

Roadside Vegetation and Conservation Values in the Shire of Katanning



Photo by C. Wilson

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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 Katanning. The report primarily provides detailed results of the roadside survey and is accompanied by management recommendations. It also briefly describes the natural environment in Katanning, legislative considerations and threats to conservation values.

Aware of the need to conserve roadside remnants, Katanning Landcare and local community members 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 December 2005 and again in October 2006. The majority (80%) of the Shire's non-urban roadsides were assessed by the RCC for their conservation status and maps were produced via a Geographic Information System (GIS). Roadside locations of seven nominated weeds were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 12.4% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 28.9%. Medium-low and low conservation value roadsides occupied 35.3% and 23.4%, 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 works 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 Katanning 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

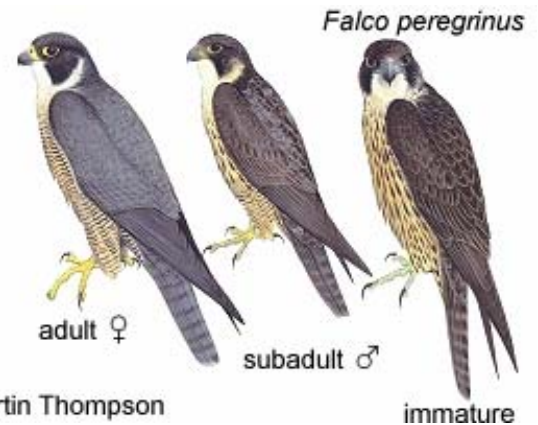
1.0 Why is Roadside Vegetation Important?

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.

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;



The Peregrine Falcon (*Falco peregrinus*) has been recorded in the Shire of Katanning.

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



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 designed 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 45 weed species in the Shire of Katanning (Appendix 4). The roadside survey recorded populations of seven significant weeds, and their locations were mapped by the RCC onto clear overlays. The seven nominated weeds were:

- Tagasaste (*Chamaecytisus palmensis*);
- Bridal Creeper (*Asparagus asparagoides*);
- Wild Radish (*Raphanus raphanistrum*) and Wild Turnip (*Brassica tournefortii*)
- Perennial Veldt Grass (*Ehrharta calycina*);
- Cape Tulip (*Moraea flaccida* and *Moraea miniata*); and
- African Lovegrass (*Eragrostis curvula*).



Tagasaste (*Chamaecytisus palmensis*) is a serious invader of disturbed bushlands and is found along roadsides in the Shire of Katanning

Photography by S.M. Armstrong. Photo used with the permission of the WA Herbarium, DEC
<http://florabase.dec.wa.gov.au/browse/photos/18156>.

Roadside populations of these weeds can be observed on the weed overlays provided with the Katanning Roadside Conservation Value map (2008). 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.



Bridal Creeper is a widespread weed, capable of invading native vegetation, smothering plants and threatening biodiversity.

Photography by J.P. Pigott & R.Randall. Photo used with the permission of the WA Herbarium, DEC

<http://florabase.dec.wa.gov.au/browse/photo/8779>



Wild radish can be a common weed in degraded roadsides, and is found throughout Katanning.

Photo by K. Jackson RCC



Photos: S.M. Armstrong

Perennial Veldt Grass (*Ehrharta calycina*) is an exotic weed species found along roadsides in the Shire of Katanning.

Photography by S.M. Armstrong. Photo used with the permission of the WA Herbarium, DEC
<http://florabase.calm.wa.gov.au/help/photos#reuse>



Eragrostis curvula

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

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>



Moraea flaccida

Photos: R. Knox & K.C. Richardson

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. Knox and K.C. Richardson. 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 5.99%, or 43.53km, of roads in the Shire of Katanning are potentially under threat from salinity (Table 1). The majority of these, 31.43 km, are local roads managed by the Shire.

Table 1. Road lengths potentially affected by salinity in the Shires of Katanning, Dumbleyung, Kent, Gnowangerup, Broomehill, Kojonup and Woodanilling

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

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
Katanning	726.37		31.43	5.08	7.03	43.53	5.99
Dumbleyung	1020.80		49.30	5.10	4.03	58.43	5.72
Kent	1,372.75		56.15	6.28	50.03	112.45	8.19
Gnowangerup	1230.93		30.55	2.98	19.70	53.23	4.32
Broomehill	505.73		6.13	0.83	3.93	10.88	2.15
Kojonup	1239.49	0.83	22.13	0.33	10.03	33.30	2.69
Woodanilling	504.96	0.83	21.63	1.83	8.38	32.65	6.47

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 legislation has been introduced under the *Environmental Protection Act 1986* which specifies that all clearing of native vegetation requires 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 ten 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 K. Jackson

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

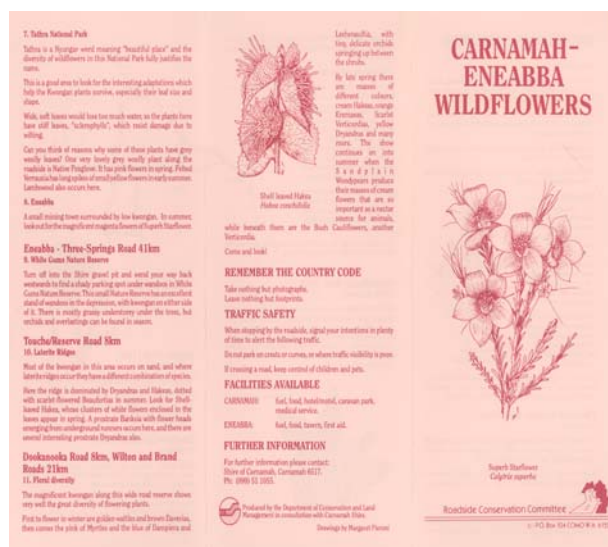
Although presently there are no Flora Roads designated within the Shire of Katanning, the roadside survey and the RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. These and other roads may be investigated further to see if they warrant a declaration as 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 KATANNING

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 300 species of native plants from the Shire of Katanning. The most prolific genera are *Acacia* 23 spp, *Eucalyptus* 22 spp, *Melaleuca* 20 spp, *Verticordia* 17 spp, and *Dryandra* 15 spp. The complete list of recorded flora can be seen in Appendix 4 of this report.



Dryandra armata subsp. *ignicida*

Photos: M. Pieroni

***Dryandra armata* subsp. *ignicida*, a native plant of the roadside flora in the Shire of Katanning.**

Photography by M. Pieroni. Photo used with the permission of the WA Herbarium, DEC <http://florabase.dec.wa.gov.au/browse/photo/16665>

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 Katanning. 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 October 2007), 3 locations of Priority flora are known to occur within roadsides in the Shire of Katanning. All of these sites occur in roadsides vested in the Shire of Katanning. In total, there are three species of Priority Flora that occur in these roadside locations in the Shire, these are:

Priority Flora

- *Melaleuca pritzelii*
- *Verticordia brevifolia* subsp. *brevifolia*
- *Verticordia huegelii* var. *tridens*

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.



***Verticordia brevifolia* subsp. *brevifolia* is a Priority 3 species found on the roadside in the Shire of Katanning. It flowers from October to November.**

Photography by E.A. Berndt and E.A. George. Photo used with the permission of the WA Herbarium, DEC
<http://florabase.calm.wa.gov.au/help/photos#reuse>

3.0 Fauna

The Western Australian Museum records approximately 119 species of fauna from the Katanning 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 Katanning area, there were 67 bird, 3 amphibia, 20 mammal, 2 fish and 27 reptile species.



The Reticulated Velvet Gecko can be found in Katanning

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

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.

A number of the fauna species recorded from Katanning are classified as endemic to the Wheatbelt region of Western Australia, or smaller regions within the State. For example, the Reticulated Velvet Gecko (*Oedura reticulata*) occurs only within the semi-arid southern interior from Buntine south to Woodanilling and Lake Grace, and was recorded by WA Museum in the Katanning area.

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), 16 species of threatened and priority fauna have been recorded or sighted throughout the Shire of Katanning, and these are listed below.

- **Red-tailed Phascogale (*Phascogale calura*)**

This arboreal marsupial seems to prefer dense woodland or tall shrubland with a continuous canopy and is most often associated with dense stands of rock she-oak and wandoo



The Red-tailed Phascogale (above) is classified as fauna that is rare or likely to become extinct.

- **Chuditch (*Dasyurus geoffroi*)**

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 such as woodland and shrubland where it shelters in hollow logs, tree hollows and burrows.

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

- **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.

- **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 construction of its nest mound.



The Malleefowl (above) is a vulnerable species that relies on remnant bushland for its survival. Image by MJ Bamford, and used with the permission of the WA Museum, FaunaBase (<http://www.museum.wa.gov.au/faunabase.htm>).

- **Western Rosella (*Platycercus icterotis xanthogenys*)**

This subspecies of the Western Rosella occurs in eucalypt and casuarina woodlands and scrubs, especially of Salmon Gums and tall mallees.

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

This species moves around seasonally in flocks to feeding areas in proteaceous shrubs and heaths and eucalypt woodlands as well as pine plantations. Breeding occurs in winter/spring, mainly in the eastern forests and wheatbelt where they can find mature hollow-bearing trees to nest in.

- **Crescent Naitail Wallaby (*Onychogalea lunata*)**

This species is presumed to be extinct. One individual was recorded in Katanning in 1896.

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

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

- **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.

- **Barking Owl (*Ninox connivens connivens*)**

This species inhabits forest and woodland and is becoming increasingly rare in the south-west. It preys on invertebrates and small mammals.

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

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

- **Western Mouse (*Pseudomys occidentalis*)**

This species occurs most frequently in areas of long unburnt vegetation on sandy clay or loam with a matrix of gravel. It is known to feed on the seeds of quandong (*Santalum acuminatum*) and various sedge species.

- **Australian Bustard (*Ardeotis australis*)**

This species is uncommon and may occur in open or lightly wooded grasslands.

- **Hooded Plover (*Charadrius rubricollis*)**

This species frequents the margins and shallows of salt lakes, also along coastal beaches, where it forages for invertebrates along the waters edge.

- **White-browed Babbler (western wheatbelt) (*Pomatostomus superciliosus ashbyi*)**

This species of bird lives in eucalypt forests and woodlands. It forages on or near the ground for insects and seeds.

4.0 Remnant Vegetation Cover

Only 11.2% of the original native vegetation remains in the Shire of Katanning 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. The remaining 11.2% of vegetation in the Shire of Katanning 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 Katanning and surrounding Shires (Shepherd, Beeston and Hopkins, 2001).

Shire	Total Area (ha)	Area Inside Ag. Clearing Line (ha)	Vegetation Cover Remaining (inside agricultural clearing line)	
			(ha)	(%)
Dumbleyung	253,816	253,816	24,003	9.5
Kent	575,537	575,537	154,315	26.8
Katanning	153,272	153,272	17,149	11.2
Gnowangerup	454,958	454,958	83,957	18.5
Broomehill	119,170	119,170	11,265	9.5
Kojonup	292,938	292,938	44,482	15.2
Woodanilling	111,769	111,769	14,367	12.9

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

KATANNING

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 'snapshot' 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 (574.72 km or ~80%) of the Shire of Katanning's non-urban roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of October, November and December 2005 and October 2006. The enthusiastic efforts of the roadside surveyors and the Katanning Landcare Staff ensured that this project was successfully completed.

The roadside surveyors were;

- Jill Richardson
- Ruth Adshead
- Lesley Trimming
- Des Plumb
- David Secomb
- Kathleen O'Brien
- Sue Cherry
- Phil Hogan
- Bushranger Cadets from Katanning Senior High School (Gemma Stephens, Tilly O'Brien, Charles O'Brien, Ben Mills, Steven Brookfield)

1.1 Methods


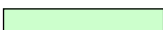

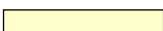
Roadside surveys are undertaken in a vehicle, generally with two people per vehicle. The passenger records the roadside attributes using the RCC's iPAQ hand-held personal computers. At the end of the survey, the iPAQs are returned to the RCC, where the survey information is analysed and mapped.

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 and;
- presence of 7 nominated weeds.

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 Katanning. 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 Katanning. 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 Katanning contains relatively intact, undisturbed and diverse remnant vegetation.

Photo by RCC.

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 by 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.

