrett & K.W.Dixon
Callistemon phoeniceus Lindl.
Callitriche sp.
**Callitriche stagnalis Scop.*
Caloplaca sp.
Calothamnus graniticus subsp. leptophyllus (Benth.) Hawkeswood P4
Calothamnus hirsutus Hawkeswood
Calothamnus lateralis Lindl.
Calothamnus quadrifidus R.Br.
Calothamnus rupestris Schauer P4
Calothamnus sanguineus Labill.
Calothamnus sp.
Calothamnus torulosus Schauer
Calytrix ? depressa
Calytrix acutifolia (Lindl.) Craven
Calytrix angulata Lindl.
Calytrix aurea Lindl.
Calytrix depressa (Turcz.) Benth.
Calytrix flavescens A.Cunn.
Calytrix fraseri A.Cunn.
Calytrix sapphirina Lindl.
Calytrix sp. Scarp (H. Bowler 270) PN
Calytrix variabilis Lindl.
Camarophyllus niveus
Campylopus australis
Campylopus bicolor
Campylopus introflexus
Campylopus pyriformis
**Cardamine hirsuta L.*
Cardamine paucijuga Turcz. P2
**Carduus pycnocephalus L.*
Carex preissii Nees
**Carpobrotus edulis (L.) N.E.Br.*
Cartonema philydroides F.Muell.
Cassytha ? racemosa
Cassytha glabella R.Br.
Cassytha micrantha Meisn.
Cassytha pomiformis Nees
Cassytha racemosa Nees
Cassytha racemosa Nees forma racemosa
Casuarina obesa Miq.
Casuarina sp.
**Centaurium erythraea Rafn*
*Centaurium tenuiflorum (Hoffmanns. & Link) *Janch.*
Centella asiatica (L.) Urb.
**Centranthus ruber (L.) DC.*
Centrolepis aristata (R.Br.) Roem. & Schult.
Centrolepis caespitosa D.A.Cooke R
Centrolepis drummondiana (Nees) Walp.
Centrolepis glabra (Sond.) Hieron.
Centrolepis inconspicua W.Fitzg.
Centrolepis mutica (R.Br.) Hieron.
Centrolepis pilosa Hieron.
Centrolepis polygyna (R.Br.) Hieron.
Cephaloziella arctica subsp. subantarctica
**Cerastium glomeratum Thuill.*
Chaetanthus aristatus (R.Br.) B.G.Briggs & L.A.S.Johnson
**Chamaecytisus palmensis (H.Christ) F.A.Bisby & K.W.Nicholls*
Chamaescilla corymbosa (R.Br.) Benth.
Chamaescilla corymbosa (R.Br.) Benth. var. corymbosa
Chamelaucium uncinatum Schauer
Chara fibrosa Bruzelius
Cheilanthes austrotenuifolia H.M.Quirk & T.C.Chambers
Cheilanthes distans (R.Br.) Mett.
Cheilanthes sieberi Kunze subsp. sieberi
Cheiranthera preissiana Putt.
**Chenopodium ambrosioides L.*
**Chenopodium glaucum L.*
Chenopodium pumilio R.Br.
Chiloscyphus semiteres
**Chloris gayana Kunth*
Chordifex sinuosus L.A.S.Johnson & B.G.Briggs ms
Chorizandra enodis Nees
Chorizema cordatum Lindl.
Chorizema dicksonii Graham
Chorizema nanum (Andrews) Sims
Chorizema rhombeum R.Br.
Chorizema ulotropis J.M.Taylor & Crisp P4
**Chrysanthemoides monilifera (L.) Norl. subsp. monilifera*
**Cicendia filiformis (L.) Delarbre*
**Cichorium intybus L.*
**Cirsium vulgare (Savi) Ten.*
Cladia aggregata (Sw.) Nyl.
Cladia corallaizon Filson
Cladia ferdinandii (Müll. Arg.) Filson
Cladia inflata (F. Wilson) D.J. Galloway
Cladia schizopora (Nyl.) Nyl.
Cladia sullivanii (Müll. Arg.) W. Martin
Cladonia ? macilenta
Cladonia capitellata (Hook. f. & Taylor) C. Bab.
Cladonia cervicornis subsp. verticillata (Hoffm.) Ahti
Cladonia cf. phyllophora
Cladonia ramulosa (With.) J.R. Laundon
Cladonia rigida (Hook.f. & Taylor) Hampe
Cladonia scabriuscula (Delise) Nyl.
Cladonia sp.
Cladonia sulcata
Cladonia tessellata (ed.)
Cladonia tessellata Ahti & Kashiw.

Clematis aristata var. occidentalis Benth.
Clitocybe odora
Clitocybe sp.
Collybia dryophila
Collybia sp.
Colocasia esculenta (L.) Schott
Coltricia dependens
Comesperma calymega Labill.
Comesperma ciliatum Steetz
Comesperma scoparium Steetz
Comesperma sp.
Comesperma virgatum Labill.
Conospermum aff. cinereum
Conospermum amoenum Meisn. subsp. amoenum
Conospermum canaliculatum Meisn.
Conospermum canaliculatum Meisn. subsp. canaliculatum
Conospermum capitatum subsp. glabratum E.M.Benn.
Conospermum capitatum R.Br.
Conospermum huegelii Endl.
Conospermum stoechadis subsp. sclerophyllum (Lindl.) E.M.Benn.
Conospermum stoechadis Endl.
Conospermum stoechadis Endl. subsp. stoechadis
Conostephium minus Lindl.
Conostephium pendulum Benth.
Conostephium preissii Sond.
Conostylis ? laxiflora
Conostylis aculeata subsp. preissii (Endl.) J.W.Green
Conostylis aculeata R.Br.
Conostylis aculeata R.Br. subsp. aculeata
Conostylis androstemma F.Muell.
Conostylis caricina Lindl. subsp. caricina
Conostylis juncea Endl.
Conostylis juncea Lindl.
Conostylis pusilla Endl.
Conostylis serrulata R.Br.
Conostylis setigera R.Br.
Conostylis setigera R.Br. subsp. setigera
Conostylis setosa Lindl.
Conostylis sp.
**Conyza bonariensis (L.) Cronquist*
**Conyza parva Cronquist*
**Conyza sumatrensis (Retz.) E.Walker*
Coprinus stercoreus
Cortinarius archeri
Cortinarius australiensis
Cortinarius basirubescens
Cortinarius erythraeus
Cortinarius paleaceus
Cortinarius rotundisporus
Cortinarius sp.
Cortinarius subarcheri
Cortinarius violaceus
Corymbia calophylla (Lindl.) K.D.Hill & L.A.S.Johnson
Corymbia haematoxylon (Maiden) K.D.Hill & L.A.S.Johnson
Corynotheca micrantha (Lindl.) Druce
Cotula australis (Spreng.) Hook.f.
**Cotula coronopifolia L.*
**Cotula turbinata L.*
Craspedia variabilis J.Everett & A.N.L.Doust
Crassula colorata (Nees) Ostenf.
Crassula colorata (Nees) Ostenf. var. colorata
Crassula decumbens Thunb. var. decumbens
Crassula exserta (Reader) Ostenf.
Crassula extrorsa Toelken
**Crassula glomerata P.J.Bergius*
**Crassula natans var. minus (Eckl. & Zeyh.) G.D.Rowley*
Crepidotus eucalyptorum
Crepidotus sp.
**Crepis foetida L. subsp. foetida*
Cristonia biloba (Benth.) J.H.Ross
Crucibulum laeve
Cryptandra arbutiflora Fenzl
Cryptandra arbutiflora Fenzl var. arbutiflora
Cryptandra nutans Steud.
**Cuscuta epithymum (L.) L.*
Cyanicula sericea (Lindl.) Hopper & A.P.Br.
Cyanicula sp. Dale (G. Brockman 713) PN
**Cyathea cooperi (F.Muell.) Domin*
Cyathochaeta avenacea (R.Br.) Benth.
Cyathochaeta teretifolia W.Fitzg. P3
**Cynodon dactylon (L.) Pers.*
**Cyperus brevifolius (Rottb.) Hassk.*
**Cyperus congestus Vahl*
Cyperus sp.
**Cyperus tenellus L.f.*
**Cyperus tenuiflorus Rottb.*
Cyrtostylis sp.
Cytogonidium leptocarpoides (Benth.) B.G.Briggs & L.A.S.Johnson
Dampiera alata Lindl.
Dampiera hederacea R.Br.
Dampiera linearis R.Br.
Dampiera pedunculata R.Br.
Dampiera trigona de Vriese
Darwinia citriodora (Endl.) Benth.
Darwinia halophila N.G.Marchant & Keighery ms
Darwinia pinifolia (Lindl.) Benth.
Darwinia thymoides (Lindl.) Benth.
Darwinia thymoides (Lindl.) Benth. subsp. thymoides
Dasypogon bromeliifolius R.Br.
Dasypogon obliquifolius Nees
**Datura ferox L.*