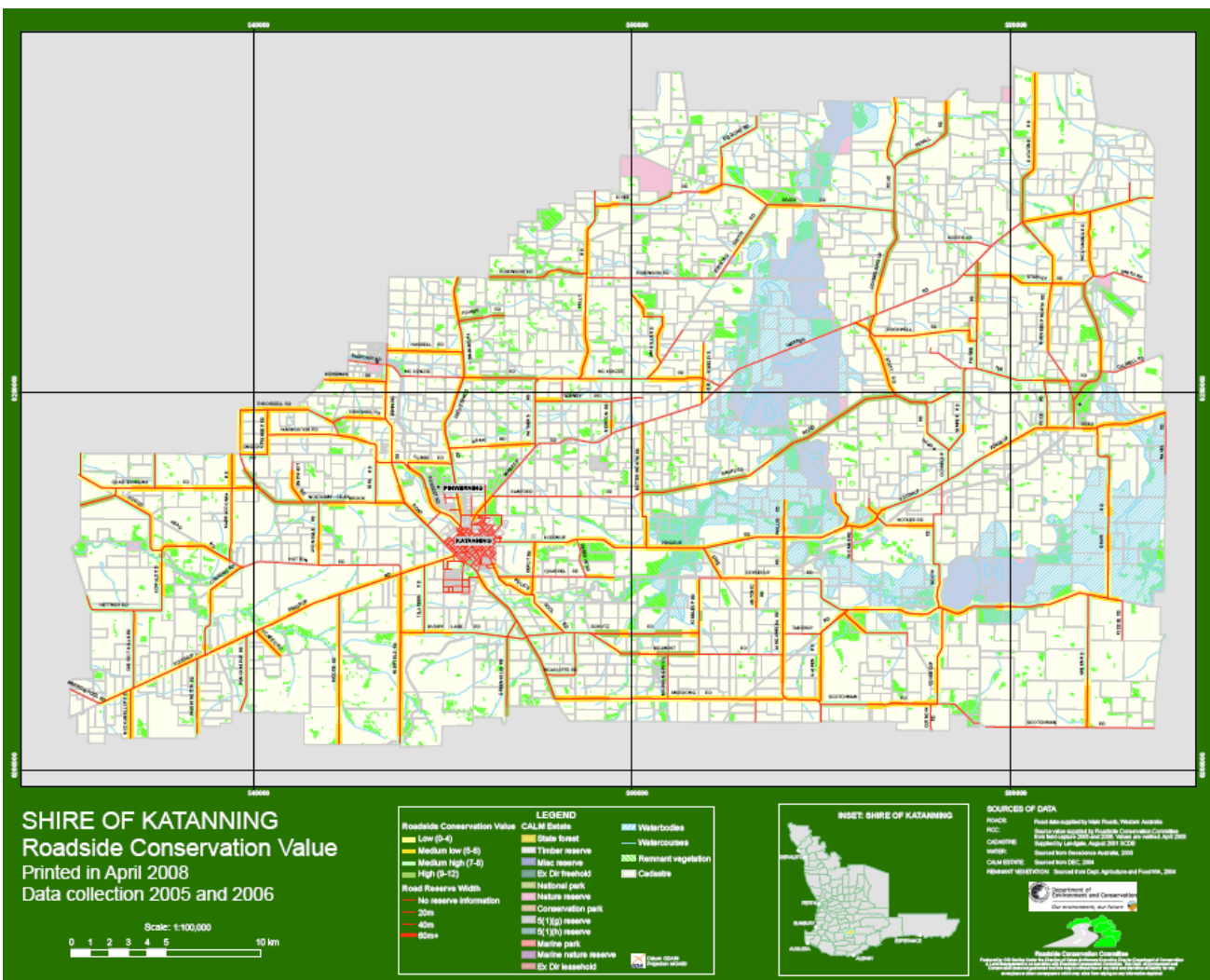
Photo by K. Jackson.

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 Katanning

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 Katanning 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 Katanning					
Length of roadsides surveyed: 1149.44 km (574.72 km of road)					
<u>Roadside Conservation Status</u>			<u>Roadside Conservation Values</u>		
	Total (km)	(%)	Score	Total (km)	(%)
High (9-12)	142.55	12.4	0	0	0.0
Medium-high (7-8)	332.6	28.9	1	20.75	1.8
Medium-low (5-6)	405.61	35.3	2	61.55	5.4
Low (0-4)	268.62	23.4	3	75.38	6.6
			4	110.94	9.7
Total	1149.4	100.0	5	201.92	17.6
			6	203.69	17.7
			7	188.53	16.4
			8	144.07	12.5
			9	89.45	7.8
			10	37.1	3.2
			11	12.2	1.1
			12	3.8	0.3
			Total	1149.4	100.0
<u>Native Vegetation in Roadsides</u>			<u>Width of Vegetated Roadside</u>		
	Total (km)	(%)		Total (km)	(%)
2-3 vegetation layers	472.4	41.1	1 to 5 m	953.7	83.0
1 vegetation layer	606.2	52.7	5 to 20 m	140.3	12.2
0 vegetation layers	70.8	6.2	Over 20 m	3.9	0.3
			Unknown	51.6	4.5
Total	1149.4	100.0	Total	1149.5	100.0
<u>Number of Native Plant Species</u>			<u>Extent of Native Vegetation</u>		
	Total (km)	(%)		Total (km)	(%)
Over 20 species	68.4	5.9	Over 80%	41.2	3.6
6 to 19 species	631.5	54.9	20% to 80%	795.1	69.2
0 to 5 species	449.5	39.2	Less than 20%	312.4	27.2
Total	1149.4	100.0	Total	1149.4	100.0
<u>Predominant Adjoining Land Use</u>			<u>Value as a Biological Corridor</u>		
	Total (km)	(%)		Total (km)	(%)
Agricultural: completely cleared	699.95	60.9	High	242.5	21.1
Agricultural: scattered vegetation	310.24	27.0	Medium	450.8	39.2
Uncleared native vegetation	84.35	7.3	Low	456.1	39.7
Drain	0.85	0.1	Total	1149.4	100.0
Plantation of non-natives	3	0.3			
Railway	19.61	1.7			
Urban or Industrial	1.7	0.1			
Other	29.73	2.6			
Total	1149.4	100.0			
<u>Weed Infestation</u>					
	Total (km)	(%)			
Light <20% weeds	213.4	18.5			
Medium 20-80% weeds	581.3	50.6			
Heavy >80% weeds	354.7	30.9			
Total	1149.4	100.0			
Roadside surveys were carried out in the Shire of Katanning in October-December 2005 and October 2006					

Table 3. Summary of results from the roadside survey in the Shire of Katanning.

Width of Road Reserve

The width of road reserves in the Shire of Katanning was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 539.86km (93.9%) of roads falling into this category. Of the remaining roads, 1.6km (0.28%) were less than 20 metres in width and 33.26km (5.82%) of road reserves were 40 metres wide.

Width of Road Reserve - Katanning		
	Total km	%
< 20 m	1.6	0.28
20 m	539.86	93.9
40 m	33.26	5.82
Total	574.72	100.0

Table 4. Width of road reserves in the Shire of Katanning.

Width of Vegetated Road Reserve

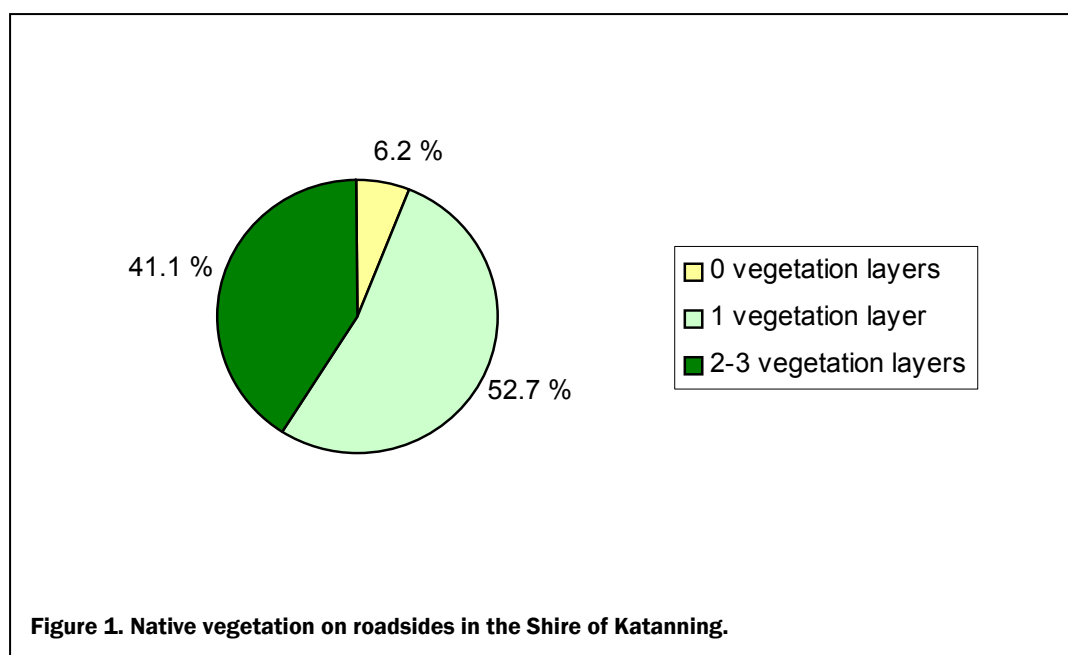
The width of vegetated roadside was recorded by selecting one of three categories, 1-5 metres, 5-20 metres or over 20 metres in width. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 953.65km (83.0%), was between 1 to 5 metres in width, followed by 140.33km (12.2%) of roadsides where the width of vegetation fell between 5 to 20 metres. Roadside vegetation over 20 metres in width spanned 3.9km (0.3%) of the roadsides surveyed, whilst the width was unknown for 51.56km (4.5%) of the roadsides surveyed.

Width of Vegetated Roadside - Katanning		
	Total km	%
1-5 m	953.65	83.0
5-20 m	140.33	12.2
Over 20 m	3.9	0.3
Unknown	51.56	4.5
Total	1149.44	100.00

Table 5. Width of vegetation on roadsides in the Shire of Katanning.

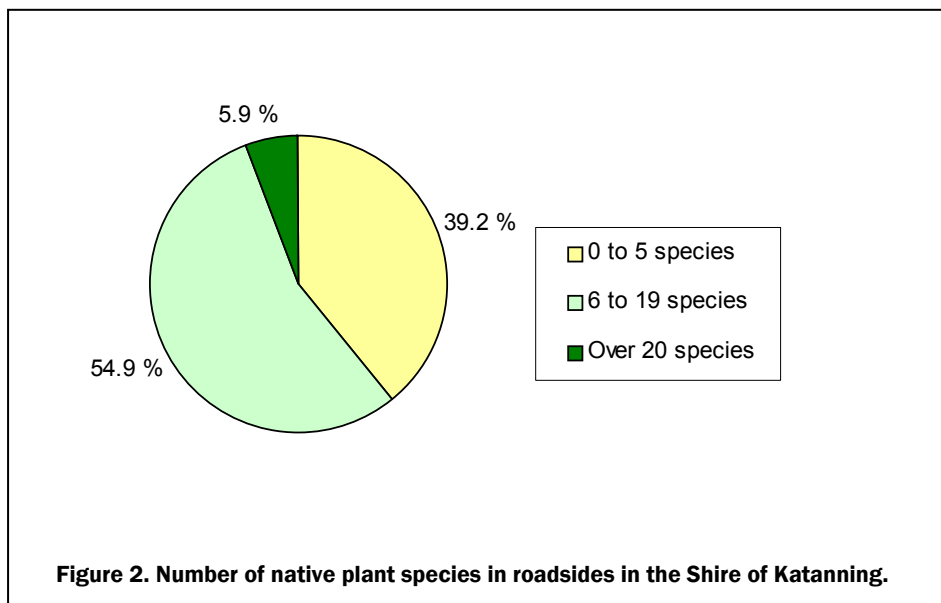
Native Vegetation Layers on Roadsides

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 41.1% of roadsides (472.4km), 52.7% (606.2km) of roadsides had only one layer and 6.2% (70.8km) had no layers of native vegetation (Table 3 and Figure 1).



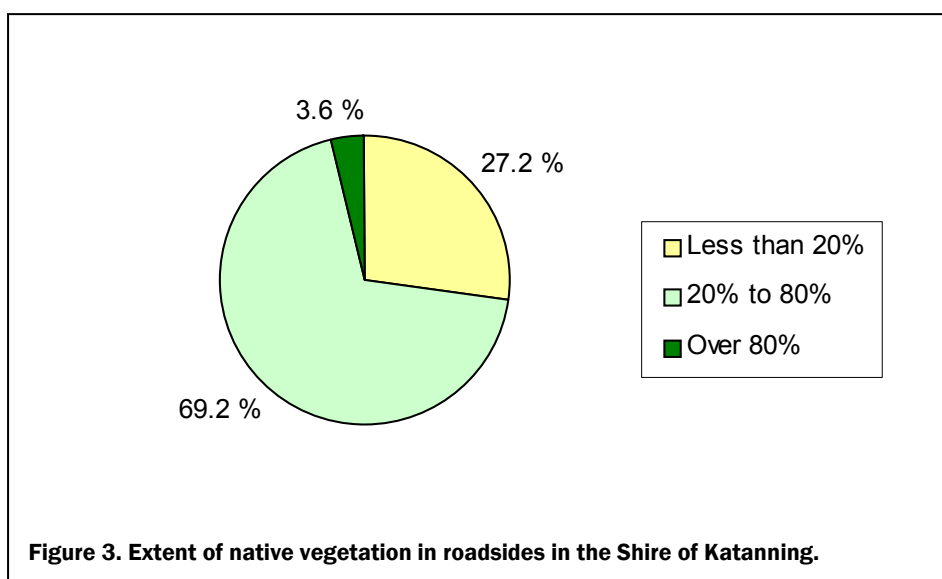
Number of Native Plant Species

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 5.9% (68.4km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 54.9% (631.5km) of the roadside, and 39.2% (449.5km) of roadsides contained 5 or less plant species (Table 3 and Figure 2).



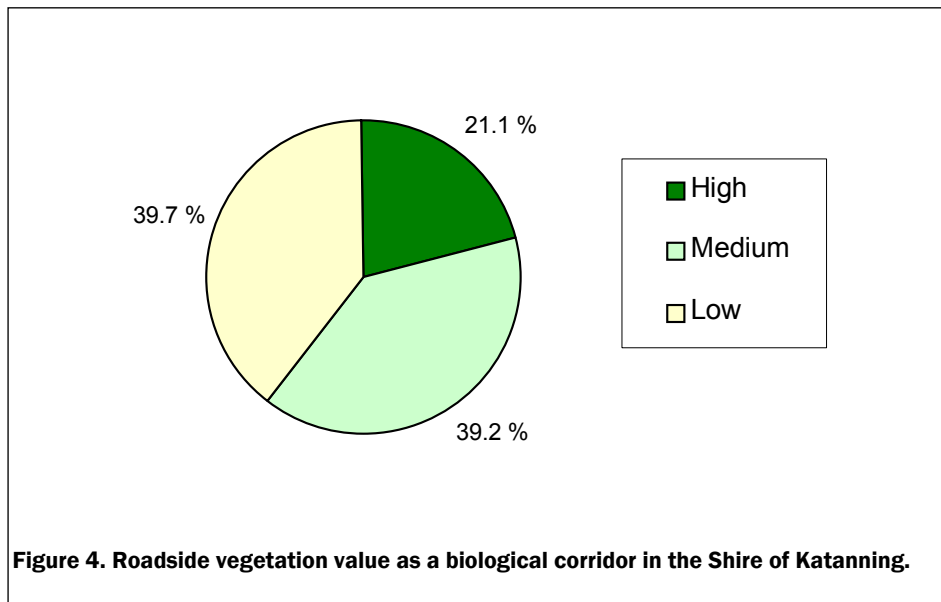
Extent of Native Vegetation

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 3.6% (41.2km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 69.2% (795.1km) of the roadsides. The remaining 27.2% (312.4km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and Figure 3).



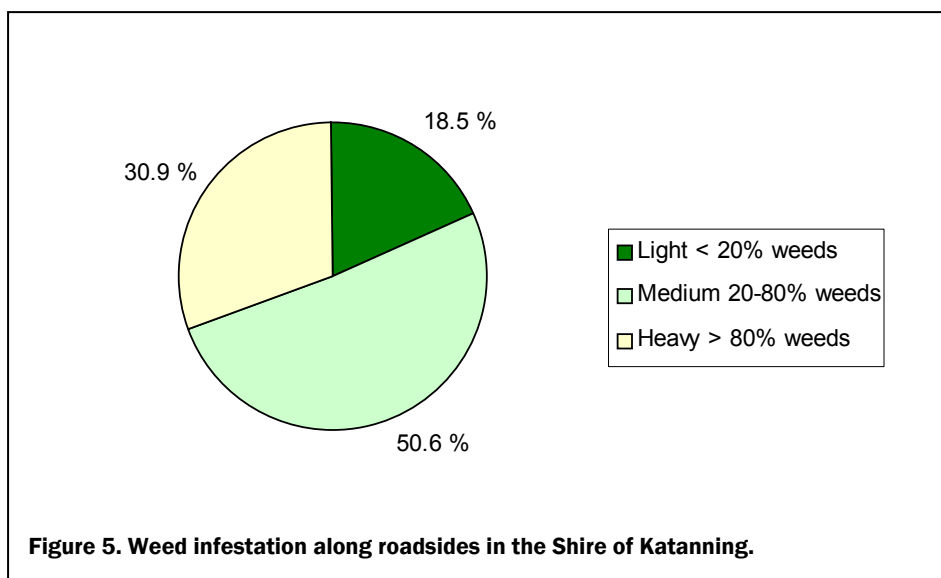
Value as a Biological Corridor

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 21.1% (242.5km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 39.2% (450.8km), and roadsides with low value as biological corridors occurred along 39.7% (456.1km) of the roadsides surveyed (Table 3 & Figure 4).



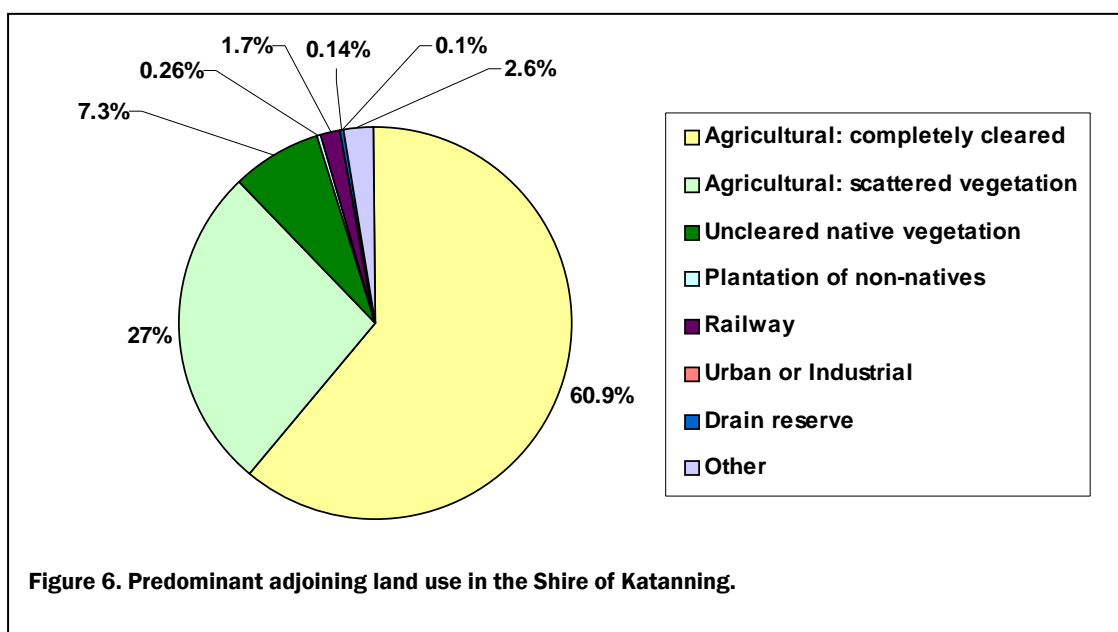
Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 18.5% (213.4km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 50.6% (581.3km) of the roadsides and 30.9% of roadsides (354.7km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 5).



Predominant Adjoining Land Use

Uncleared native vegetation was present on 7.3% (84.35km) of the land adjoining roadsides, whilst 60.9% (699.95km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, but containing a scattered distribution of native vegetation, comprised 27% (310.24km) of the roadsides. 1.7% (19.6km) of the roadsides bordered land that contained railway reserves, while 0.14% (1.7km) bordered urban or industrial land uses, and 0.26% (3km) were adjoined to plantations of non-native trees. Drain reserves were the adjoining land use for 0.1% (0.85km) of the roadsides surveyed and 'other' land uses were found adjacent to 2.6% (29.73km) of the roadsides (Table 3 and Figure 6).



Nominated Weeds

The Shire nominated six weeds / weed groups to be mapped. The location of each weed is depicted on clear overlays accompanying the Roadside Conservation Value map. The weeds are;

- Tagasaste (*Chamaecytisus palmensis*);
- Bridal Creeper (*Asparagus asparagoides*);
- Veldt Grass (Perennial) (*Ehrharta calycina*);
- Cape Tulip (*Moraea flaccida* and *Moraea miniata*);
- African Lovegrass (*Eragrostis curvula*); and
- Wild Radish (*Raphanus raphanistrum*) and Wild Turnip (*Brassica tournefortii*).

These weeds were only recorded as being present or absent in each roadside section. The density of weed infestations was not recorded and nor was there a separate recording for the left and right sides of the roads. Figure 7 displays the proportion of roads (expressed as a percentage of the total length of surveyed roads) that contain each weed. As such, this length provides a general indication of the extent of each weeds presence in the Shire's roadsides.

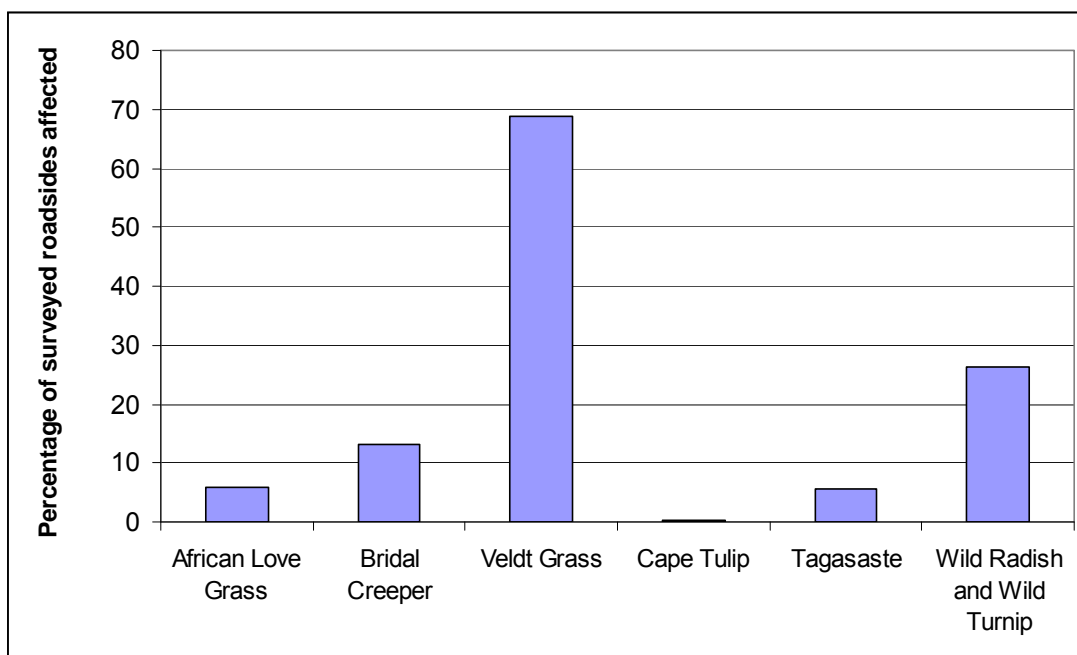


Figure 7. Percentage (by length) of surveyed roadsides affected by nominated weeds in the Shire of Katanning.

Of the nominated weeds species, Perennial Veldt Grass was the most prevalent, occurring along 69% of the roads surveyed. The next most commonly occurring weeds were Wild Radish and Wild Turnip, which were present along 26% of roads. This was followed by Bridal Creeper, which was present along 13% of roads, then African Lovegrass on 5.8% of roads, Tagasaste on 5.6% of roads and Cape Tulip on 0.2% of roads (Figure 7). The maps in Figure 8 indicate which roadside sections contained each weed.