Daucus glochidiatus (Labill.) Fisch., C.A.Mey. & Ave-Lall.
Daviesia brachyphylla Meisn.
Daviesia cordata Sm.
Daviesia costata Cheel
Daviesia decurrens Meisn.
Daviesia decurrens Meisn. subsp. decurrens ms
Daviesia divaricata Benth.
Daviesia divaricata Benth. subsp. divaricata ms
Daviesia horrida Meisn.
Daviesia nudiflora Meisn. subsp. nudiflora
Daviesia physodes G.Don
Daviesia preissii Meisn.
Daviesia rhombifolia Meisn.
Daviesia triflora Crisp
Dermocybe austroveneta
Dermocybe erythrocephala
Desmocladus asper (Nees) B.G.Briggs & L.A.S.Johnson
Desmocladus castaneus B.G.Briggs & L.A.S.Johnson
Desmocladus fasciculatus (R.Br.) B.G.Briggs & L.A.S.Johnson
Desmocladus flexuosus (R.Br.) B.G.Briggs & L.A.S.Johnson
Dianella revoluta var. divaricata (R.Br.) R.J.F.Hend.
Dianella revoluta R.Br.
Dichelachne crinita (L.f.) Hook.f.
Dichopogon capillipes (Endl.) Brittan
Didymium clavus
Didymodon torquatus
Dielsia stenostachya (W.Fitzg.) B.G.Briggs & L.A.S.Johnson
Dillwynia dillwynioides (Meisn.) Druce P3
Dillwynia laxiflora Benth.
Dillwynia sp. A Perth Flora (R. Coveny 8036) PN
**Dimorphotheca ecklonis DC.*
Dioscorea hastifolia Endl.
Diplolaena drummondii (Benth.) Ostenf.
Diplopeltis huegelii subsp. lehmannii (Miq.) Keighery
Diplopeltis huegelii Endl. subsp. huegelii
Diploschistes scruposus (Schreb.) Norman
Diploschistes sp.
**Dipogon lignosus (L.) Verdc.*
**Disa bracteata Sw.*
**Dischisma arenarium E.Mey.*
**Dischisma capitatum (Thunb.) Choisy*
**Dittrichia graveolens (L.) Greuter*
Diuris aff. corymbosa
Diuris aff. longifolia
Diuris aff. magnifica
Diuris brumalis D.L.Jones
Diuris corymbosa Lindl.
Diuris longifolia R.Br.
Diuris magnifica D.L.Jones
Diuris micrantha D.L.Jones R
Diuris purdiei Diels R
Diuris setacea R.Br.
Diuris sp.
Diuris sp. Darling Scarp (G.B. Brockman 1118) PN
Dodonaea ceratocarpa Endl.
Dodonaea hackettiana W.Fitzg. P4
Dodonaea pinifolia Miq.
Drakaea elastica Lindl. R
Drakaea glyptodon Fitzg.
Drakaea livida J.Drumm.
Drakaea micrantha Hopper & A.P.Br. ms R
Drosera aff. pallida
Drosera callistos N.G.Marchant & Lowrie
Drosera erythrorhiza subsp. ? squamosa
Drosera erythrorhiza subsp. collina N.G.Marchant & Lowrie
Drosera erythrorhiza subsp. squamosa (Benth.) N.G.Marchant & Lowrie
Drosera erythrorhiza Lindl.
Drosera erythrorhiza Lindl. subsp. erythrorhiza
Drosera gigantea subsp. geniculata N.G.Marchant & Lowrie
Drosera gigantea Lindl.
Drosera gigantea Lindl. subsp. gigantea
Drosera glanduligera Lehm.
Drosera heterophylla Lindl.
Drosera leucoblasta Benth.
Drosera macrantha Endl.
Drosera macrantha Endl. subsp. macrantha
Drosera mannii Cheek
Drosera marchantii DeBuhr subsp. marchantii
Drosera menziesii subsp. penicillaris (Diels) N.G.Marchant & Lowrie
Drosera menziesii DC.
Drosera menziesii DC. subsp. menziesii
Drosera microphylla Endl.
Drosera neesii Lehm. subsp. neesii
Drosera nitidula Planch. subsp. nitidula
Drosera occidentalis Morrison subsp. occidentalis P4
Drosera oreopodion N.G.Marchant & Lowrie
Drosera paleacea DC.
Drosera paleacea DC. subsp. paleacea
Drosera pallida Lindl.
Drosera platystigma Lehm.
Drosera porrecta Lehm.
Drosera pulchella Lehm.
Drosera rosulata Lehm.
Drosera sp.
Drosera stolonifera Endl.
Drosera zonaria Planch.
Dryandra armata R.Br.
Dryandra bipinnatifida R.Br. subsp. bipinnatifida

Dryandra kippistiana var. paenepeccata A.S.George P3
Dryandra kippistiana Meisn.
Dryandra lindleyana subsp. lindleyana
Dryandra lindleyana var. mellicula A.S.George
Dryandra lindleyana Meisn.
Dryandra lindleyana Meisn. var. lindleyana
Dryandra nivea (Labill.) R.Br.
Dryandra polycephala Benth. P4
Dryandra praemorsa var. splendens A.S.George
Dryandra praemorsa Meisn.
Dryandra praemorsa Meisn. var. praemorsa
Dryandra sessilis var. cygnorum (Gand.) A.S.George
Dryandra sessilis (Knight) Domin
Dryandra sessilis (Knight) Domin var. sessilis
Dryandra squarrosa R.Br. subsp. squarrosa
Dysphania glomulifera (Nees) Paul G.Wilson subsp. glomulifera
Eccremidium pulchellum
**Echium plantagineum L.*
**Ehrharta brevifolia Schrader*
**Ehrharta calycina Sm.*
**Ehrharta longiflora Sm.*
Elythranthera brunonis (Endl.) A.S.George
Elythranthera emarginata (Lindl.) A.S.George
Entoloma sp.
Epaltes australis Less.
Ephebe lanata (L.) Vain
Epilobium billardiereanum subsp. cinereum (A.Rich.) Raven & Engelhorn
**Epilobium ciliatum Raf.*
Epilobium hirtigerum A.Cunn.
Eragrostis brownii (Kunth) Wight
**Eragrostis curvula (Schrad.) Nees*
Eragrostis elongata (Willd.) J.Jacq.
Eremaea asterocarpa Hnatiuk
Eremaea asterocarpa Hnatiuk subsp. asterocarpa
Eremaea pauciflora (Endl.) Druce
Eremaea pauciflora (Endl.) Druce var. pauciflora
Eremaea sp.
Eriochilus dilatatus subsp. multiflorus (Lindl.) Hopper & A.P.Br. ms
Eriochilus dilatatus subsp. undulatus Hopper & A.P.Br. ms
Eriochilus scaber Lindl. subsp. scaber ms
Eriochilus tenuis Lindl.
**Erodium botrys (Cav.) Bertol.*
Eryngium pinnatifidum subsp. palustre Keighery ms
Eryngium pinnatifidum Bunge
Eryngium pinnatifidum Bunge subsp. pinnatifidum ms
Eucalyptus balanites P.M.Grayling & Brooker R
Eucalyptus decipiens subsp. decipiens x lane-poolei
Eucalyptus decipiens Endl. subsp. decipiens
Eucalyptus decurva F.Muell.
Eucalyptus drummondii Benth.
Eucalyptus gomphocephala DC.
Eucalyptus laeliae Podger & Chippend.
Eucalyptus lane-poolei Maiden
Eucalyptus marginata subsp. marginata / thalassica
Eucalyptus marginata subsp. thalassica Brooker & Hopper
Eucalyptus marginata Sm.
Eucalyptus marginata Sm. subsp. marginata
Eucalyptus megacarpa F.Muell.
Eucalyptus moderata L.A.S.Johnson & K.D.Hill
Eucalyptus patens Benth.
Eucalyptus rudis subsp. cratyantha Brooker & Hopper P4
Eucalyptus rudis Endl.
Eucalyptus rudis Endl. subsp. rudis
Eucalyptus todtiana F.Muell.
Eucalyptus wandoo Blakely
Eucalyptus wandoo Blakely subsp. wandoo
Euchilopsis linearis (Benth.) F.Muell.
Euchiton sphaericus (Willd.) Holub
Euphorbia australis Boiss.
**Euphorbia helioscopia L.*
**Euphorbia terracina L.*
Eutaxia parvifolia Benth.
Eutaxia virgata Benth.
Evandra pauciflora R.Br.
Exidia glandulosa
**Ficus carica L.*
**Filago gallica L.*
Fissidens leptocladus
Fissidens megalotis Muell.Hal.
Fissidens taylorii var. taylorii
Fistulina hepatica
Flavoparmelia rutidota (Hook. f. & Taylor) Hale
Fossombronia sp.
Fossombronia sp. (Sterile)
**Freesia alba x leichtlinii*
**Fumaria capreolata L.*
**Fumaria muralis W.D.J.Koch*
Funaria hygrometrica var. calvescens
Fusicoccum sp.
Gahnia ancistrophylla Benth.
Gahnia aristata (F.Muell.) Benth.
Gahnia decomposita (R.Br.) Benth.
Gahnia trifida Labill.
**Galenia pubescens (Eckl. & Zeyh.) Druce var. pubescens*
Galerina eucalyptorum
Galerina sp.
**Galium divaricatum Lam.*

**Galium murale (L.) All.*
**Gamochaeta calviceps (Fernald) Cabrera*
Gastrolobium capitatum (Benth.) G.Chandler & Crisp
Gastrolobium dilatatum (Benth.) G.Chandler & Crisp
Gastrolobium ebracteolatum G.Chandler & Crisp
Gastrolobium obovatum Benth.
Gastrolobium spathulatum Benth.
Gastrolobium spinosum Benth.
Gastrolobium spinosum Benth. var. spinosum
Gastrolobium villosum Benth.
**Gaura lindheimeri Engelm. & A.Gray*
Geastrum sp.
**Genista linifolia L.*
**Genista monspessulana (L.) L.A.S.Johnson*
Genus sp.
**Geranium molle L.*
Geranium retrorsum DC.
**Gladiolus caryophyllaceus (Burm.f.) Poir.*
Glischrocaryon aureum var. angustifolium (Nees) Orchard
Glischrocaryon aureum (Lindl.) Orchard
Glischrocaryon aureum (Lindl.) Orchard var. aureum
Glossostigma diandrum (L.) Kuntze
**Glyceria declinata Breb.*
Gnephosis angianthoides (Steetz) Anderb.
**Gomphocarpus fruticosus (L.) W.T.Aiton*
Gompholobium aristatum Benth.
Gompholobium capitatum A.Cunn.
Gompholobium confertum (DC.) Crisp
Gompholobium cyaninum Chappill ms
Gompholobium knightianum Lindl.
Gompholobium marginatum R.Br.
Gompholobium polymorphum R.Br.
Gompholobium preissii Meisn.
Gompholobium tomentosum Labill.
Gonocarpus ? cordiger
Gonocarpus benthamii Orchard
Gonocarpus benthamii Orchard subsp. benthamii ms
Gonocarpus cordiger Nees
Gonocarpus nodulosus Nees
Gonocarpus paniculatus (Benth.) Orchard
Gonocarpus pithyoides Nees
Goodenia coerulea R.Br.
Goodenia drummondii subsp. megaphylla L.W.Sage
Goodenia filiformis R.Br. P3
Goodenia laytoniana Benth.
Goodenia micrantha C.Chr. & Ostenf.
Goodenia pulchella Benth.
Grammatotheca bergiana (Cham.) C.Presl
Gratiola pubescens R.Br.
Grevillea bipinnatifida R.Br.
Grevillea bipinnatifida R.Br. subsp. bipinnatifida
Grevillea centristigma (McGill.) Keighery
Grevillea crowleyae Olde & Marriott P2
Grevillea diversifolia Meisn.
Grevillea diversifolia Meisn. subsp. diversifolia
Grevillea leptobotrys Meisn.
Grevillea manglesii subsp. dissectifolia (McGill.) McGill. P3
Grevillea manglesii subsp. ornithopoda (Meisn.) McGill. P2
Grevillea manglesii (Graham) Planch. subsp. manglesii
Grevillea pilulifera (Lindl.) Druce
Grevillea pimeleoides W.Fitzg. P4
Grevillea pulchella subsp. ascendens Olde & Marriott
Grevillea quercifolia R.Br.
Grevillea synapheae R.Br. subsp. synapheae
Grevillea tenuiflora (Lindl.) Meisn.
Grevillea wilsonii A.Cunn.
Grifola campyla
Grimmia laevigata
Grimmia pulvinata var. africana
Gymnopilus allantopus
Gymnopilus sp.
Gyrostemon subnudus (Nees) Baill.
Haemodorum ? laxum
Haemodorum ? simplex
Haemodorum brevisepalum Benth.
Haemodorum discolor T.Macfarlane
Haemodorum laxum R.Br.
Haemodorum simplex Lindl.
Haemodorum sparsiflorum F.Muell.
Haemodorum spicatum R.Br.
Hafellia disciformis (Fr.) Marbach & H. Mayrhofer
**Hainardia cylindrica (Willd.) Greuter*
Hakea amplexicaulis R.Br.
Hakea auriculata Meisn.
Hakea ceratophylla (Sm.) R.Br.
Hakea cyclocarpa Lindl.
Hakea incrassata R.Br.
Hakea lasianthoides Rye
Hakea lissocarpha R.Br.
Hakea marginata R.Br.
Hakea ruscifolia Labill.
Hakea spathulata (Benth.) R.M.Barker
Hakea stenocarpa R.Br.
Hakea sulcata R.Br.
Hakea trifurcata (Sm.) R.Br.
Hakea undulata R.Br.
Hakea varia R.Br.
Halgania corymbosa Lindl. P3
Haloragis brownii (Hook.f.) Schindl.
Haloragis tenuifolia Benth. P3
Hardenbergia comptoniana (Andrews) Benth.
Harknessia uromycoides

Harperia lateriflora W.Fitzg.
Hebeloma sp.
Hedwigidium integrifolium
**Hedypnois rhagadioloides subsp. cretica (L.) Hayek*
Helichrysum macranthum Benth.
Hemiandra glabra subsp. chimaera B.J.Conn & Tozer ms
Hemiandra pungens R.Br.
Hemigenia humilis Benth.
Hemigenia incana (Lindl.) Benth.
Hemigenia rigida Benth.
Hemigenia sericea Benth.
Hensmania turbinata (Endl.) W.Fitzg.
Heterodea muelleri (Hampe) Nyl.
Heterodermia sp.
Hibbertia ? commutata
Hibbertia ? lasiopus
Hibbertia ? sp.
Hibbertia acerosa (DC.) Benth.
Hibbertia aff. diamesogenos
Hibbertia aff. helianthemoides
Hibbertia amplexicaulis Steud.
Hibbertia aurea Steud.
Hibbertia commutata Steud.
Hibbertia diamesogenos (Steud.) J.R.Wheeler ms
Hibbertia glomerata subsp. darlingensis J.R.Wheeler
Hibbertia glomerata Benth.
Hibbertia huegelii (Endl.) F.Muell.
Hibbertia hypericoides (DC.) Benth.
Hibbertia montana Steud. P4
Hibbertia mylnei Benth.
Hibbertia nymphaea Diels
Hibbertia ovata Steud.
Hibbertia pachyrrhiza Steud.
Hibbertia perfoliata Endl.
Hibbertia pilosa Steud.
Hibbertia quadricolor Domin
Hibbertia racemosa (Endl.) Gilg
Hibbertia serrata Hotchk.
Hibbertia silvestris Diels
Hibbertia sp.
Hibbertia sp. Kojonup (C.M. Lewis 288) PN
Hibbertia spicata F.Muell.
Hibbertia spicata F.Muell. subsp. spicata
Hibbertia stellaris Endl.
Hibbertia subvaginata (Steud.) F.Muell.
Hibbertia vaginata (Benth.) F.Muell.
**Hibiscus trionum L. var. trionum*
Hohenbuehelia sp.
**Holcus lanatus L.*
**Holcus setiger Nees*
Homalosciadium homalocarpum (F.Muell.) H.Eichler
Hovea chorizemifolia (Sweet) DC.
Hovea pungens Benth.
Hovea trisperma var. grandiflora Benth.
Hovea trisperma Benth.
Hovea trisperma Benth. var. trisperma
Hyalolepidozia longiscypha
Hyalosperma cotula (Benth.) Paul G.Wilson
Hyalosperma demissum (A.Gray) Paul G.Wilson
Hybanthus calycinus (Ging.) F.Muell.
Hybanthus debilissimus F.Muell.
Hybanthus floribundus (Lindl.) F.Muell.
Hybanthus floribundus (Lindl.) F.Muell. subsp. floribundus
Hydnum albidum
Hydnum repandum
Hydnum rufescens
Hydnum sp.
Hydrocotyle alata A.Rich.
Hydrocotyle blepharocarpa F.Muell.
Hydrocotyle callicarpa Bunge
Hydrocotyle diantha DC.
Hydrocotyle scutellifera Benth.
Hygrophorus sp.
Hymenogaster aureus
Hypericum gramineum G.Forst.
Hypericum japonicum Thunb.
Hypocalymma ? angustifolium
Hypocalymma angustifolium (Endl.) Schauer
Hypocalymma robustum (Endl.) Lindl.
Hypocenomyce scalaris (Ach.) M. Choisy
**Hypochaeris glabra L.*
**Hypochaeris radicata L.*
Hypogymnia subphysodes (Kremp.) Filson var. subphysodes
Hypolaena ? exsulca
Hypolaena exsulca R.Br.
Hypolaena pubescens (R.Br.) Nees
Hypoxis gardneri R.J.F.Hend.
Hypoxis occidentalis Benth.
Hypoxis vaginata Schltdl. var. vaginata
Imshaugia aleurites (Ach.) S.L. Mey.
Inocybe banksiana var. subflavospora
Inocybe imbricata
Inocybe serrata
Inocybe sp.
Isoetes australis S.Williams
Isoetes sp.
Isolepis cernua var. setiformis (Benth.) Muasya
Isolepis cernua (Vahl) Roem. & Schult. var. cernua
Isolepis congrua Nees
Isolepis cyperoides R.Br.
**Isolepis hystrix (Thunb.) Nees*
**Isolepis marginata (Thunb.) A.Dietr.*
Isolepis oldfieldiana (S.T.Blake) K.L.Wilson
Isolepis producta (C.B.Clarke) K.L.Wilson

**Isolepis sp.*
Isolepis stellata (C.B.Clarke) K.L.Wilson
Isopogon asper R.Br.
Isopogon crithmifolius F.Muell.
Isopogon drummondii Benth. P3
Isopogon sp. Canning Reservoir (M.D. Tindale 121 & B.R. Maslin) PN
Isopogon sphaerocephalus Lindl.
Isotoma hypocrateriformis var. cristata N.G.Walsh ms
Isotoma hypocrateriformis var. trichogramma N.G.Walsh ms
Isotoma hypocrateriformis (R.Br.) Druce
Isotropis cuneifolia (Sm.) Heynh.
**Ixia ? maculata*
**Ixia maculata L.*
**Ixia polystachya L.*
Ixiolaena viscosa Benth.
Jacksonia alata Benth.
Jacksonia furcellata (Bonpl.) DC.
Jacksonia gracillima Chappill ms
Jacksonia lehmannii Meisn.
Jacksonia sternbergiana Huegel
Jamesoniella colorata
Johnsonia pubescens subsp. cygnorum Keighery P2
Johnsonia pubescens Lindl. subsp. pubescens
Johnsonia sp. G.J. Keighery 5249
**Juncus articulatus L.*
**Juncus bufonius L.*
**Juncus capitatus Weigel*
Juncus holoschoenus R.Br.
Juncus kraussii subsp. australiensis (Buchenau) Snogerup
**Juncus microcephalus Kunth*
Juncus pallidus R.Br.
Juncus pauciflorus R.Br.
Juncus planifolius R.Br.
Juncus subsecundus N.A.Wakef.
**Juncus usitatus L.A.S.Johnson*
Kennedia carinata (Benth.) Domin
Kennedia coccinea Vent.
Kennedia microphylla Meisn.
Kennedia prostrata R.Br.
Kennedia stirlingii Lindl.
**Kickxia elatine (L.) Dumort. subsp. elatine*
Kingia australis R.Br
Kunzea glabrescens Toelken
Kunzea micrantha Schauer
Kunzea micrantha Schauer subsp. micrantha
Kunzea recurva Schauer
Kunzea sp.
Labichea lanceolata Benth.
Labichea lanceolata Benth. subsp. lanceolata
Labichea punctata Benth.
Laccaria fraterna
Laccaria sp.
Lachnagrostis filiformis (Forst.) Trin.
Lachnagrostis plebeia (R.Br.) Trin.
Lachnagrostis preissii Nees
Lactarius eucalypti
Lactarius sp.
Lagenophora huegelii Benth.
**Lagurus ovatus L.*
Lambertia multiflora var. darlingensis Hnatiuk
Landoltia punctata (G.Mey.) Les & D.J.Crawford
Lasiopetalum floribundum Benth.
Lasiopetalum glabratum Paust
Lasiopetalum pterocarpum E.M.Benn. & K.Shepherd ms R
**Lathyrus tingitanus L.*
Latrobea tenella (Meisn.) Benth.
**Lavandula sp.*
**Lavandula stoechas L.*
Laxmannia minor R.Br.
Laxmannia ramosa Lindl. subsp. ramosa
Laxmannia squarrosa Lindl.
Lechenaultia biloba Lindl.
Lechenaultia expansa R.Br.
Lechenaultia floribunda Benth.
Lechenaultia sp.
Lentinellus sp.
Lepidobolus preissianus Nees
Lepidobolus preissianus Nees subsp. preissianus
Lepidosperma carphoides Benth.
Lepidosperma effusum Benth.
Lepidosperma leptostachyum Benth.
Lepidosperma longitudinale Labill.
Lepidosperma pubisquameum Steud.
Lepidosperma sp.
Lepidosperma sp. Gosnells (A. Markey 1145) PN
Lepidosperma sp. K Boorabbin (K.L. Wilson 2579) PN
Lepidosperma sp. Margaret River (B.J. Lepschi 1841) PN
Lepidosperma squamatum Labill.
Lepidosperma tetraquetrum Nees
Lepidosperma tuberculatum Nees
Lepiota konradii
Leporella fimbriata (Lindl.) A.S.George
Lepraria sp.
Leprocaulon microscopicum (Vill.) D. Hawksw.
Leptocarpus laxus (R.Br.) B.G.Briggs
Leptocarpus sp.
Leptodontium paradoxum
Leptomeria cunninghamii Miq.
Leptomeria empetriformis Miq.
Leptomeria pauciflora R.Br.
Leptonia incana
Leptospermum erubescens Schauer
**Leptospermum laevigatum (Gaertn.) F.Muell.*