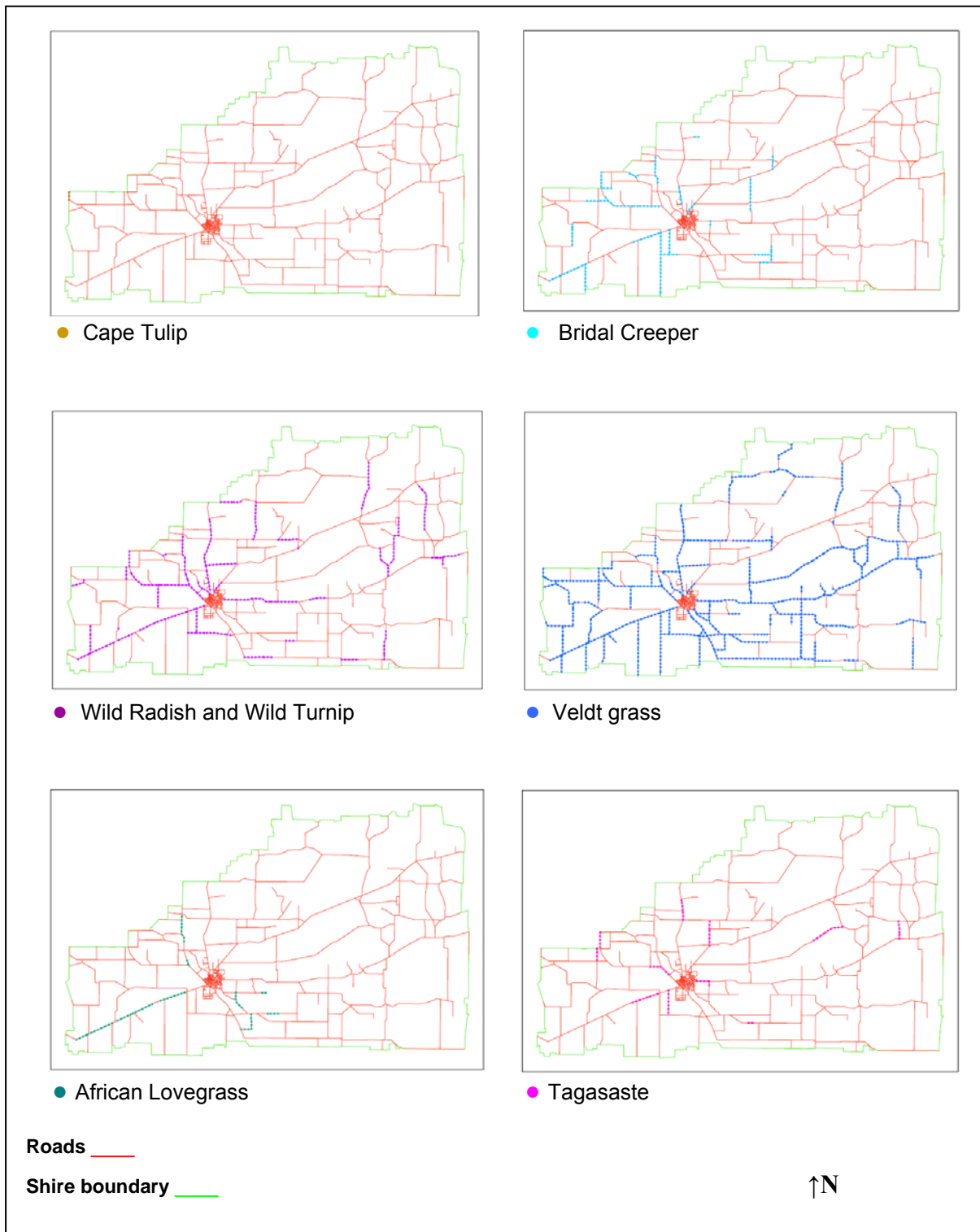
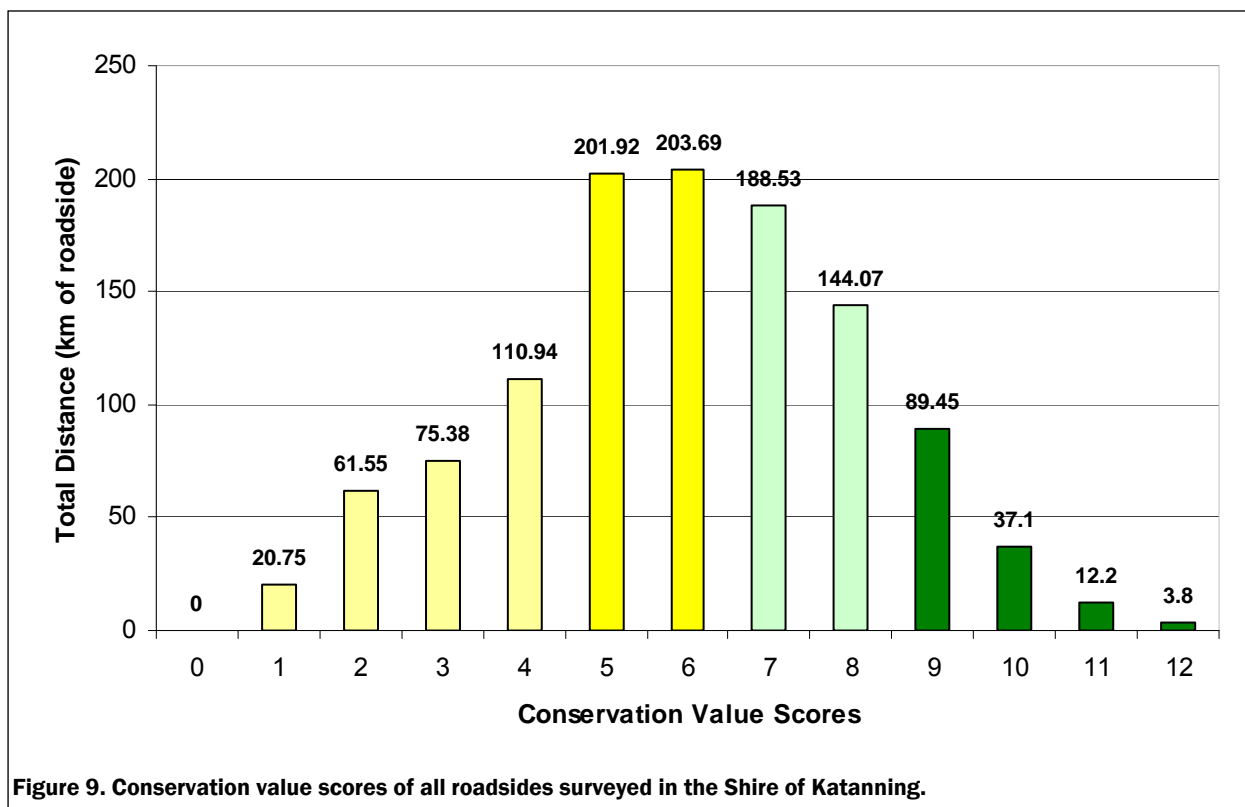


Figure 8. Spatial extent of nominated weeds on roadsides in the Shire of Katanning.

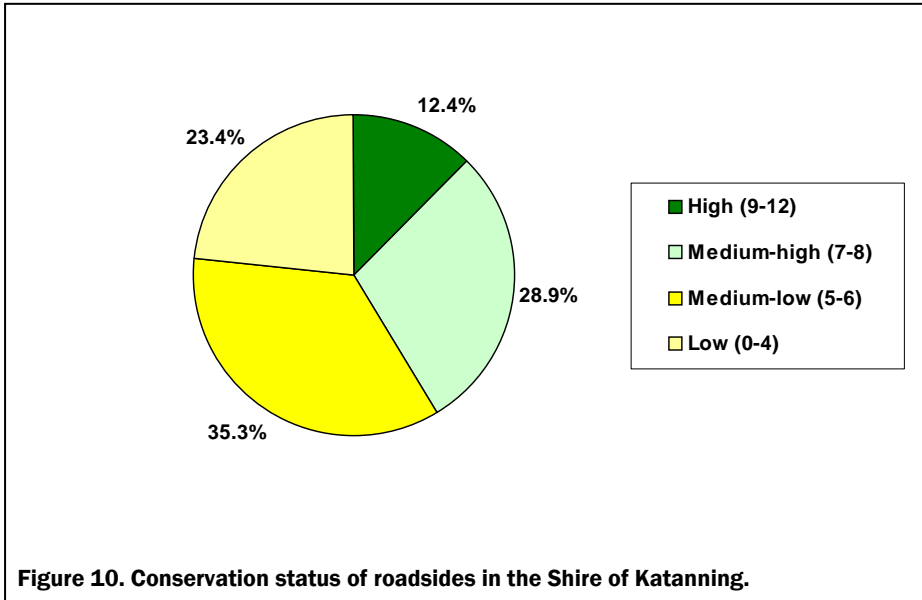
Conservation Value Scores

A selection of the preceding roadside attributes (Native Vegetation Layers, Number of Native Plant Species, Extent of Native Vegetation, Value as a Biological Corridor, Weed Infestation and Predominant Adjoining Land Use) were used to calculate Conservation Value Scores for each section of roadside surveyed. Scores range from 0 to 12, from lowest to highest conservation value respectively (Figure 9). The two most commonly occurring roadside conservation value scores were 5 and 6, with 35.3% (201.92km and 203.69km respectively) of roadsides recording these scores. Following this, 188.53km (16.4%) of roadsides recorded a score of 7, 144.07km (12.5%) recorded a score of 8, and 110.94km (9.7%) recorded a score of 4. A score of 9 covered 89.45km (7.8%) of roadsides, a score of 3 covered 75.38km (6.6%), and a score of 2 spanned 61.55km (5.4%). Roadsides with a score of 10 spanned 37.1km (3.2%), a score of 1 spanned 20.75km (1.8%), and the very high scores of 11 and 12 covered 1.4% (12.2 km and 3.8 km respectively) of roadsides.



Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Katanning. Roadside sections of high conservation value (scores of 9-12) covered 12.4% (142.5 km) of the roadsides surveyed. Medium-high conservation value roadsides (scores of 7 and 8) accounted for 28.9% of the total surveyed (332.6 km), medium-low conservation roadsides (scores of 5 and 6) covered 35.3% (405.6 km) of the total roadsides surveyed. Roadsides of low conservation value (score of 0-4) occupied 23.4% (268.62km) of the roadsides surveyed (Table 3 and Figure 10).



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).

Although presently there are no Flora Roads designated within the Shire of Katanning, the roadside survey and the 2007 RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. Roadsides, or large sections of roadsides, determined as having high conservation value in the Shire of Katanning include:

- Ranford Road
- Robinson Road
- Wolyaming Road
- Greenhills 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) 9334 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.

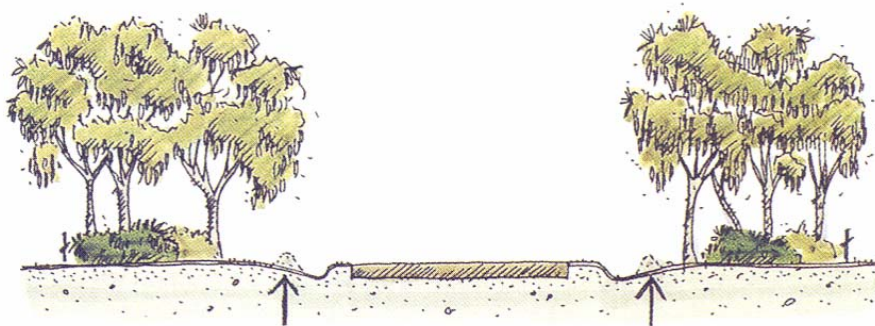
1.3 Improve roadside sections of medium to low conservation value by:

- 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.

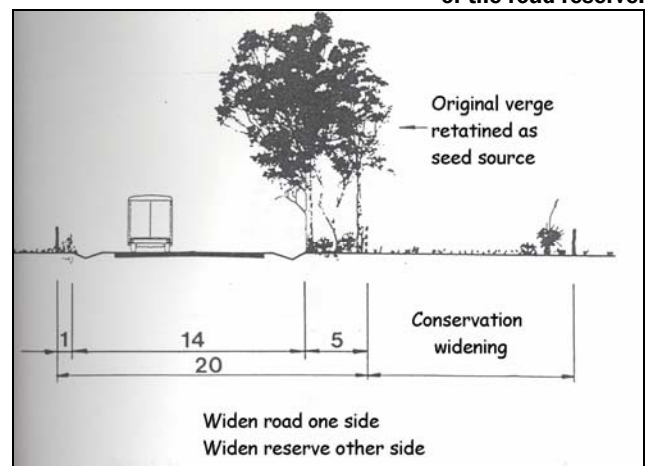


Avoid windrowing drain material into vegetation

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) 933402423.