Lepyrodia glauca (Nees) F.Muell.
Lepyrodia heleocharoides Gilg P3
Lepyrodia macra Nees
Lepyrodia muirii F.Muell.
Lepyrodia riparia L.A.S.Johnson & B.G.Briggs ms
Lethocolea pansa (Tayl.)G.A.M. Scott & K.G. Beckm.
Lethocolea pansa (Tayl.)G.A.M.Scott & K.G.Beckm.
Leucopogon australis R.Br.
Leucopogon capitellatus DC.
Leucopogon conostephioides DC.
Leucopogon glabellus R.Br.
Leucopogon gracillimus DC.
Leucopogon nutans E.Pritz.
Leucopogon propinquus R.Br.
Leucopogon pulchellus Sond.
Leucopogon sp.
Leucopogon sp. Moore River (M. Hislop 1695) PN
Leucopogon sp. Murdoch (M. Hislop 1037) PN
Leucopogon sp. Parkerville (A. Meebold 11654) PN
Leucopogon sp.D Perth Flora(aff. polymorphus)
Leucopogon sprengelioides Sond.
Leucopogon strictus Benth.
Leucopogon tenuis DC.
Leucopogon verticillatus R.Br.
Levenhookia octomaculata F.L.Erickson & J.H.Willis P3
Levenhookia preissii (Sond.) F.Muell.
Levenhookia pusilla R.Br.
Levenhookia stipitata (Sond.) F.Muell.
Lindsaea linearis Sw.
Linum marginale Planch.
**Linum trigynum L.*
Lobelia alata Labill.
Lobelia gibbosa Labill.
Lobelia rhombifolia de Vriese
Lobelia rhytidosperma Benth.
Lobelia sp. Labill.
Lobelia tenuior R.Br.
Logania campanulata R.Br.
Logania serpyllifolia subsp. angustifolia (Benth.) B.J.Conn
Logania serpyllifolia R.Br.
**Lolium perenne L.*
Lolium sp.
Lomandra ? caespitosa
Lomandra ? nutans
Lomandra brittanii T.S.Choo
Lomandra caespitosa (Benth.) Ewart
Lomandra drummondii (Benth.) Ewart
Lomandra hermaphrodita (C.R.P.Andrews) C.A.Gardner
Lomandra integra T.Macfarlane
Lomandra micrantha (Endl.) Ewart
Lomandra micrantha (Endl.) Ewart subsp. micrantha
Lomandra nigricans T.Macfarlane
Lomandra odora (Endl.) Ewart
Lomandra preissii (Endl.) Ewart
Lomandra purpurea (Endl.) Ewart
Lomandra sericea (Endl.) Ewart
Lomandra sonderi (F.Muell.) Ewart
Lomandra sp.
Lomandra spartea (Endl.) Ewart
Lomandra suaveolens (Endl.) Ewart
Lonicera sp.
**Lotus angustissimus L.*
**Lotus subbiflorus Lag.*
**Lotus uliginosus Schkuhr*
Loxocarya cinerea R.Br.
**Lupinus cosentinii Guss.*
**Lupinus luteus L.*
Lycogala epidendrum
Lycopodium sp.
Lyginia barbata R.Br.
Lyginia imberbis R.Br.
Lyophyllum sp.
Lyperanthus serratus Lindl.
Lysinema ciliatum R.Br.
Lysinema elegans Sond.
**Lythrum hyssopifolia L.*
Macarthuria apetala Harv.
Macarthuria australis Endl.
Macrozamia riedlei (Gaudich.) C.A.Gardner
Marianthus candidus Endl.
Marianthus coeruleopunctatus Klotzsch
Marianthus drummondianus (Putt.) Benth.
Marianthus tenuis Benth.
**Medicago polymorpha L.*
Meeboldina ? coangustata
Meeboldina aff. crebriculmis
Meeboldina cana (Nees) B.G.Briggs & L.A.S.Johnson
Meeboldina coangustata (Nees) B.G.Briggs & L.A.S.Johnson
Meeboldina decipiens L.A.S.Johnson & B.G.Briggs subsp. decipiens ms
Meeboldina roycei L.A.S.Johnson & B.G.Briggs ms
Meeboldina scariosa (R.Br.) B.G.Briggs & L.A.S.Johnson
Meeboldina sp.
Melaleuca aff. scabra
**Melaleuca armillaris (Gaertn.) Sm.*
Melaleuca cf. osullivanii
Melaleuca cf. parviceps
Melaleuca cuticularis Labill.
Melaleuca huegelii Endl. subsp. huegelii
Melaleuca incana R.Br. subsp. incana

Melaleuca lateriflora subsp. acutifolia (Benth.) Craven
Melaleuca lateritia A.Dietr.
Melaleuca osullivanii Craven & Lepschi
Melaleuca parviceps Lindl.
Melaleuca pauciflora Turcz.
Melaleuca preissiana Schauer
Melaleuca radula Lindl.
Melaleuca rhaphiophylla Schauer
Melaleuca seriata Lindl.
Melaleuca sp.
Melaleuca subtrigona Schauer
Melaleuca teretifolia Endl.
Melaleuca thymoides Labill.
Melaleuca trichophylla Lindl.
Melaleuca viminea Lindl.
Melaleuca viminea Lindl. subsp. viminea
Melanotus sp.
**Melilotus indicus (L.) All.*
**Melinis repens (Willd.) Zizka*
Menegazzia sp.
**Mentha suaveolens Ehrh.*
**Mentha x piperita L.*
Mesomelaena graciliceps (C.B.Clarke) K.L.Wilson
Mesomelaena pseudostygia (Kuek.) K.L.Wilson
Mesomelaena stygia (R.Br.) Nees subsp. stygia
Mesomelaena tetragona (R.Br.) Benth.
Mesophellia sp.
Microlaena stipoides (Labill.) R.Br.
Microlaena stipoides (Labill.) R.Br. var. stipoides
Microtis alba R.Br.
Microtis atrata Lindl.
Microtis media subsp. densiflora (Benth.) R.J.Bates
Microtis media subsp. quadrata R.J.Bates P4
Microtis media R.Br. subsp. media
Microtis orbicularis R.S.Rogers
Millotia tenuifolia Cass.
Millotia tenuifolia Cass. var. tenuifolia
Mirbelia dilatata R.Br.
Mirbelia floribunda Benth.
Mirbelia spinosa Benth.
**Miscanthus sinensis Andersson*
**Misopates orontium (L.) Raf.*
**Moenchia erecta (L.) P.Gaertn., B.Mey. & Scherb.*
Monochaetia karstenii
**Monopsis debilis (L.f.) C.Presl*
Monotaxis grandiflora Endl. var. grandiflora
Monotaxis occidentalis Endl.
**Moraea flaccida (Sweet) Steud.*
Mycena sp.
Myriophyllum tillaeoides Diels
Naematoloma fasciculare
Naematoloma sp.
Neofuscelia sp.
Neurachne alopecuroidea R.Br.
**Nicotiana glauca Graham*
Nidula emodensis
Nitella tasmanica var. afoliolata R.D.Wood
Nitella tasmanica var. microcephala (A.Braun) R.D.Wood
Nothojafnea sp.
Nuytsia floribunda (Labill.) G.Don
Ochrolechia subpallescens Verseghy
**Oenothera affinis Cambess.*
**Oenothera mollissima L.*
**Oenothera sp.*
**Oenothera stricta Link subsp. stricta*
Olax benthamiana Miq.
Olearia conspicua Lander & S.Harris ms
Olearia paucidentata (Steetz) Benth.
Olearia rudis (Benth.) Benth.
Opercularia apiciflora Juss.
Opercularia echinocephala Benth.
Opercularia hispidula Endl.
Opercularia vaginata Juss.
Ophioglossum gramineum Willd.
**Ornithopus compressus L.*
**Ornithopus pinnatus (Mill.) Druce*
**Orobanche minor Sm.*
Orthrosanthus laxus (Endl.) Benth. var. laxus
Ottelia ovalifolia (R.Br.) Rich.
**Oxalis corniculata L.*
**Oxalis glabra Thunb.*
**Oxalis incarnata L.*
Oxalis perennans Haw.
**Oxalis pes-caprae L.*
**Oxalis purpurea L.*
**Oxalis sp.*
**Panicum miliaceum L.*
Pannoparmelia wilsonii (Räsänen) D.J. Galloway
Panus fasciatus
Paracaleana gracilicordata Hopper & A.P.Br. ms P1
Paracaleana granitica Hopper & A.P.Br. ms P1
Paracaleana nigrita (Lindl.) Blaxell
Paragonis grandiflora (Benth.) J.R.Wheeler & N.G.Marchant ms
**Parapholis incurva (L.) C.E.Hubb.*
Paraporpidia ? glauca
Paraporpidia glauca (Taylor) Rambold
Paraserianthes lophantha (Willd.) subsp. lophantha
Paraserianthes lophantha (Willd.) I.C.Nielsen
**Parentucellia latifolia (L.) Caruel*
**Parentucellia viscosa (L.) Caruel*
Parmelia erumpens Kurok
Parmelina conlabrosa (Hale) Elix & J. Johnst.
Parmotrema chinense (Osbeck) Hale & Ahti
Parsonsia diaphanophleba F.Muell. P4

**Paspalum dilatatum Poir.*
**Paspalum distichum L.*
**Passiflora filamentosa Cav.*
Patersonia ? occidentalis
Patersonia babianoides Benth.
Patersonia juncea Lindl.
Patersonia occidentalis R.Br.
Patersonia pygmaea Lindl.
Patersonia rudis Endl.
Patersonia rudis Endl. subsp. rudis
Patersonia sp. Swamp form R.Br.
Paxillus curtisii
Paxillus muelleri
**Pelargonium capitatum (L.) L'Her.*
Pelargonium littorale Huegel subsp. littorale
Pelargonium littoralis Huegel
**Pelargonium x domesticum L.H.Bailey*
**Pennisetum setaceum (Forssk.) Chiov.*
Pennisetum sp.
Pentapeltis peltigera (Hook.) Bunge
**Pentaschistis airoides (Nees) Stapf subsp. airoides*
Pericalymma ellipticum var. ? floridum
Pericalymma ellipticum var. floridum (Schauer) Cranfield
Pericalymma ellipticum (Endl.) Schauer
Pericalymma ellipticum (Endl.) Schauer var. ellipticum
Pericalymma spongiocaule Cranfield
Perichaena depressa
Peronospora dianthicola
Persoonia angustiflora Benth.
Persoonia elliptica R.Br.
Persoonia longifolia R.Br.
Persoonia saccata R.Br.
Pertusaria leiocarpella
Pertusaria sp.
Pertusaria subventrosa
Petrophile biloba R.Br.
Petrophile juncifolia Lindl.
Petrophile linearis R.Br.
Petrophile macrostachya R.Br.
Petrophile seminuda Lindl.
Petrophile serruriae R.Br.
Petrophile squamata subsp. northern (J. Monks 40) PN
Petrophile squamata R.Br. subsp. squamata
Petrophile striata R.Br.
**Petrorhagia ? dubia*
Peziza sp.
Peziza violacea
**Phalaris angusta Trin.*
**Phalaris minor Retz.*
**Phalaris paradoxa L.*
Phellinus sp.
Phellodon plicatus
Philonotis tenuis
Philotheca spicata (A.Rich.) Paul G.Wilson
Philotheca verrucosa
Philydrella pygmaea (R.Br.) Caruel
Philydrella pygmaea (R.Br.) Caruel subsp. pygmaea
Phlebocarya ciliata R.Br.
Phlebocarya filifolia (F.Muell.) Benth.
Pholiota highlandensis
Pholiota multicingulata
Phyllangium divergens (Hook.f.) Dunlop
Phyllangium paradoxum (R.Br.) Dunlop
Phyllanthus calycinus Labill.
Phylloglossum drummondii Kunze
**Phyllopodium cordatum (Thunb.) Hilliard*
Phylloporus hyperion
Phyllota gracilis Turcz.
Physarum luteolum
Physarum sp.
Physarum viride
**Phytolacca octandra L.*
Pilularia novae-hollandiae A.Braun
Pimelea angustifolia R.Br.
Pimelea argentea R.Br.
Pimelea brevistyla Rye subsp. brevistyla
Pimelea calcicola Rye
Pimelea ciliata Rye subsp. ciliata
Pimelea imbricata subsp. piligera
Pimelea imbricata var. piligera (Benth.) Diels
Pimelea imbricata R.Br.
Pimelea lanata R.Br.
Pimelea lehmanniana subsp. nervosa (Meisn.) Rye
Pimelea leucantha Diels
Pimelea preissii Meisn.
Pimelea rara Rye P4
Pimelea rosea R.Br. subsp. rosea
Pimelea sp.
Pimelea spectabilis Lindl.
Pimelea suaveolens Meisn.
Pimelea suaveolens Meisn. subsp. suaveolens
Pimelea sylvestris R.Br.
**Pinus pinaster Aiton*
Pithocarpa pulchella Lindl.
Pithocarpa pulchella Lindl. var. pulchella
Pityrodia bartlingii (Lehm.) Benth.
Platysace compressa (Labill.) C.Norman
Platysace filiformis (Bunge) C.Norman
Platysace juncea (Bunge) C.Norman
Pleuridium ecklonii
Pleuroflammula croceosanguinea
**Poa annua L.*
Poa drummondiana Nees
Poa poiformis (Labill.) Druce
Poa porphyroclados Nees
**Podalyria sericea (Andrews) R.Br.*

Podolepis gracilis (Lehm.) Graham
Podolepis lessonii (Cass.) Benth.
Podotheca angustifolia (Labill.) Less.
Podotheca chrysantha (Steetz) Benth.
Podotheca gnaphalioides Graham
Podotheca sp.
**Polygonum aviculare L.*
**Polypogon monspeliensis (L.) Desf.*
Polypogon tenellus R.Br.
Poranthera huegelii Klotzsch
Poranthera microphylla Brongn.
Potamogeton drummondii Benth.
Potamogeton ochreatus Raoul
Pottia scabrifolia
Praecoxanthus aphyllus (Benth.) Hopper & A.P.Br.
Prasophyllum ? drummondii
Prasophyllum brownii Rchb.f.
Prasophyllum cyphochilum Benth.
Prasophyllum drummondii Rchb.f.
Prasophyllum elatum R.Br.
Prasophyllum fimbria Rchb.f.
Prasophyllum gracile Lindl.
Prasophyllum hians Rchb.f.
Prasophyllum macrostachyum R.Br.
Prasophyllum parvifolium Lindl.
Prasophyllum plumiforme Fitzg.
**Prunus cerasifera Ehrh.*
**Prunus sp.*
Psathyrella sp.
Pseudephebe pubescens (L.) M.Choisy
**Pseudognaphalium luteoalbum (L.) Hilliard & B.L.Burtt*
Psora crenata (Taylor) Reinke
Pteridium esculentum (G.Forst.) Cockayne
Pterochaeta paniculata Steetz
Pterostylis aff. nana
Pterostylis aff. sanguinea
Pterostylis aspera D.L.Jones & M.A.Clem.
Pterostylis barbata Lindl.
Pterostylis concava D.L.Jones & M.A.Clem.
Pterostylis dilatata A.S.George
Pterostylis recurva Benth.
Pterostylis sanguinea D.L.Jones & M.A.Clem.
Pterostylis sp. Slender Snail Orchid (G.J. Keighery 14516) PN
Pterostylis sp. crinkled leaf (G.J. Keighery 13426) PN
Pterostylis sp. inland (A.C. Beauglehole 11880) PN
Pterostylis vittata Lindl.
Ptilotus drummondii (Moq.) F.Muell. var. drummondii
Ptilotus esquamatus (Benth.) F.Muell.
Ptilotus manglesii (Lindl.) F.Muell.
Ptilotus polystachyus (Gaudich.) F.Muell.
Puccinia haemodori
Pucciniosira paradoxa
Pultenaea ochreata Meisn.
Pultenaea reticulata (Sm.) Benth.
Pulvinula archeri
Punctularia strigoso-zonata
Pyrenopsis sp.
Pyrorchis nigricans (R.Br.) D.L.Jones & M.A.Clem.
Pyrrhospora laeta (Stirt.) Hafellner
Quinetia urvillei Cass.
Racopilum cuspidigerum var. convolutaceum
Ramalea cochleata Müll. Arg.
Ramalina inflata subsp. australis G.N. Stevens
Ramaria ochroceosalmonicolor
Ramaria sinapicolor
Ramaria sp.
Ranunculus colonorum Endl.
**Ranunculus muricatus L.*
**Ranunculus trilobus Desf.*
**Raphanus raphanistrum L.*
Regelia ciliata Schauer
Regelia inops (Schauer) Schauer
Restio megalotheca F.Muell.
Resupinatus sp.
Rhagodia baccata (Labill.) Moq. subsp. baccata
Rhizocarpon polycarpum (Hepp) Th. Fr.
Rhizocarpon sp.
Rhodanthe citrina (Benth.) Paul G.Wilson
Rhodanthe corymbosa (A.Gray) Paul G.Wilson
Rhodanthe manglesii Lindl.
Rimelia reticulata (Taylor) Hale & A. Fletcher
**Romulea flava var. minor (Beg.) M.P.deVos*
**Romulea rosea var. communis M.P.de Vos.*
**Romulea rosea (L.) Eckl.*
**Rosa chinensis x moschata Herrm.*
Rosa x mannettii
Rosulabryum albolimbatum
Rosulabryum torquescens
**Rubus anglocandicans A.Newton*
**Rubus laudatus A.Berger*
**Rubus ulmifolius Schott*
**Rumex brownii Campd.*
**Rumex conglomeratus Murray*
**Rumex crispus L.*
Russula flocktonae
Russula mariae
Russula purpureo-flava
Russula sp.
**Salvia verbenaca L.*
Samolus repens (J.R.Forst. & G.Forst.) Pers. var. repens
Sarcodon scabrosum
Scaevola ? pilosa
Scaevola calliptera Benth.
Scaevola canescens Benth.

Scaevola glandulifera DC.
Scaevola lanceolata Benth.
Scaevola pilosa Benth.
Scaevola platyphylla Lindl.
Scaevola sp.
Scaevola striata R.Br.
Schoenolaena juncea Bunge
Schoenus aff. brevisetis
Schoenus aff. subfascicularis
Schoenus armeria Boeck.
Schoenus bifidus (Nees) Boeck.
Schoenus caespititius W.Fitzg.
Schoenus clandestinus S.T.Blake
Schoenus curvifolius (R.Br.) Roem. & Schult.
Schoenus discifer Tate
Schoenus efoliatus (R.Br.) Roem. & Schult.
Schoenus efoliatus F.Muell.
Schoenus grammatophyllus F.Muell.
Schoenus grandiflorus (Nees) F.Muell.
Schoenus nanus (Nees) Benth.
Schoenus odontocarpus F.Muell.
Schoenus pedicellatus (R.Br.) Benth.
Schoenus pennisetis S.T.Blake P1
Schoenus plumosus Rye
Schoenus rigens S.T.Blake
Schoenus sp.
Schoenus sp. smooth culms (K.R. Newbey 7823) PN
Schoenus subbarbatus Kuk.
Schoenus subfascicularis Kuek.
Schoenus subflavus Kuek.
Schoenus tenellus Benth.
Schoenus unispiculatus Benth.
Schoenus variicellae Rye
Scholtzia ? involucrata
Scholtzia involucrata (Endl.) Druce
Scleroderma sp.
Seimatosporium carpophilus
Seimatosporium fusisporum
Selaginella gracillima (Kunze) Salomon
Sematophyllum homomallum
**Senecio diaschides D.G.Drury*
Senecio hispidulus A.Rich.
Senecio leucoglossus F.Muell. P4
Senecio multicaulis A.Rich. subsp. multicaulis
Senecio pinnatifolius var. latilobus (Steetz) I.Thomps.
Senecio quadridentatus Labill.
Senecio sp.
Septoria brizae
Septoria sp.
**Setaria italica (L.) P.Beauv.*
**Setaria pumila (Poir.) Roem. & Schult.*
**Setaria verticillata (L.) P.Beauv.*
Sida hookeriana Miq.
**Silene gallica var. quinquevulnera (L.) W.D.J.Koch*
**Silene gallica L.*
Siloxerus filifolius (Benth.) Ostenf.
Siloxerus humifusus (Benth.) Ostenf.
Siloxerus humifusus Labill.
Siloxerus multiflorus (Nees) P.S.Short
Siphula aff. corinacea
Siphula coriacea Nyl.
**Solanum americanum Mill.*
**Solanum linnaeanum Hepper & P.-M.L.Jaeger*
**Solanum nigrum L.*
**Sonchus asper (L.) Hill subsp. asper*
Sonchus hydrophilus Boulos
**Sonchus oleraceus L.*
**Sorghum halepense (L.) Pers.*
Sowerbaea laxiflora Lindl.
**Sparaxis bulbifera (L.) Ker Gawl.*
Sphaerolobium linophyllum (Huegel) Benth.
Sphaerolobium medium R.Br.
Sphaerolobium sp.
Sphaerolobium vimineum Sm.
Spiculaea ciliata Lindl.
Sporobolus virginicus (L.) Kunth
**Stachys arvensis (L.) L.*
Stachystemon sp. Keysbrook (R. Archer 17/11/99) PN
Stachystemon vermicularis Planch.
Stackhousia monogyna Labill.
**Stellaria media (L.) Vill.*
Stemonitis fusca
Stemonitis lignicola Nann.-Bremek.
Stemonitis splendens Rostaf.
Stenanthemum emarginatum Rye
Stenopetalum gracile Bunge
Stereocaulon corticatulum Nyl.
Stereocaulon sp.
Stereum strigoso-zonatum
Stipa sp.
Stirlingia latifolia (R.Br.) Steud.
Stropharia semiglobata
Stropharia sp.
Stylidium ? ciliatum
Stylidium ? divaricatum
Stylidium ? diversifolium
Stylidium ? hispidum
Stylidium aff. bulbiferum
Stylidium affine Sond.
Stylidium amoenum R.Br.
Stylidium araeophyllum Wege ms
Stylidium brunonianum Benth.
Stylidium bulbiferum Benth.
Stylidium calcaratum R.Br.
Stylidium carnosum Benth.
Stylidium ciliatum Lindl.
Stylidium despectum R.Br.