4.0 Setting Objectives

The objective of all roadside management should be to:

- | | |
|---|--|
| <ul style="list-style-type: none">▪ Protect- native vegetation- rare or threatened flora or fauna- cultural and heritage values- community assets from fire | <ul style="list-style-type: none">▪ 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 |
| <ul style="list-style-type: none">▪ Maintain- safe function of the road- native vegetation communities- fauna habitats and corridors- visual amenity and landscape qualities- water quality | <ul style="list-style-type: none">▪ 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 _____ Section No. _____ Starting Point _____ Odometer reading _____ Ending Point _____ Odometer reading _____ Length of Section _____	<u>No. OF DIFFERENT NATIVE SPECIES</u> 0 – 5 <input type="checkbox"/> <input type="checkbox"/> 6 – 19 <input type="checkbox"/> <input type="checkbox"/> Over 20 <input type="checkbox"/> <input type="checkbox"/> <u>VALUE AS A BIOLOGICAL CORRIDOR</u> Connects uncleared areas <input type="checkbox"/> <input type="checkbox"/> Flowering shrubs <input type="checkbox"/> <input type="checkbox"/> Large trees with hollows <input type="checkbox"/> <input type="checkbox"/> Hollow logs <input type="checkbox"/> <input type="checkbox"/> <u>PREDOMINANT ADJOINING LANDUSE</u> Agricultural crop or pasture: - Completely cleared <input type="checkbox"/> <input type="checkbox"/> - Scattered <input type="checkbox"/> <input type="checkbox"/> Uncleared land <input type="checkbox"/> <input type="checkbox"/> Plantation of non-native trees <input type="checkbox"/> <input type="checkbox"/> Urban or Industrial <input type="checkbox"/> <input type="checkbox"/> Railway reserve parallel to road <input type="checkbox"/> <input type="checkbox"/> Drain reserve parallel to road <input type="checkbox"/> <input type="checkbox"/> Other: <input type="checkbox"/> <input type="checkbox"/> <u>UTILITIES</u> Utility Present <input type="checkbox"/> <input type="checkbox"/> Utility Absent <input type="checkbox"/> <input type="checkbox"/> Type: _____ <u>GENERAL WEEDS</u> Few weeds (<20% total plants) <input type="checkbox"/> <input type="checkbox"/> Half weeds (20 – 80% total) <input type="checkbox"/> <input type="checkbox"/> Mostly weeds (>80% total) <input type="checkbox"/> <input type="checkbox"/> Ground layer totally weeds <input type="checkbox"/> <input type="checkbox"/>	<u>NOMINATED WEEDS</u> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/>	
<u>WIDTH OF ROAD RESERVE (m)</u> _____ Side of the road Left Right <u>WIDTH OF VEGETATED ROADSIDE</u> 1 – 5 m <input type="checkbox"/> <input type="checkbox"/> 5 – 20 m <input type="checkbox"/> <input type="checkbox"/> Over 20m <input type="checkbox"/> <input type="checkbox"/> <u>NATIVE VEGETATION ON ROADSIDE</u> Tree layer <input type="checkbox"/> <input type="checkbox"/> Shrub layer <input type="checkbox"/> <input type="checkbox"/> Ground layer <input type="checkbox"/> <input type="checkbox"/> <u>EXTENT OF NATIVE VEGETATION ON ROADSIDE</u> Less than 20% <input type="checkbox"/> <input type="checkbox"/> 20 – 80% <input type="checkbox"/> <input type="checkbox"/> Over 80% <input type="checkbox"/> <input type="checkbox"/>	<u>UTILITIES</u> Utility Present <input type="checkbox"/> <input type="checkbox"/> Utility Absent <input type="checkbox"/> <input type="checkbox"/> Type: _____ <u>GENERAL WEEDS</u> Few weeds (<20% total plants) <input type="checkbox"/> <input type="checkbox"/> Half weeds (20 – 80% total) <input type="checkbox"/> <input type="checkbox"/> Mostly weeds (>80% total) <input type="checkbox"/> <input type="checkbox"/> Ground layer totally weeds <input type="checkbox"/> <input type="checkbox"/>	<hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> <20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> >80% total weeds <input type="checkbox"/> <input type="checkbox"/>	
		<u>NOMINATED WILDCARD</u> <u>OFFICE USE ONLY</u> Conservation value score <input type="checkbox"/> <input type="checkbox"/>	

Appendix

2

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
M021	1	16.59	20.39	3.80	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	0	1	0	0	0	0	0	2	2	0	4	2	VELDT_GRASS RADISH_AND_TURNIP BRIDAL_CREEPER AFRICAN_LOVEGRASS		
M021	2	20.39	23.19	2.80	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	0	0	0	0	0	0	0	0	0	1	1	1	1	VELDT_GRASS RADISH_AND_TURNIP AFRICAN_LOVEGRASS BRIDAL_CREEPER		
M021	3	23.19	24.29	1.10	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	1	0	0	1	0	1	1	1	1	5	4	VELDT_GRASS RADISH_AND_TURNIP BRIDAL_CREEPER AFRICAN_LOVEGRASS	
M021	4	24.29	24.59	0.30	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	1	1	0	1	0	2	0	0	2	6	4	VELDT_GRASS BRIDAL_CREEPER	
M021	5	24.59	25.09	0.50	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	2	1	2	1	1	0	1	0	2	1	0	1	8	4	VELDT_GRASS	
M021	6	25.09	27.49	2.40	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	2	1	1	0	0	0	1	1	1	1	6	4	VELDT_GRASS AFRICAN_LOVEGRASS RADISH_AND_TURNIP	
M021	7	27.49	28.49	1.00	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	1	0	0	0	0	1	1	1	1	4	4	VELDT_GRASS AFRICAN_LOVEGRASS	
M021	8	28.49	30.79	2.30	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	0	1	0	0	0	1	2	1	1	5	4	VELDT_GRASS RADISH_AND_TURNIP AFRICAN_LOVEGRASS	
M021	9	30.79	31.89	1.10	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	VELDT_GRASS RADISH_AND_TURNIP
M021	10	31.89	35.79	3.90	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	1	1	0	0	0	1	0	1	1	5	3	VELDT_GRASS TAGASASTE RADISH_AND_TURNIP AFRICAN_LOVEGRASS BRIDAL_CREEPER	
M021	11	35.79	37.29	1.50	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	1	1	1	0	0	0	0	0	2	0	2	1	6	2	VELDT_GRASS RADISH_AND_TURNIP	
M021	12	37.29	38.39	1.10	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	VELDT_GRASS RADISH_AND_TURNIP
M021	13	38.39	38.99	0.60	KOJONUP-PINGRUP RD	North East	19-Oct-06	cp	20	0	0	0	0	0	0	2	2	0	0	1	1	3	3		

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M021	14	42.18	43.99	1.81	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	0	0	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP TAGASASTE
M021	15	43.99	45.60	1.61	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	1	0	0	0	1	2	2	1	0	2	0	7	4	VELDT_GRASS RADISH_AND_TURNIP
M021	16	45.60	46.21	0.61	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	0	1	0	0	0	0	2	2	0	0	2	2	4	5	VELDT_GRASS RADISH_AND_TURNIP
M021	17	46.21	48.32	2.11	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	1	2	0	5	4	VELDT_GRASS RADISH_AND_TURNIP
M021	18	48.32	49.13	0.81	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	2	1	5	4	VELDT_GRASS RADISH_AND_TURNIP
M021	19	49.14	50.04	0.90	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	2	1	5	4	VELDT_GRASS RADISH_AND_TURNIP
M021	20	50.04	52.94	2.90	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	1	1	5	5	VELDT_GRASS RADISH_AND_TURNIP
M021	21	52.94	54.74	1.80	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	1	2	2	6	7	VELDT_GRASS
M021	22	54.74	55.14	0.40	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	0	2	0	5	4	VELDT_GRASS RADISH_AND_TURNIP
M021	23	55.14	55.74	0.60	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	1	1	0	0	2	2	0	1	2	2	6	7	VELDT_GRASS RADISH_AND_TURNIP
M021	24	55.74	57.24	1.50	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	0	1	0	0	0	0	2	2	0	0	1	1	3	4	VELDT_GRASS RADISH_AND_TURNIP
M021	25	57.24	58.04	0.80	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	1	2	4	5	VELDT_GRASS
M021	26	58.04	59.34	1.30	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	1	1	0	0	4	4	VELDT_GRASS
M021	27	59.34	60.14	0.80	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	1	1	4	4	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M021	28	60.14	60.84	0.70	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	0	1	1	4	5	VELDT_GRASS
M021	29	60.84	61.74	0.90	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	1	1	1	0	0	2	2	0	0	0	1	5	5	VELDT_GRASS
M021	30	61.74	63.34	1.60	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	1	1	2	2	0	0	0	1	5	6	VELDT_GRASS
M021	31	63.34	68.74	5.40	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	0	1	1	1	7	8	VELDT_GRASS
M021	32	68.74	69.34	0.60	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	1	1	1	1	8	8	VELDT_GRASS
M021	33	69.34	70.34	1.00	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	1	1	4	4	VELDT_GRASS
M021	34	70.34	70.54	0.20	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	1	1	5	5	VELDT_GRASS
M021	35	70.54	72.64	2.10	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	0	2	0	0	0	0	2	2	0	0	1	1	3	5	VELDT_GRASS
M021	36	72.64	73.84	1.20	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	1	1	1	1	5	5	VELDT_GRASS
M021	37	73.84	74.64	0.80	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	0	0	0	0	0	2	2	0	0	0	2	3	4	VELDT_GRASS RADISH_AND_TURNIP
M021	38	74.64	75.04	0.40	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	VELDT_GRASS RADISH_AND_TURNIP
M021	39	75.04	75.64	0.60	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	0	2	2	5	6	VELDT_GRASS RADISH_AND_TURNIP
M021	40	75.64	78.14	2.50	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	VELDT_GRASS RADISH_AND_TURNIP
M021	41	78.14	78.94	0.80	KOJONUP-PINGRUP RD	East	19-Oct-06	cw ra	20	1	1	1	1	0	0	2	2	0	0	1	2	5	6	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
M031	1	253.82	256.14	2.32	GREAT SOUTHERN HWY	South	24-Oct-05	jill	20	1	1	1	1	1	0	1	1	0	0	2	2	5	4	BRIDAL_CREEPER TAGASASTE RADISH_AND_TURNIP	
M031	2	257.14	257.34	0.20	GREAT SOUTHERN HWY	South	24-Oct-05	jill	20	1	2	1	2	1	2	1	1	0	2	2	0	6	9	VELDT_GRASS RADISH_AND_TURNIP	
M031	3	257.34	257.84	0.50	GREAT SOUTHERN HWY	South	24-Oct-05	jill	20	2	2	1	1	2	1	2	2	2	1	0	2	9	9	VELDT_GRASS RADISH_AND_TURNIP	
M031	4	257.84	262.34	4.50	GREAT SOUTHERN HWY	East	24-Oct-05	jill	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP	
M031	5	262.34	263.24	0.90	GREAT SOUTHERN HWY	East	24-Oct-05	jill	20	2	1	1	1	1	1	1	1	2	2	2	0	9	6	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP	
M031	6	263.24	264.84	1.60	GREAT SOUTHERN HWY	East	24-Oct-05	jill	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP	
M031	7	264.84	266.30	1.46	GREAT SOUTHERN HWY	East	24-Oct-05	jill	20	1	1	0	0	0	0	1	1	1	1	2	2	5	5	BRIDAL_CREEPER TAGASASTE VELDT_GRASS RADISH_AND_TURNIP	
M031	8	266.30	268.00	1.70	GREAT SOUTHERN HWY	South East	24-Oct-05	jill	40	2	2	0	1	1	1	1	1	1	1	1	0	1	5	7	RADISH_AND_TURNIP TAGASASTE VELDT_GRASS
M031	9	268.00	269.30	1.30	GREAT SOUTHERN HWY	South East	24-Oct-05	jill	40	2	2	1	1	1	1	1	1	1	1	1	1	1	7	7	RADISH_AND_TURNIP VELDT_GRASS
M031	10	271.52	271.92	0.40	GREAT SOUTHERN HWY	South East	07-Dec-05	jill	40	2	2	1	1	1	1	1	1	1	2	1	0	7	7	VELDT_GRASS	
M031	11	271.92	272.62	0.70	GREAT SOUTHERN HWY	South East	07-Dec-05	jill	40	2	2	1	1	1	1	1	1	0	0	1	1	6	6	VELDT_GRASS	
M031	12	272.62	272.92	0.30	GREAT SOUTHERN HWY	South East	07-Dec-05	jill	40	1	1	0	0	0	0	1	1	0	0	1	2	3	4	VELDT_GRASS	
M031	13	272.92	280.92	8.00	GREAT SOUTHERN HWY	South East	07-Dec-05	jill	40	2	2	1	1	1	1	1	1	2	2	1	2	8	9	VELDT_GRASS	
3080005	1	0.60	2.30	1.70	WARREN RD	East	26-Oct-05	GEMMA	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080005	2	34.90	37.40	2.50	WARREN RD	East	26-Oct-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	
3080005	3	37.40	38.45	1.05	WARREN RD	East	26-Oct-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	
3080005	4	38.45	40.42	1.97	WARREN RD	East	26-Oct-05	jill	20	1	1	1	1	1	1	1	1	1	0	2	2	7	6	
3080005	5	40.42	40.78	0.36	WARREN RD	East	26-Oct-05	jill	20	0	1	0	1	0	1	0	1	0	0	2	2	2	6	
3080005	6	40.78	41.64	0.86	WARREN RD	East	26-Oct-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
3080005	7	41.64	41.90	0.26	WARREN RD	East	26-Oct-05	jill	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
3080006	1	0.00	3.10	3.10	FAIRFIELD RD	South	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	BRIDAL_CREEPER VELDT_GRASS
3080006	2	3.10	8.70	5.60	FAIRFIELD RD	South	07-Nov-05	jill	20	1	2	1	1	1	1	1	1	0	0	1	1	5	6	BRIDAL_CREEPER VELDT_GRASS
3080006	3	8.70	9.20	0.50	FAIRFIELD RD	South	07-Nov-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	BRIDAL_CREEPER VELDT_GRASS
3080010	1	0.00	0.20	0.20	NOOKANELLUP RD	South	14-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	1	2	0	6	5	VELDT_GRASS BRIDAL_CREEPER
3080010	2	0.20	2.90	2.70	NOOKANELLUP RD	South	14-Nov-05	jill	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	VELDT_GRASS
3080011	1	0.00	1.00	1.00	GREENHILLS RD	West	07-Dec-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080011	2	1.00	3.00	2.00	GREENHILLS RD	South	07-Dec-05	jill	20	2	2	1	1	1	1	1	1	2	2	2	1	9	8	VELDT_GRASS
3080011	3	3.00	5.50	2.50	GREENHILLS RD	South	07-Dec-05	jill	20	2	2	1	1	1	1	1	1	2	2	2	1	9	8	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080012	1	0.00	2.30	2.30	WITHERS RD	North	25-Oct-05	lesley	20	1	1	2	2	1	1	1	1	2	1	1	1	8	7	TAGASASTE
3080012	2	2.30	3.60	1.30	WITHERS RD	North	25-Oct-05	lesley	20	1	1	1	1	1	1	1	1	2	1	2	2	8	7	TAGASASTE
3080013	1	0.00	4.10	4.10	PUNCHMIRUP RD	South	14-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS
3080014	1	0.00	0.20	0.20	TRIMMER RD	North	13-Oct-05	CP	40	0	0	0	0	0	0	0	0	0	0	2	1	2	1	VELDT_GRASS AFRICAN_LOVEGRASS
3080014	2	0.20	1.00	0.80	TRIMMER RD	North	13-Oct-05	CP	40	1	1	1	1	1	1	0	0	1	1	1	1	5	5	VELDT_GRASS AFRICAN_LOVEGRASS RADISH_AND_TURNIP
3080014	3	1.00	1.75	0.75	TRIMMER RD	North	13-Oct-05	CP	20	0	0	0	0	0	0	0	0	0	0	2	1	2	1	VELDT_GRASS RADISH_AND_TURNIP
3080014	4	1.75	3.50	1.75	TRIMMER RD	North	13-Oct-05	CP	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	RADISH_AND_TURNIP
3080014	5	3.50	6.65	3.15	TRIMMER RD	North	13-Oct-05	CP	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	BRIDAL_CREEPER AFRICAN_LOVEGRASS VELDT_GRASS RADISH_AND_TURNIP
3080014	6	6.65	7.55	0.90	TRIMMER RD	North	13-Oct-05	CP	20	2	1	1	1	1	1	1	0	2	1	1	2	8	6	BRIDAL_CREEPER AFRICAN_LOVEGRASS VELDT_GRASS RADISH_AND_TURNIP
3080015	1	0.00	1.40	1.40	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	VELDT_GRASS BRIDAL_CREEPER
3080015	2	1.40	3.50	2.10	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	1	1	1	1	1	1	1	1	0	1	1	6	5	VELDT_GRASS BRIDAL_CREEPER
3080015	3	3.50	4.00	0.50	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	0	1	0	0	0	1	0	0	0	1	1	4	1	VELDT_GRASS
3080015	4	4.00	5.50	1.50	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	1	1	1	1	1	1	1	1	0	1	1	6	5	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080015	5	5.50	6.70	1.20	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	VELDT_GRASS
3080015	6	6.70	7.70	1.00	QUARTERMAINE RD	West	19-Oct-05	jill	20	0	0	0	0	0	0	0	0	0	0	2	1	2	1	VELDT_GRASS
3080015	7	7.70	9.05	1.35	QUARTERMAINE RD	West	19-Oct-05	jill	20	0	0	0	0	0	0	0	0	0	1	2	1	2	2	VELDT_GRASS
3080015	8	9.05	9.30	0.25	QUARTERMAINE RD	West	19-Oct-05	jill	20	0	0	0	0	0	0	0	0	0	1	2	1	2	2	VELDT_GRASS
3080015	9	9.30	9.70	0.40	QUARTERMAINE RD	West	19-Oct-05	jill	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS
3080016	1	0.00	7.90	7.90	LANGAWEIRA RD	South	05-Nov-05	d secomb	20	1	1	1	1	1	1	0	0	1	1	2	1	6	5	VELDT_GRASS
3080016	2	7.90	8.70	0.80	LANGAWEIRA RD	South	05-Nov-05	d secomb	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS
3080016	3	8.70	10.75	2.05	LANGAWEIRA RD	East	05-Nov-05	d secomb	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	VELDT_GRASS
3080017	1	0.00	2.80	2.80	CHEVIOT HILLS RD	North	05-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS RADISH_AND_TURNIP
3080017	2	2.80	4.10	1.30	CHEVIOT HILLS RD	North	05-Nov-05	jill	20	2	1	1	1	1	1	1	1	1	1	1	1	7	6	VELDT_GRASS RADISH_AND_TURNIP
3080018	1	0.00	1.00	1.00	COOMELBERRUP RD	North	03-Dec-05	jill	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	
3080018	2	1.00	1.60	0.60	COOMELBERRUP RD	North	03-Dec-05	jill	20	1	1	1	1	0	0	1	1	0	0	1	2	4	5	VELDT_GRASS RADISH_AND_TURNIP
3080018	3	1.60	2.00	0.40	COOMELBERRUP RD	North	03-Dec-05	jill	20	1	1	0	0	1	1	0	0	1	1	2	2	5	5	VELDT_GRASS RADISH_AND_TURNIP
3080018	4	2.00	5.60	3.60	COOMELBERRUP RD	North	03-Dec-05	jill	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	VELDT_GRASS RADISH_AND_TURNIP