Stylidium dichotamum Benth.
Stylidium dichotomum DC.
Stylidium diuroides Lindl.
Stylidium diuroides Lindl. subsp. diuroides
Stylidium divaricatum Sond.
Stylidium diversifolium R.Br.
Stylidium ecorne (F.L.Erickson & J.H.Willis) P.G.Farrell & S.H.James
Stylidium emarginatum Sond.
Stylidium emarginatum Sond. subsp. emarginatum
Stylidium eriopodum DC.
Stylidium guttatum R.Br.
Stylidium hesperium Wege ms
Stylidium hispidum Lindl.
Stylidium inundatum R.Br.
Stylidium ireneae Lowrie & Kenneally P4
Stylidium junceum R.Br.
Stylidium lateriticola Kenneally
Stylidium lineatum Sond.
Stylidium longitubum Benth. P3
Stylidium mimeticum Lowrie & Carlquist
Stylidium neurophyllum Wege ms
Stylidium perpusillum Hook.f.
Stylidium petiolare Sond.
Stylidium piliferum R.Br.
Stylidium piliferum R.Br. subsp. piliferum
Stylidium pulchellum Sond.
Stylidium repens R.Br.
Stylidium roseo-alatum F.L.Erickson & J.H.Willis
Stylidium scariosum DC.
Stylidium schoenoides DC.
Stylidium sp. Darling Range (H. Bowler 371) PN
Stylidium thesioides DC.
Stylidium utricularioides Benth.
Stypandra glauca R.Br.
Styphelia tenuiflora Lindl.
Suillus luteus
**Symphyotrichum squamatum (Spreng.) G.L.Nesom*
Synaphea ? damopsis
Synaphea ? gracillima
Synaphea ? gracillima x petiolaris
Synaphea acutiloba Meisn.
Synaphea aff. gracillima
Synaphea aff. petiolaris
Synaphea aff. sp. Fairbridge Farm (D. Papenfus 696)
Synaphea cuneata A.S.George P3
Synaphea decorticans Lindl.
Synaphea gracillima Lindl.
Synaphea odocoileops A.S.George P1
Synaphea petiolaris R.Br.
Synaphea petiolaris R.Br. subsp. petiolaris
Synaphea sp.
Synaphea sp. Fairbridge Farm (D. Papenfus 696) PN R
Synaphea sp. Serpentine (G.R. Brand 103) PN
Synaphea sp. Udumung (A.S. George 17058) PN
Synaphea spinulosa (Burm.f.) Merr.
Synaphea spinulosa (Burm.f.) Merr. subsp. spinulosa
**Tagetes erecta L.*
Taxandria linearifolia (DC.) J.R.Wheeler & N.G.Marchant ms
Templetonia drummondii Benth. P4
**Tetragonia decumbens Mill.*
Tetraria australiensis C.B.Clarke R
Tetraria capillaris (F.Muell.) J.M.Black
Tetraria octandra (Nees) Kuk.
Tetraria sp.
Tetrarrhena laevis R.Br.
Tetratheca hirsuta Lindl.
Tetratheca nuda Lindl.
Tetratheca sp.
Tetratheca sp. Granite (S. Patrick SP1224) PN P3
Tetratheca sp. Mt Solus (F. Obbens 307/98) PN
Thelymitra antennifera (Lindl.) Hook.f.
Thelymitra benthamiana Rchb.f.
Thelymitra crinita Lindl.
Thelymitra flexuosa Endl.
Thelymitra frenchii Jeanes
Thelymitra fuscolutea R.Br.
Thelymitra graminea Lindl.
Thelymitra macrophylla Lindl.
Thelymitra sp.
Thelymitra spiralis (Lindl.) F.Muell.
Thelymitra stellata Lindl. R
Thelymitra vulgaris Jeanes
Thelymitra xanthotricha Jeanes
Themeda triandra Forssk.
Thomasia foliosa Gay
Thomasia glutinosa var. latifolia Benth.
Thomasia glutinosa Lindl.
Thomasia glutinosa Lindl. var. glutinosa
Thomasia grandiflora Lindl.
Thomasia macrocarpa Endl.
Thomasia montana Steud. R
Thomasia paniculata Lindl.
Thomasia pauciflora Lindl.
Thryptomene australis Endl. subsp. australis
Thuidium sp.
Thuidium sparsum var. hastatum
**Thunbergia alata Sims*
Thysanothecium hookeri Mont. & Berk.
Thysanothecium scutellatum (Fr.) D.J. Galloway
Thysanotus ? manglesianus
Thysanotus ? patersonii
Thysanotus ? thyrsoideus
Thysanotus anceps Lindl. P3

Thysanotus arbuscula Baker
Thysanotus arenarius Brittan
Thysanotus dichotomus (Labill.) R.Br.
Thysanotus fastigiatus Brittan
Thysanotus manglesianus Kunth
Thysanotus multiflorus R.Br.
Thysanotus patersonii R.Br.
Thysanotus rectantherus Brittan
Thysanotus sp.
Thysanotus sparteus R.Br.
Thysanotus tenellus Endl.
Thysanotus thyrsoideus Baker
Thysanotus triandrus (Labill.) R.Br.
**Tolpis barbata (L.) Gaertn.*
Tortula papillosa
Trachymene coerulea Graham subsp. coerulea
Trachymene pilosa Sm.
Tremelloscypha australiensis
Tremulina tremula (R.Br.) B.G.Briggs & L.A.S.Johnson
Tribonanthes australis Endl.
Tribonanthes brachypetala Lindl.
Tribonanthes longipetala Lindl.
Tribonanthes sp.
Tribulus terrestris L.
Trichia favoginea
Trichocline sp.
Trichocline spathulata (DC.) J.H.Willis
Tricholoma aurantium
Tricholoma eucalypticum
Tricholoma saponaceum
Tricholomopsis rutilans
Tricholomopsis sp.
Tricoryne elatior R.Br.
Tricoryne humilis Endl.
Tricoryne tenella R.Br.
Tricostularia neesii Lehm. var. neesii
**Trifolium angustifolium L.*
**Trifolium angustifolium L. var. angustifolium*
**Trifolium arvense L. var. arvense*
**Trifolium campestre Schreb.*
**Trifolium campestre Schreb. var. campestre*
**Trifolium dubium Sibth.*
**Trifolium hirtum All.*
**Trifolium hybridum L. var. hybridum*
**Trifolium incarnatum L. var. incarnatum*
**Trifolium ornithopodioides L.*
**Trifolium resupinatum L. var. resupinatum*
**Trifolium subterraneum L.*
Triglochin huegelii (Endl.) Aston
Triglochin linearis Endl.
Triglochin muelleri Buchenau
Triglochin nana F.Muell.
Tripterococcus brunonis Endl.
Tripterococcus sp. (A.S. George 14234) PN
**Tritonia crocata (L.) Ker Gawl.*
**Tropaeolum majus L.*
Trymalium floribundum Steud. subsp. floribundum
Trymalium ledifolium var. rosmarinifolium (Steud.) Benth.
Trymalium ledifolium Fenzl
Trymalium ledifolium Fenzl var. ledifolium
Tubaria rufofulva
Tylopilus sp.
Uromyces trifolii
Uromycladium tepperianum
**Ursinia anthemoides (L.) Poir.*
Usnea ? inermis
Usnea inermis Motyka
Usnea scabrida Taylor subsp. scabrida
Usnea sp.
Utricularia multifida R.Br.
Utricularia tenella R.Br.
Utricularia violacea R.Br.
Velleia sp.
Velleia trinervis Labill.
**Vellereophyton dealbatum (Thunb.) Hilliard & B.L.Burtt*
**Verbascum virgatum Stokes*
Verticordia acerosa var. preissii (Schauer) A.S.George
Verticordia acerosa Lindl. var. acerosa
Verticordia bifimbriata A.S.George
Verticordia densiflora var. cespitosa (Turcz.) A.S.George
Verticordia densiflora Lindl. var. densiflora
Verticordia huegelii var. decumbens A.S.George
Verticordia huegelii var. stylosa (Turcz.) A.S.George
Verticordia huegelii Endl. var. huegelii
Verticordia insignis Endl. subsp. insignis
Verticordia lindleyi Schauer subsp. lindleyi P4
Verticordia pennigera Endl.
Verticordia plumosa var. ananeotes A.S.George R
Verticordia plumosa var. brachyphylla (Diels) A.S.George
Verticordia plumosa var. pleiobotrya A.S.George R
Verticordia plumosa (Desf.) Druce
Verticordia plumosa (Desf.) Druce var. plumosa
**Vicia benghalensis L.*
**Vicia hirsuta (L.) Gray*
**Vicia sativa subsp. nigra (L.) Ehrh.*
**Vicia sativa L.*
**Vicia sativa L. subsp. sativa*
Villarsia albiflora F.Muell.
Villarsia capitata Nees
Villarsia violifolia F.Muell.

Viminaria juncea (Schrad. & J.C.Wendl.) Hoffmanns.
**Vinca major L.*
**Vulpia bromoides (L.) Gray*
**Vulpia muralis (Kunth) Nees*
Vulpia myuros var. hirsuta
**Vulpia myuros (L.) C.C.Gmel.*
**Vulpia myuros (L.) C.C.Gmel. var. myuros*
**Wahlenbergia capensis (L.) A.DC.*
Wahlenbergia gracilenta Lothian
Wahlenbergia multicaulis Benth.
Wahlenbergia preissii de Vriese
Wahlenbergia stricta (R.Br.) Sweet subsp. stricta
**Watsonia borbonica (Pourr.) Goldblatt*
**Watsonia meriana var. bulbillifera (J.Mathews & L.Bolus) D.A.Cooke*
**Watsonia meriana (L.) Mill. var. meriana*
**Watsonia sp.*
Weissia rutilans
Wurmbea dioica subsp. alba T.Macfarlane
Wurmbea dioica (R.Br.) F.Muell.
Xanthoparmelia ? tasmanica
Xanthoparmelia brattii (Essl.) O.Blanco et al.
Xanthoparmelia burmeisteri (Elix) Egan
Xanthoparmelia digitiformis (Elix & P.M. Armstr.) Filson
Xanthoparmelia elixii Filson
Xanthoparmelia flavescentireagens (Gyeln.) D.J. Galloway
Xanthoparmelia fracticollis Elix
Xanthoparmelia isidiigera (Müll. Arg.) Elix & J. Johnst.
Xanthoparmelia monadnockensis Elix
Xanthoparmelia neorimalis (Elix & P.M. Armstr.) Elix & T.H. Nash
Xanthoparmelia norstrigosa Elix
Xanthoparmelia notata (Kurok.) Hale
Xanthoparmelia parvoincerta Elix & J. Johnst.
Xanthoparmelia scabrosa (Taylor) Hale
Xanthoparmelia semiviridis (Nyl.) O.Blanco et al.
Xanthoparmelia sp.
Xanthoparmelia subimitatrix (Essl.) O.Blanco et al. P1
Xanthoparmelia substrigosa (Hale) Hale
Xanthoparmelia taractica (Kremp.) Hale
Xanthoparmelia tasmanica (Hook. f. & Taylor) Hale
Xanthorrhoea acanthostachya D.J.Bedford
Xanthorrhoea gracilis Endl.
Xanthorrhoea preissii Endl.
Xanthosia atkinsoniana F.Muell.
Xanthosia candida (Benth.) Steud.
Xanthosia ciliata Hook.
Xanthosia fruticulosa Benth.
Xanthosia huegelii (Benth.) Steud.
Xanthosia singuliflora F.Muell.
Xerochrysum bracteatum (Vent.) Tzvelev
Xylomelum occidentale R.Br.
Xyris atrovirida Doust & B.J.Conn
**Zantedeschia aethiopica (L.) Spreng.*
? Lepidosperma sp.
? Siphula sp.
? Stereocaulon sp.
?Stylidium sp.

Appendix

5

APPENDIX 5

Fauna species in the Shire of Serpentine-Jarrahdale (Source- WA Museum, 2005)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates –32.1666, 115.8166 and –32.4833,116.2666.

Note - not a comprehensive list.

* represents an introduced species.

BIRD SPECIES	
Galaxiidae	*Galaxias occidentalis*
Gobiidae	*Acentrogobius bifrenatus*
Mugilidae	*Aldrichetta forsteri*
Nannopercidae	*Edelia vittata*
Percichthyidae	*Bostockia porosa*
Petromyzontidae	*Geotria australis*
Plotosidae	*Neosilurus hyrtlii* *Tandanus bostocki*

MAMMAL SPECIES		
Burramyidae	*Cercartetus concinnus*	Western Pygmy-possum, Mundarda
Dasyuridae	*Antechinus flavipes leucogaster*	Mardo
	Dasyurus geoffroii	Western Quoll, Chuditch
	Phascogale tapoatafa tapoatafa	Brush-tailed Phascogale, Wambenger
	Sminthopsis crassicaudata	Fat-tailed Dunnart
	Sminthopsis gilberti	Gilbert`s Dunnart
	Sminthopsis griseoventer griseoventer	Grey-bellied Dunnart
	Sminthopsis macroura	Stripe-faced Dunnart
Leporidae	**Oryctolagus cuniculus*	Rabbit
Macropodidae	*Macropus fuliginosus*	Western Grey Kangaroo)
	Macropus irma	Western Brush Wallaby
	Setonix brachyurus	Quokka
Molossidae	*Mormopterus planiceps*	Southern Freetail-bat)
	Tadarida australis	White-striped Freetail-bat
Muridae	*Hydromys chrysogaster*	Water rat
	**Mus musculus*	House mouse
	**Rattus rattus*	Black rat
Mustelidae	**Mustela putorius*	European Polecat, Ferret)
Myrmecobiidae	*Myrmecobius fasciatus*	Numbat, Walpurti
Peramelidae	*Isoodon obesulus fusciventer*	
Phalangeridae	*Trichosurus vulpecula vulpecula*	Common Brushtail Possum)
Suidae	**Sus scrofa*	Pig
Tachyglossidae	*Tachyglossus aculeatus*	Short-beaked echidna
Tarsipedidae	*Tarsipes rostratus*	Honey Possum, Noolbenger
Vespertilionidae	*Chalinolobus gouldii*	Gould`s wattled bat)
	Chalinolobus morio	Chocolate Wattled Bat
	Falsistrellus mackenziei	Western False Pipistrelle
	Nyctophilus geoffroyi	Lesser long-eared bat
	Nyctophilus gouldi	Goulds long-eared bat
	Vespadelus regulus	Southern Forest Bat

REPTILE SPECIES		
Agamidae	*Ctenophorus ornatus*	Ornate Rock Dragon
	Pogona minor minor	Western Bearded Dragon
Boidae	*Morelia spilota imbricata*	Southern Carpet Python
Elapidae	*Acanthophis antarcticus*	Southern death adder
	Brachyurophis semifasciata	Southern shovel-nosed snake
	Elapognathus coronatus	Crowned snake
	Neelaps bimaculatus	Black-naped snake
	Notechis scutatus	Tiger snake
	Parasuta gouldii	Gould`s snake
	Parasuta nigriceps	Black-backed snake
	Pelamis platura	Yellow-bellied sea snake
	Pseudechis australis	Mulga Snake
	Pseudonaja affinis affinis	Dugite
	Pseudonaja nuchalis	Gwardar
	Simoselaps bertholdi	Jan`s banded snake
Gekkonidae	*Christinus marmoratus*	Marbled Gecko
	Diplodactylus polyophthalmus	Speckled Stone Gecko
	Gehyra variegata	Variegated Tree Dtella
	Underwoodisaurus milii	Barking Gecko
Pygopodidae	*Aprasia pulchella*	Granite Worm Lizard
	Aprasia repens	Sandplain Worm Lizard
	Delma fraseri fraseri	Fraser`s Legless Lizard
	Lialis burtonis	Burton`s Legless Lizard
	Pygopus lepidopodus	Common Scaly-foot
Scincidae	*Acritoscincus trilineatum*	Southwestern Cool Skink
	Cryptoblepharus plagiocephalus	Fence or Wall Skink
	Ctenotus australis	
	Ctenotus delli	
	Ctenotus fallens	
	Ctenotus impar	Odd-striped Skink
	Ctenotus labillardieri	Red-legged Skink)
	Egernia kingii	King`s Skink
	Egernia napoleonis	Southwestern Crevice Skink
	Hemiergis initialis	Five-toed Earless Skink
	Hemiergis initialis initialis	Five-toed Earless Skink
	Hemiergis quadrilineata	Two-toed Earless Skink
	Lerista distinguenda	
	Lerista elegans	
	Lerista lineata	
	Menetia greyii	Common Dwarf Skink
	Morethia obscura	Woodland Flecked Skink)
	Tiliqua occipitalis	Western Bluetongue
	Tiliqua rugosa rugosa	Southwestern Bobtail
Typhlopidae	*Ramphotyphlops australis*	
	Ramphotyphlops bituberculatus	
	Ramphotyphlops pinguis	
	Ramphotyphlops waitii	
Varanidae	*Varanus gouldii*	Gould`s Sand Monitor
	Varanus rosenbergi	Southern Heath Monitor

FISH SPECIES	
Galaxiidae	*Galaxias occidentalis*

Gobiidae	*Acentrogobius bifrenatus*	
Mugilidae	*Aldrichetta forsteri*	Yelloweye Mullet
Nannopercidae	*Edelia vittata*	
Percichthyidae	*Bostockia porosa*	
Petromyzontidae	*Geotria australis*	Pouched Lamprey
Plotosidae	*Neosilurus hyrtlii* *Tandanus bostocki*	

AMPHIBIA SPECIES

Hylidae	*Litoria adelaidensis*	Slender Tree Frog
	Litoria moorei	Motorbike Frog or Bell Frog
Myobatrachidae	*Crinia georgiana*	Quacking Frog
	Crinia glauerti	Glauert`s Froglet
	Crinia insignifera	Squelching Froglet
	Crinia pseudinsignifera	Bleating Froglet
	Geocrinia leai	Lea`s Frog
	Heleioporus barycragus	Western Marsh Frog
	Heleioporus eyrei	Moaning Frog
	Heleioporus inornatus	Whooping Frog
	Heleioporus psammophilus	Sand Frog
	Limnodynastes dorsalis	Bullfrog or Banjo Frog)
	Neobatrachus pelobatoides	Humming Frog
	Pseudophryne guentheri	Crawling Frog, Günther’s Toadlet

Appendix

6

ROADSIDE CONSERVATION COMMITTEE

GUIDELINES FOR MANAGING THE HARVESTING OF NATIVE FLOWERS, SEED AND TIMBER FROM ROADSIDES

Preamble

The diversity of values associated with roadside vegetation is well documented and acknowledged. In landscapes that have been extensively cleared, roadside vegetation provides essential wildlife corridors and habitat for local flora and fauna, including a number of threatened species. Hence it is highly desirable that this asset is managed in such a way as to ensure its conservation and sustainability.

The control and management of roadside vegetation is the responsibility of the road manager. Local government authorities, as road managers, are often approached for 'permission' to take various flora products from the roadside. These requests are mainly for wildflowers, native seed and firewood. Other products which may be sought includes material for making didgeridoos, other types of craftwood, and stakes or poles for various purposes.

Although road managers are primarily concerned about the maintenance of the running surface itself, through the implementation of these simple guidelines for the removal of flora and timber material from the roadsides, the vegetated roadside reserve should be maintained for its biodiversity values, and the benefit of the community and road users.

In some instances the Roadside Conservation Committee (RCC) is supportive of the sustainable harvesting of flora, such as salvage (removal of dead material that is not significant wildlife habitat or is material to be destroyed by road works), or the selective collection of seed for revegetation. However, each case should be viewed on its merits and any decision to facilitate harvesting from roadsides should be referred to the Department of Environment and Conservation (DEC) and/or the RCC for advice. Licences allowing the taking of roadside flora may be issued by DEC when supported by the road managing authority.

Legislation

All Western Australian native flora is protected under the *Wildlife Conservation Act 1950*. Native flora includes all parts of a native plant, including its flowers, seed, and timber. Protection of native flora under the Act has the effect of requiring a person to only take (cut or remove) native flora from Crown land under a licence.

Road and rail reserves are Crown land, and hence a licence is required to cut or remove any native flora from a roadside or rail line. There is, however, a legal provision by which the road manager or their agent (contractor) does not require a licence whilst undertaking legitimate road management activities. This provision does not extend to other persons who wish to take protected flora from roadsides.