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080018	5	5.60	8.07	2.47	COOMELBERRUP RD	North	03-Dec-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP
3080018	6	8.07	8.64	0.57	COOMELBERRUP RD	North	03-Dec-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
3080018	7	8.64	9.91	1.27	COOMELBERRUP RD	North	03-Dec-05	jill	20	0	2	0	1	0	2	0	1	0	1	2	2	2	9	
3080018	8	9.91	11.18	1.27	COOMELBERRUP RD	North	03-Dec-05	jill	20	1	2	0	1	0	1	0	1	0	0	2	2	3	7	
3080018	9	11.18	11.95	0.77	COOMELBERRUP RD	North	03-Dec-05	jill	20	1	2	0	1	0	1	0	0	1	1	1	1	3	6	
3080019	1	0.00	1.50	1.57	WASHINGTON RD	South	14-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	BRIDAL_CREEPER VELDT_GRASS
3080019	2	1.50	4.60	3.17	WASHINGTON RD	South	14-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	2	1	1	6	7	BRIDAL_CREEPER VELDT_GRASS
3080023	1	0.00	0.80	0.80	BADGEBUP NORTH RD	North	08-Dec-05	jill	20	2	2	1	1	1	2	1	1	1	2	2	0	8	8	
3080023	2	0.80	1.53	0.73	BADGEBUP NORTH RD	North	08-Dec-05	jill	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3080023	4	4.47	10.47	6.00	BADGEBUP NORTH RD	North	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	0	1	2	2	2	4	5	VELDT_GRASS RADISH_AND_TURNIP
3080023	5	10.47	11.27	0.80	BADGEBUP NORTH RD	North	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	VELDT_GRASS RADISH_AND_TURNIP
3080023	6	11.27	11.94	0.70	BADGEBUP NORTH RD	North	19-Oct-06	cw ra	20	2	1	1	1	1	2	2	1	1	2	2	9	8		
3080024	1	0.00	2.90	2.90	MURDONG RD	East	05-Nov-05	d secomb	40	1	1	1	1	1	1	0	0	1	0	2	2	6	5	RADISH_AND_TURNIP VELDT_GRASS
3080024	2	2.90	4.20	1.30	MURDONG RD	East	05-Nov-05	d secomb	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	RADISH_AND_TURNIP VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080024	3	4.20	12.16	7.96	MURDONG RD	East	05-Nov-05	d secomb	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	VELDT_GRASS
3080025	1	0.00	2.70	2.70	DATATINE RD	North	08-Dec-05	jill	20	2	2	1	1	2	2	2	2	1	1	2	2	10	10	
3080025	2	2.70	3.10	0.40	DATATINE RD	North	08-Dec-05	jill	20	1	1	0	0	1	1	0	0	1	1	2	2	5	5	
3080025	3	3.10	7.10	4.00	DATATINE RD	North	08-Dec-05	jill	20	2	2	1	1	1	1	1	1	0	0	1	1	6	6	
3080025	4	7.10	8.30	1.20	DATATINE RD	North	08-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	
3080026	1	0.00	0.40	0.40	SHAW RD	South	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS RADISH_AND_TURNIP
3080026	2	0.40	1.14	0.74	SHAW RD	South	19-Oct-06	cw ra	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS RADISH_AND_TURNIP
3080026	3	1.14	1.88	0.74	SHAW RD	South	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	2	1	2	2	8	7	VELDT_GRASS
3080026	4	1.88	2.82	0.94	SHAW RD	South	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	1	0	2	2	9	8	VELDT_GRASS
3080026	5	2.82	3.26	0.44	SHAW RD	South	19-Oct-06	cw ra	20	1	1	1	1	0	0	2	2	0	2	1	1	5	7	VELDT_GRASS
3080026	6	3.26	3.60	0.34	SHAW RD	South	19-Oct-06	cw ra	20	2	2	0	0	1	1	2	2	0	0	2	1	7	6	VELDT_GRASS
3080026	7	3.60	4.84	1.24	SHAW RD	South	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	0	1	1	4	5	
3080026	8	4.84	5.28	0.44	SHAW RD	South	19-Oct-06	cw ra	20	1	0	0	0	0	0	2	2	0	0	2	1	5	3	
3080026	9	5.28	6.32	1.04	SHAW RD	South	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	0	0	2	1	8	7	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080026	10	6.32	7.26	0.94	SHAW RD	South	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	1	1	5	5	
3080026	11	7.26	9.80	2.54	SHAW RD	South	19-Oct-06	cw ra	20	2	2	0	0	0	0	0	0	0	0	1	1	3	3	
3080033	1	0.78	1.23	0.45	THROSSELL RD	West	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	BRIDAL_CREEPER RADISH_AND_TURNIP VELDT_GRASS
3080033	2	1.23	2.28	1.05	THROSSELL RD	West	07-Nov-05	jill	20	2	2	1	1	1	1	1	1	1	2	1	0	7	7	BRIDAL_CREEPER
3080033	3	2.28	4.53	2.25	THROSSELL RD	West	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	
3080033	4	4.53	5.98	1.45	THROSSELL RD	West	07-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	1	2	2	5	6	
3080034	1	0.00	1.90	1.90	ROBINSON RD	East	25-Oct-05	kathleen	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	RADISH_AND_TURNIP
3080034	2	1.90	2.40	0.50	ROBINSON RD	East	25-Oct-05	kathleen	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	RADISH_AND_TURNIP
3080034	3	2.40	3.20	0.80	ROBINSON RD	East	25-Oct-05	kathleen	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	RADISH_AND_TURNIP
3080034	4	3.20	3.70	0.50	ROBINSON RD	East	25-Oct-05	kathleen	20	1	1	1	1	1	1	2	2	0	1	2	0	7	6	
3080034	5	3.70	4.90	1.20	ROBINSON RD	East	25-Oct-05	kathleen	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	
3080034	6	4.90	5.30	0.40	ROBINSON RD	East	25-Oct-05	kathleen	20	2	2	1	1	1	2	1	2	2	2	0	0	7	9	
3080035	1	0.00	1.20	1.20	COYRECUP NORTH RD	South	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP
3080035	2	1.20	1.90	0.70	COYRECUP NORTH RD	South	31-Oct-05	steven	20	2	1	1	0	0	0	1	0	1	0	2	2	7	3	VELDT_GRASS RADISH_AND_TURNIP