There are two types of licences that apply to the taking of protected flora from Crown land – Commercial Purposes Licences where the flora is being taken for any commercial purpose, and

Scientific or Other Prescribed Purposes Licences where the protected flora is being taken for specific non-commercial purposes.
These licences are issued by DEC. In issuing a licence, DEC is required to be assured that the activity will not compromise the conservation of the flora. In determining this, DEC will seek advice from the land manager for which the application relates to determine the potential impact of the activity, and how the activity relates to the management objectives being applied to that land.

A licence application may be refused if the activity is either a conservation concern, or does not fit in with the management objectives of the road manager. Once issued with a licence, a licensee must comply with the conditions of the licence that are designed to ensure the activity does not adversely impact on the conservation of the flora or the natural environment in which it occurs.

Commercial Wildflower Harvesting

Western Australia is referred to as the *'Wildflower State'*, and its wildflowers attract a significant number of tourists each year. Roadside vegetation provides the most accessible, and hence the most commonly viewed, array of wildflowers, and as such are an important feature of regional tourism and can provide a significant financial boost to local economies.

The RCC considers that the flora on roadsides is reserved and maintained for public benefit. It is therefore seen as a contradiction of purpose to allow wildflowers on roadsides to be harvested, particularly for private gain, and this activity should not be permitted.

Wildflower harvesting in many instances detracts from the biodiversity and tourism values of the roadside. It is often the case that flora is harvested from roadsides because of the convenience of access, and harvesters should be directed to find alternative locations.
There are situations where some harvesting may be considered, such as in very wide road reserves where the activity can be screened from road users, but mostly road managers have been discouraged from supporting or allowing such harvesting to occur. If harvesting is to be approved, then the points provided at the end of these guidelines should be considered.

Seed Collection

Throughout much of the south west, revegetation of the native flora is being undertaken to redress the problems that historic clearing has created. Increasingly, this revegetation is aimed at using local native flora so as to recreate the native vegetation to support biodiversity objectives. The paradox is that in many areas the native vegetation has been cleared to such an extent that adequate sources of native seed cannot be found for undertaking this work. Roadside vegetation may be a source of such seed.

Native seed is an important component of remnant vegetation. It is critical for the regeneration of certain species, called re-seeder species, when plants are either killed by an event, such as fire, storm damage, or die as part of their natural cycle. The maintenance of adequate seed of these species is necessary as a precaution to ensure the sustainability of the flora biodiversity.

Native seed is also an important food source for native fauna living in roadside vegetation, from ants to birds and mammals. The maintenance of this fauna is important for the continuing survival of the vegetation, especially where the fauna is required to pollinate the flora.

When seed is needed for *bona fide* revegetation projects within the local community, and no other source of local seed is available, then the controlling authority may consider giving permission for

collection of seed from roadsides. Such collection must be under the appropriate licence issued by DEC and the harvesting should be done in a way that does not endanger the long-term survival of the roadside vegetation.

Where seed collection is to be authorised on roadsides, the road manager should consider the points listed at the end of these guidelines. Specific consideration should be given to the methods that are approved for harvesting the seed, the quantity of seed that may be taken, and the species from which the seed is to be sourced.

Timber Harvesting from Roadsides.

Timber is harvested for a range of reasons, including saw logs, firewood and craftwood. Due to the ease of access, timber harvesters may wish to source timber from roadside vegetation for these purposes.

The RCC seeks to encourage roadside managers to retain timber on roadsides as an important component of the natural habitat, which fulfils ecological, aesthetic and land management functions. The value of fallen logs and branches within the roadside is often not realised, but this material forms an important habitat for many species of insects, reptiles, mammals and birds, thus enhancing the roadside biodiversity. Insects and reptiles that live in fallen timber are also important elements of the food chain, and are very important to the functioning of natural systems, and the survival of many other native animals.

The RCC believes that harvesting of timber from roadsides should not be permitted except in defined road safety, fence line or service clearance zones, or where a tree has fallen, or appears likely to fall into clearance zones.

Where timber removal is to be allowed, consideration should be given to the points raised at the end of these guidelines, especially in relation to safety issues related to timber cutting. Permission to remove timber should be specific to certain sections of roadsides where the removal is necessary for other planned road management purposes.

Guidelines For Harvesting On Roadsides

- ✓ In all cases the permission of the managing authority, i.e. Main Roads WA, Local Government or DEC, must be sought before native flora is removed from a roadside.
- ✓ Flora removal should be from only designated roads, which have wider vegetated road verges i.e. vegetation width > 3metres
- ✓ The number of operators authorised to remove flora from a roadside should be strictly limited to that which can be sustained and managed. The determination of this is at the judgement of the managing authority, but consideration should be taken of the type of flora being harvested and an evaluation of monitoring of the impact of the harvest activity. Advice may be sought from DEC.
- ✓ Approval for flora harvesting should be for a set period, with a review of the impact and operation before renewal.
- ✓ Approval should also stipulate approved methods of harvesting, the species which may be harvested, and the quantity of material to be taken. Advice on harvest conditions may be obtained from DEC.

- ✓ Any flora removed should not affect the viability of the residual seed bank. It is recommended that no more than 20% of the flowers or seed on a plant should be taken, unless it is in an area that is scheduled to be cleared as part of road management.
- ✓ Methods of harvesting flora should not jeopardise the survival of the plant/tree, unless it is in an area that is scheduled to be cleared as part of road management.
- ✓ The removal of whole plants should be restricted to areas that are scheduled to be cleared as part of road management. Note, some species of flora such as zamia palms and grass trees cannot be removed for commercial purposes without a special endorsement on the Commercial Purposes Licence issued by DEC.
- ✓ No flora of special conservation concern (Declared Rare Flora or Priority Flora) should be removed without special authorisation through DEC.
- ✓ No commercial harvesting of any plant product should be allowed for any reason between the markers that delineate a Special Environmental Area.
- ✓ Flora harvesting should be prohibited from designated Flora Roads.
- ✓ Care should be taken that access to Dieback infected areas is limited to the drier months of the year, and vehicular access disallowed.
- ✓ Safety should always be of prime concern and every effort should be made to ensure that personal safety is a key consideration in any harvesting operation.
- ✓ Flora harvesters should not operate from the roadside in areas where the vegetation is close to the road, where vehicles cannot be safely parked off the road, or where there is poor driver visibility.

Appendix

7

Guidelines for the Nomination and Management of Flora Roads

Introduction

The Flora Roads program began as an initiative of the Roadside Conservation Committee (RCC), as a means of encouraging road managers to protect and conserve roadside vegetation of high conservation value. Flora Roads also highlight areas of high conservation flora as a tourist asset to local communities and are easily identified to passing travellers as areas worthy of an inspection to view the local flora.

The Roadside Conservation Committee has defined Flora Roads as "those roads which have conservation value owing to the vegetation growing within the reserve".

Principle Conservation Values of Flora Roads:

- The roadside must contain a significant population of native vegetation. Introduced trees and grasses are not important for conservation.
- The native vegetation must be in as near to its natural condition as possible. In undisturbed vegetation, several layers of plants occur – trees, shrubs and herbs are present in woodlands, for example. If one or more of the expected layers are missing, the conservation value is reduced.
- The roadside may be the only remaining example of original vegetation within a cleared area. It thus:
  - Assists in vegetation mapping and distribution studies
  - Provides a benchmark for study of soil change during agricultural development
  - Provides a source of local seed for revegetation projects
  - Acts as a wildlife habitat for the protection of fauna.
  - Rare or endangered plants may occur on the roadside.
  - May provide nest sites and refuges for native animals.
  - May act as a biological corridor.

Identification and Nomination of Flora Roads

The RCC has been coordinating a volunteer roadside survey program since 1989, which provides a list of high conservation value roads within many Shires in the agricultural areas of this state. These roadsides can be investigated further to see of they warrant declaration as a Flora Road. Nevertheless, roadsides that have not been surveyed may still be nominated.

Any person may suggest to the managing authority or to the RCC that a road, or a section of road fits the criteria of a Flora Road. However, only the managing authority in whom care, control and management of the road is vested can officially declare it a Flora Road.

A road may be nominated as a Flora Road by submitting a written request to the RCC.
The RCC requires the following information:

- Endorsement from the managing authority;
- Name of the road, LGA, and the road manager (MRWA, Local Government or DCLM);
- Distance of the proposed Flora Road; and
- Width of the road reserve.

The following information would also be useful:

- Photograph(s) of the road;
- A list of the dominant plant species;
- Threats (weeds, disturbances, etc).

This information will be stored in the RCC Flora Roads Register, a database which is maintained by the RCC Technical Officer (Mapping).

Establishment of a Flora Road

Given that only the managing authority can officially declare a road, or section of road as a Flora Road, it is important to have the support of the road manager.

The RCC will provide two Flora Road signs to the managing authority. The signs are in the tourist sign colours of white letters and symbols on a leaf brown background. It is the responsibility of the managing authority to erect the signs, and to provide signposts, auxiliary signs and carry out maintenance. One sign may be placed at each approach to the area.

Management Implications

A standard sign was developed by Main Roads WA in the late 1980's, a policy for the erection of Flora Road signage was developed shortly afterwards. See Appendix 1

Part16 of the RCC *Roadside Manual* details the establishment and management of Flora Roads. The RCC's *Guidelines for Managing Special Environment Areas in Transport Corridors* and the *Roadside Handbook* also provide information on Flora Road establishment.

The aim of all management should be to minimise any disturbance to the roadside flora, consistent with the provision of a safe and efficient roadway.

The managing authority will be expected to take into consideration the high conservation values present, and take special care when working within the Flora Road road reserve and the surrounding area. More specifically though;

- Council may choose to adopt a policy on Roadside Conservation.
- Environmental assessments (pre-construction checklists) should be completed prior to any upgrade work, to assist with planning for flora preservation.
- Fire Management should be undertaken in such a way so as to take into account the ecological needs of the flora.
- Where rehabilitation is contemplated, local native species should be used.

Tourism Implications

Declared Flora Roads will, by their very nature, be attractive to tourists, and would often be suitable as part of a tourist drive network. Consideration should be given to:

- Promoting the road by means of a small brochure or booklet;
- Eventually showing all Flora Roads on a map of the region or State;
- Using specially designed signs to delineate the Flora Road section; and
- Constructing roadside flora rest areas where people can get out and enjoy the flora. Walk trails could be made from these, and information brochures produced.

Flora Road Register

To ensure that knowledge of Flora Roads sites does not get lost, due perhaps to staff changes, the RCC has established a Flora Roads Register. Information pertaining to each Flora Road (i.e. road name, location, length, etc) will be stored in the Flora Roads database, and updated as necessary.

In order to plan roadworks so that these important areas of roadside vegetation are not disturbed, road managers should also know of these areas. Therefore, it is suggested that the Managing Authority (Shire, MRWA, DCLM) establish a *Register of Roads Important for Conservation* also. This register should be consulted prior to any works being initiated in the area.