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080035	3	1.90	4.70	2.80	COYRECUP NORTH RD	South	31-Oct-05	steven	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP
3080036	1	0.00	0.40	0.40	CARROLUP RIVER RD	South	05-Nov-05	jill	20	1	0	0	0	0	0	0	0	0	0	2	2	3	2	VELDT_GRASS RADISH_AND_TURNIP
3080036	2	0.40	2.30	1.90	CARROLUP RIVER RD	West	05-Nov-05	jill	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS RADISH_AND_TURNIP
3080039	1	2.50	5.80	3.30	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	
3080039	2	5.80	7.10	1.30	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	0	1	1	2	1	0	0	1	0	0	0	0	0	4	2	
3080039	3	7.10	8.40	1.30	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	20	1	1	1	1	0	0	2	2	0	0	0	0	4	4	
3080039	4	8.40	10.40	2.00	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	RADISH_AND_TURNIP
3080039	5	10.40	11.70	1.30	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	20	2	2	0	0	1	1	0	0	1	0	0	2	4	5	RADISH_AND_TURNIP
3080039	6	11.70	12.20	0.50	COYRECUP SOUTH RD	South	13-Nov-05	d secpmb	20	2	2	1	1	2	2	0	0	1	0	2	2	7	7	RADISH_AND_TURNIP
3080041	1	4.40	5.27	0.87	MC KENZIE RD	East	03-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	VELDT_GRASS
3080041	2	5.27	6.34	1.07	MC KENZIE RD	East	03-Dec-05	jill	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	VELDT_GRASS
3080041	3	6.34	8.21	1.87	MC KENZIE RD	East	03-Dec-05	jill	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	VELDT_GRASS
3080041	4	8.21	10.48	2.27	MC KENZIE RD	East	03-Dec-05	jill	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3080041	5	10.48	11.45	0.97	MC KENZIE RD	East	03-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	0	1	4	5	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080041	6	11.45	13.72	2.27	MC KENZIE RD	East	03-Dec-05	jill	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	VELDT_GRASS
3080041	7	13.72	14.09	0.37	MC KENZIE RD	East	03-Dec-05	jill	20	2	2	1	1	1	1	2	2	1	1	1	1	8	8	VELDT_GRASS
3080041	8	14.09	17.10	3.01	MC KENZIE RD	East	03-Dec-05	jill	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	VELDT_GRASS RADISH_AND_TURNIP
3080043	1	9.60	10.60	1.00	HUTTON RD	North	26-Oct-05	jill	20	1	2	1	1	0	1	1	1	1	2	2	2	5	7	VELDT_GRASS
3080043	2	10.60	11.70	1.10	HUTTON RD	North	26-Oct-05	jill	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	VELDT_GRASS
3080043	3	11.70	12.00	0.30	HUTTON RD	North	26-Oct-05	jill	20	2	2	1	1	1	1	1	1	0	1	1	0	6	6	
3080043	4	12.00	12.60	0.60	HUTTON RD	North	26-Oct-05	jill	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	
3080043	5	12.60	13.60	1.00	HUTTON RD	North	26-Oct-05	jill	20	1	1	1	1	1	1	1	1	1	0	0	1	5	5	VELDT_GRASS
3080045	1	0.00	2.27	2.27	WOLYAMING RD	North East	08-Dec-05	jill	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3080045	2	2.27	3.87	1.60	WOLYAMING RD	North	08-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	
3080045	3	3.87	4.67	0.80	WOLYAMING RD	North	08-Dec-05	jill	20	2	2	1	1	2	2	2	2	2	2	0	2	9	11	
3080045	4	4.67	5.27	0.60	WOLYAMING RD	North	08-Dec-05	jill	20	2	2	1	2	2	2	1	1	2	2	2	0	10	9	
3080045	5	5.27	7.17	1.90	WOLYAMING RD	North	08-Dec-05	jill	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	
3080045	6	7.17	7.77	0.60	WOLYAMING RD	North	08-Dec-05	jill	20	1	2	1	1	1	1	1	1	1	2	2	0	7	7	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080045	7	7.77	10.37	2.60	WOLYAMING RD	North	08-Dec-05	jill	20	1	1	1	1	1	1	1	0	0	2	2	6	6		
3080045	8	10.37	11.37	1.00	WOLYAMING RD	North	08-Dec-05	jill	20	1	1	1	1	1	1	1	0	0	2	2	6	6		
3080047	1	0.00	2.00	2.00	FLUGEE RD	North	19-Oct-06	cw ra	20	2	1	1	1	1	2	2	0	0	2	2	8	7	RADISH_AND_TURNIP	
3080047	2	2.00	2.60	0.60	FLUGEE RD	North	19-Oct-06	cw ra	20	0	0	0	0	0	0	0	0	0	2	2	2	2	RADISH_AND_TURNIP	
3080047	3	2.60	3.50	0.90	FLUGEE RD	North	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	1	1	2	2	4	4		
3080047	4	3.50	4.60	1.10	FLUGEE RD	North	19-Oct-06	cw ra	20	2	2	1	1	1	2	2	1	1	2	2	9	9		
3080047	5	4.60	5.60	1.00	FLUGEE RD	North	19-Oct-06	cw ra	20	2	2	1	1	1	2	2	1	1	2	2	9	9		
3080051	1	8.00	10.84	2.84	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS	
3080051	2	10.84	11.04	0.20	RANFORD RD	East	31-Oct-05	ben	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	VELDT_GRASS
3080051	3	11.04	11.64	0.60	RANFORD RD	East	31-Oct-05	ben	20	1	1	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS	
3080051	4	11.64	13.64	2.00	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS	
3080051	5	13.64	14.04	0.40	RANFORD RD	East	31-Oct-05	ben	20	0	1	0	0	0	0	0	0	0	2	2	2	3	VELDT_GRASS	
3080051	6	14.04	14.64	0.60	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	1	0	0	2	2	7	7	VELDT_GRASS	
3080051	7	14.64	15.14	0.50	RANFORD RD	East	31-Oct-05	ben	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080051	8	15.14	15.24	0.10	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	VELDT_GRASS
3080051	9	15.24	15.44	0.20	RANFORD RD	East	31-Oct-05	ben	20	1	1	1	1	1	1	0	0	0	0	2	2	5	5	VELDT_GRASS
3080051	10	15.44	16.50	1.06	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	VELDT_GRASS
3080051	11	16.50	17.20	0.70	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	VELDT_GRASS
3080051	12	17.20	18.00	0.80	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS
3080051	13	18.00	18.60	0.60	RANFORD RD	East	31-Oct-05	ben	20	2	2	2	2	2	2	1	1	2	2	2	2	11	11	VELDT_GRASS TAGASASTE
3080051	14	18.60	19.90	1.30	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	VELDT_GRASS TAGASASTE
3080051	15	19.90	22.80	2.90	RANFORD RD	East	31-Oct-05	ben	20	2	2	1	1	2	2	2	2	2	2	2	2	11	11	VELDT_GRASS TAGASASTE
3080051	16	22.80	24.20	1.40	RANFORD RD	East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS
3080051	17	24.20	24.70	0.50	RANFORD RD	East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS
3080051	18	24.70	25.10	0.40	RANFORD RD	East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080051	19	25.10	25.40	0.30	RANFORD RD	East	31-Oct-05	tilly	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS
3080051	20	25.40	26.70	1.30	RANFORD RD	East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080053	1	0.00	0.60	0.60	STOTT RD	South	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	0	1	0	2	6	9	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080053	2	0.60	0.80	0.20	STOTT RD	South	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	2	2	6	6	VELDT_GRASS
3080053	3	0.80	1.10	0.30	STOTT RD	South	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	0	0	3	3	VELDT_GRASS
3080053	4	1.10	4.72	3.62	STOTT RD	South	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	1	1	2	2	6	6	
3080058	1	1.20	1.60	0.40	TEE RD	West	19-Oct-06	cw ra	20	2	0	0	0	0	0	2	2	1	1	0	2	5	5	VELDT_GRASS
3080058	2	1.60	2.50	0.90	TEE RD	West	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	VELDT_GRASS
3080058	3	2.50	3.10	0.60	TEE RD	West	19-Oct-06	cw ra	20	1	1	1	1	0	0	0	0	0	0	2	1	4	3	VELDT_GRASS
3080058	4	3.10	6.20	3.10	TEE RD	West	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	2	2	2	2	7	8	VELDT_GRASS
3080063	1	0.00	1.20	1.20	BELMONT RD	East	24-Oct-05	des	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080063	2	1.20	1.90	0.70	BELMONT RD	East	24-Oct-05	des	20	1	0	0	0	0	0	0	0	0	0	1	1	2	1	VELDT_GRASS
3080063	3	1.90	3.00	1.10	BELMONT RD	East	24-Oct-05	des	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	VELDT_GRASS
3080063	4	3.00	3.90	0.90	BELMONT RD	East	24-Oct-05	des	20	1	1	0	0	0	0	1	1	1	1	1	1	4	4	VELDT_GRASS TAGASASTE
3080063	5	3.90	4.50	0.60	BELMONT RD	East	24-Oct-05	des	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	VELDT_GRASS
3080063	6	4.50	5.90	1.40	BELMONT RD	East	24-Oct-05	des	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	VELDT_GRASS BRIDAL_CREEPER RADISH_AND_TURNIP
3080063	7	5.90	6.15	0.25	BELMONT RD	East	24-Oct-05	des	20	2	0	0	0	0	0	1	0	0	0	2	2	5	2	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080067	1	1.32	2.02	0.70	KIBBLEUP RD	South	19-Oct-06	lesley	20	2	1	1	1	0	0	1	1	1	0	2	2	7	5	VELDT_GRASS
3080067	2	2.02	2.62	0.60	KIBBLEUP RD	South	19-Oct-06	lesley	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3080067	3	2.62	2.92	0.30	KIBBLEUP RD	South	19-Oct-06	lesley	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3080067	4	2.92	3.42	0.50	KIBBLEUP RD	South	19-Oct-06	lesley	20	2	2	1	1	1	1	2	1	1	0	2	2	9	7	BRIDAL_CREEPER
3080067	5	3.42	3.72	0.30	KIBBLEUP RD	South	19-Oct-06	lesley	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	BRIDAL_CREEPER
3080067	6	3.72	5.32	1.60	KIBBLEUP RD	South	19-Oct-06	lesley	20	2	2	1	1	1	0	1	1	1	2	2	2	8	8	BRIDAL_CREEPER
3080069	1	0.00	1.64	1.64	LAKE COYRECUP RD	South East	06-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	0	1	2	2	6	7	VELDT_GRASS
3080069	2	1.64	2.28	0.64	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	1	1	1	1	1	1	0	0	0	0	1	2	4	5	VELDT_GRASS
3080069	3	2.28	5.29	3.01	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	1	1	0	0	0	0	1	1	0	0	2	2	3	4	VELDT_GRASS
3080069	4	5.29	9.80	4.51	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080069	5	9.80	10.74	0.94	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	2	2	1	1	0	1	0	1	0	1	2	0	5	6	VELDT_GRASS
3080069	6	10.74	11.38	0.64	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	1	2	1	1	0	1	0	1	0	0	2	2	4	7	VELDT_GRASS
3080069	7	11.38	12.42	1.04	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	1	1	0	0	0	0	1	1	0	0	0	0	2	2	VELDT_GRASS
3080069	8	12.42	12.86	0.44	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	2	2	1	1	1	1	1	0	0	0	1	2	6	6	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080069	9	12.86	14.10	1.24	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	1	1	0	1	0	1	1	0	0	0	2	2	4	5	VELDT_GRASS
3080069	10	14.10	15.12	1.02	LAKE COYRECUP RD	East	06-Nov-05	d secomb	20	0	2	0	1	0	0	2	0	0	0	2	2	2	3	
3080069	11	15.12	15.50	0.38	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	1	0	0	0	5	4	
3080069	12	15.50	16.37	0.87	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	1	2	5	6	
3080069	13	16.37	16.85	0.48	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	1	0	1	2	5	5	
3080069	14	16.85	18.30	1.45	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	1	1	1	2	8	9	
3080069	15	18.30	18.65	0.35	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	2	1	0	0	2	2	0	0	0	1	6	6	
3080069	16	18.65	18.72	0.07	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	0	0	2	2	1	1	1	1	7	7	
3080069	17	18.72	19.19	0.47	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	2	2	0	0	1	0	4	3	
3080069	18	19.19	19.75	0.56	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	0	0	2	2	1	1	2	2	8	8	
3080069	19	19.75	20.81	1.06	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	2	2	0	2	8	10	
3080069	20	20.81	21.68	0.87	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	0	0	0	0	1	2	3	4	VELDT_GRASS
3080069	21	21.68	23.34	1.66	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	VELDT_GRASS
3080069	22	23.34	24.91	1.57	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080069	23	24.91	25.07	0.16	LAKE COYRECUP RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	VELDT_GRASS
3080082	1	1.70	3.00	1.30	TABENUP RD	North East	22-Nov-05	d secomb	40	0	2	0	1	0	1	0	1	0	1	2	2	2	8	
3080082	2	3.00	3.70	0.70	TABENUP RD	North East	22-Nov-05	d secomb	40	2	2	1	1	0	1	0	1	0	0	2	0	5	5	
3080083	1	0.00	0.24	0.24	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	0	1	0	0	1	2	2	2	3	5	VELDT_GRASS
3080083	2	0.24	0.58	0.34	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	0	1	0	1	2	2	1	0	5	6	VELDT_GRASS
3080083	3	0.58	1.92	1.34	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	1	1	1	1	2	2	1	1	7	7	VELDT_GRASS
3080083	4	1.92	2.26	0.34	CONNING RD	North	19-Oct-06	lesley	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	VELDT_GRASS RADISH_AND_TURNIP
3080083	5	2.26	2.79	0.54	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	0	0	0	0	2	2	0	1	4	5	VELDT_GRASS
3080083	6	2.79	3.43	0.64	CONNING RD	North	19-Oct-06	lesley	20	1	2	1	1	1	1	0	0	1	1	2	1	6	6	VELDT_GRASS
3080083	7	3.43	4.47	1.04	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	0	0	0	0	1	1	1	2	4	5	VELDT_GRASS
3080083	8	4.47	4.91	0.44	CONNING RD	North	19-Oct-06	lesley	20	1	1	1	1	1	0	0	0	1	2	2	0	6	4	VELDT_GRASS
3080083	9	4.91	5.95	1.04	CONNING RD	North	19-Oct-06	lesley	20	1	1	0	1	1	1	0	0	1	2	2	2	5	7	VELDT_GRASS
3080084	1	0.00	1.77	1.77	MARRACOONDA RD	South	25-Oct-05	jill	20	1	1	1	1	0	0	1	1	1	2	2	1	6	6	VELDT_GRASS TAGASASTE RADISH_AND_TURNIP
3080084	2	1.77	4.95	3.18	MARRACOONDA RD	South	25-Oct-05	jill	20	1	1	1	1	0	0	0	0	1	1	1	1	4	4	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080084	1	4.95	5.67	0.72	MARRACOONDA RD	South	25-Oct-05	jill	20	2	2	1	1	1	1	2	2	2	2	1	0	9	8	
3080085	1	0.00	1.40	1.40	ONslow RD	West	08-Nov-05	jill	20	2	1	1	1	1	1	1	1	0	0	2	2	7	6	BRIDAL_CREEPER VELDT_GRASS
3080086	1	0.00	0.67	0.67	STANLEY RD	East	08-Dec-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
3080086	2	0.67	1.54	0.87	STANLEY RD	East	08-Dec-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
3080086	3	1.54	3.40	1.87	STANLEY RD	East	08-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	
3080086	4	3.40	4.77	1.37	STANLEY RD	East	08-Dec-05	jill	20	2	1	1	1	1	1	1	1	0	0	2	2	7	6	
3080086	5	4.77	6.44	1.67	STANLEY RD	East	08-Dec-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	
3080087	1	0.00	1.30	1.30	RIVER RD	East	24-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	VELDT_GRASS
3080087	2	1.30	3.40	2.10	RIVER RD	East	24-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS
3080087	3	3.40	4.30	0.90	RIVER RD	East	24-Nov-05	jill	20	2	1	2	1	2	1	2	1	2	1	0	2	10	7	VELDT_GRASS
3080087	4	5.76	7.06	1.30	RIVER RD	East	24-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	5	5	VELDT_GRASS
3080087	5	7.06	8.36	1.30	RIVER RD	East	24-Nov-05	jill	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	VELDT_GRASS
3080087	6	8.36	9.76	1.40	RIVER RD	East	24-Nov-05	jill	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS
3080087	7	9.76	11.69	1.93	RIVER RD	East	24-Nov-05	jill	20	1	1	2	1	2	1	2	0	2	1	0	2	9	6	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080087	8	11.69	12.72	1.03	RIVER RD	East	24-Nov-05	jill	20	1	1	0	0	0	0	2	2	1	0	0	1	4	4	VELDT_GRASS
3080087	9	12.72	16.70	3.98	RIVER RD	East	24-Nov-05	jill	20	2	2	1	1	1	1	1	1	1	1	1	1	7	7	
3080088	1	0.00	0.80	0.80	PEPALL RD	North	08-Dec-05	jill	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	
3080088	2	0.80	1.30	0.50	PEPALL RD	North	08-Dec-05	jill	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	
3080088	3	1.30	1.90	0.60	PEPALL RD	North	08-Dec-05	jill	20	2	2	1	2	2	2	1	2	1	1	2	2	9	11	
3080088	4	1.90	3.30	1.40	PEPALL RD	North	08-Dec-05	jill	20	1	2	1	1	1	1	1	1	1	1	2	2	7	8	
3080088	5	3.30	4.90	1.60	PEPALL RD	North	08-Dec-05	jill	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	
3080088	6	4.90	5.59	0.69	PEPALL RD	North	08-Dec-05	jill	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	
3080089	1	0.00	0.97	0.97	ROCKWELL RD	East	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	1	2	2	5	7	
3080089	2	0.97	1.33	0.37	ROCKWELL RD	East	19-Oct-06	cw ra	20	2	2	0	0	1	1	2	2	0	0	2	0	7	5	
3080089	3	1.33	1.80	0.47	ROCKWELL RD	East	19-Oct-06	cw ra	20	0	0	0	0	0	0	0	0	1	0	2	2	3	2	
3080089	4	1.80	6.17	4.37	ROCKWELL RD	East	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
3080089	5	6.17	6.43	0.27	ROCKWELL RD	East	19-Oct-06	cw ra	20	2	1	0	0	0	0	2	2	0	0	0	2	4	5	
3080089	6	6.43	7.50	1.07	ROCKWELL RD	East	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	0	0	2	2	6	6	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080092	1	0.00	3.50	3.50	ILLAREEN RD	South	19-Oct-06	lesley	20	1	1	1	1	1	1	1	1	2	2	2	2	7	8	VELDT_GRASS TAGASASTE BRIDAL_CREEPER BRIDAL_CREEPER RADISH_AND_TURNIP
3080093	1	0.00	0.90	0.90	WARBURTON RD	North	04-Nov-05	jill	20	1	0	0	0	0	0	0	0	0	0	1	1	2	1	
3080093	2	0.90	2.30	1.40	WARBURTON RD	West	04-Nov-05	jill	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	
3080093	3	2.30	2.80	0.50	WARBURTON RD	West	04-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	1	1	6	6	
3080093	4	2.80	3.80	1.00	WARBURTON RD	West	04-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	1	1	0	5	5	
3080093	5	3.80	4.30	0.50	WARBURTON RD	West	04-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	
3080093	6	4.30	4.90	0.60	WARBURTON RD	West	04-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	
3080093	7	4.90	5.40	0.50	WARBURTON RD	West	04-Nov-05	jill	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
3080093	8	5.40	7.65	2.25	WARBURTON RD	West	04-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	
3080094	1	0.00	0.50	0.50	JAM HILLS RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	0	0	0	0	2	1	4	3	
3080094	2	0.50	1.40	0.90	JAM HILLS RD	North	20-Oct-06	cw cp	20	1	1	1	1	1	1	0	0	2	1	2	2	7	6	
3080094	3	1.40	2.10	0.70	JAM HILLS RD	North	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	0	1	2	6	6	
3080094	4	2.10	2.60	0.50	JAM HILLS RD	North	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	1	2	1	7	6	
3080094	5	2.60	3.00	0.40	JAM HILLS RD	West	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080094	6	3.00	3.30	0.30	JAM HILLS RD	West	20-Oct-06	cw cp	20	1	1	2	2	1	1	2	2	1	1	2	2	9	9	
3080094	7	3.30	3.70	0.40	JAM HILLS RD	West	20-Oct-06	cw cp	20	0	1	0	1	0	0	0	1	0	0	2	2	2	5	
3080094	8	3.70	4.00	0.30	JAM HILLS RD	West	20-Oct-06	cw cp	20	1	1	1	1	0	0	2	2	0	0	2	2	6	6	
3080094	9	4.00	4.50	0.50	JAM HILLS RD	West	20-Oct-06	cw cp	20	1	1	0	1	1	1	0	2	1	1	2	0	5	6	
3080094	10	4.50	4.90	0.40	JAM HILLS RD	West	20-Oct-06	cw cp	20	1	1	0	0	0	0	2	2	0	0	0	0	3	3	
3080096	1	0.00	1.30	1.30	GIBNEY RD	East	20-Oct-06	cw cp	20	1	1	1	1	0	0	1	1	0	2	2	2	5	7	
3080096	2	1.30	4.00	2.70	GIBNEY RD	East	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	
3080098	1	0.00	2.80	2.80	MOORE RD	South	07-Nov-05	jill	20	2	1	1	1	1	1	1	1	2	1	1	1	8	6	VELDT_GRASS
3080098	2	2.80	4.20	1.40	MOORE RD	South	07-Nov-05	jill	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3080098	3	4.20	5.90	1.70	MOORE RD	South	07-Nov-05	jill	20	1	2	1	1	1	1	1	1	0	0	1	1	5	6	VELDT_GRASS
3080098	4	5.90	6.80	0.90	MOORE RD	South	07-Nov-05	jill	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	VELDT_GRASS
3080098	5	6.80	7.90	1.30	MOORE RD	South	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	VELDT_GRASS
3080099	1	0.00	0.90	0.90	HOOD RD	North	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	0	0	2	0	8	6	VELDT_GRASS TAGASASTE
3080099	2	0.90	2.50	1.60	HOOD RD	North	19-Oct-06	cw ra	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	VELDT_GRASS TAGASASTE

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
3080100	1	0.00	1.50	1.50	KELLY RD	North	25-Oct-05	kathleen	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	RADISH_AND_TURNIP	
3080100	2	1.50	3.40	1.90	KELLY RD	North	25-Oct-05	kathleen	20	1	1	1	1	0	0	0	0	1	1	2	2	5	5	RADISH_AND_TURNIP	
3080100	3	3.40	5.70	2.30	KELLY RD	North	25-Oct-05	kathleen	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	RADISH_AND_TURNIP	
3080100	4	5.70	7.50	1.80	KELLY RD	North	25-Oct-05	jill	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	VELDT_GRASS	
3080100	5	7.50	8.10	0.60	KELLY RD	North	25-Oct-05	jill	20	1	1	1	0	0	0	1	0	0	0	2	2	5	3	VELDT_GRASS	
3080100	6	8.10	8.70	0.60	KELLY RD	North	25-Oct-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS	
3080100	7	8.70	9.40	0.70	KELLY RD	North	25-Oct-05	jill	20	1	2	1	2	1	2	1	1	1	2	2	0	7	9	VELDT_GRASS	
3080103	1	0.00	3.10	3.10	HENSMAN RD	West	08-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	
3080103	2	3.10	3.40	0.30	HENSMAN RD	West	08-Nov-05	jill	20	0	0	0	0	0	0	2	2	0	0	1	1	3	3		
3080105	1	0.00	1.80	1.80	GLENDOWER RD	North	25-Oct-05	jill	20	1	1	1	1	0	0	1	1	2	2	2	2	7	7		
3080107	1	0.00	0.40	0.40	KOWALD RD	South	05-Nov-05	jill	20	2	2	2	2	1	1	2	2	1	1	2	1	10	9	BRIDAL_CREEPER VELDT_GRASS	
3080107	2	0.40	0.60	0.20	KOWALD RD	South	05-Nov-05	jill	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	BRIDAL_CREEPER VELDT_GRASS	
3080107	3	0.60	0.80	0.20	KOWALD RD	South	05-Nov-05	jill	20	2	2	1	1	0	0	1	1	1	0	1	1	6	5	BRIDAL_CREEPER VELDT_GRASS	
3080107	4	0.80	1.80	1.00	KOWALD RD	South	05-Nov-05	jill	20	1	1	0	1	0	0	1	1	0	0	2	2	4	5	BRIDAL_CREEPER VELDT_GRASS	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080107	5	1.80	2.40	0.60	KOWALD RD	South	05-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	0	2	5	7	BRIDAL_CREEPER VELDT_GRASS
3080107	6	2.40	3.20	0.80	KOWALD RD	South	05-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	BRIDAL_CREEPER VELDT_GRASS
3080107	7	3.20	4.67	1.47	KOWALD RD	West	05-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS
3080109	1	0.00	1.90	1.90	GRANT RD	South East	14-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	VELDT_GRASS
3080111	1	0.00	3.62	3.62	MCAULIFFE RD	East	19-Oct-06	LESLEY	20	1	1	1	1	1	1	0	0	2	2	2	2	7	7	AFRICAN_LOVEGRASS VELDT_GRASS
3080113	1	0.00	0.20	0.20	BUTTERWORTH RD	North	26-Sep-05	lesley	20	1	1	1	1	1	1	1	1	0	0	1	2	5	6	VELDT_GRASS
3080113	2	0.20	1.40	1.20	BUTTERWORTH RD	North	26-Sep-05	lesley	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	VELDT_GRASS
3080113	3	1.40	1.60	0.20	BUTTERWORTH RD	North	26-Sep-05	lesley	20	1	1	1	1	1	1	1	1	1	2	1	1	6	7	VELDT_GRASS
3080113	4	1.60	2.10	0.50	BUTTERWORTH RD	North	26-Sep-05	lesley	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	VELDT_GRASS
3080113	5	2.10	6.60	4.50	BUTTERWORTH RD	North	26-Sep-05	lesley	20	1	1	1	1	1	1	0	1	1	1	1	2	5	7	VELDT_GRASS BRIDAL_CREEPER
3080115	1	0.00	1.30	1.30	ANTONIO RD	South	19-Oct-06	lesley	20	1	1	1	1	0	0	1	1	2	1	2	2	7	6	VELDT_GRASS
3080115	2	1.30	1.60	0.30	ANTONIO RD	South	19-Oct-06	lesley	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
3080117	1	0.00	1.20	1.20	GREEN RD	South	22-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	0	0	2	2	6	6	
3080117	2	1.20	1.80	0.60	GREEN RD	South	22-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	0	0	2	0	6	4	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080117	3	1.80	3.70	1.90	GREEN RD	South	22-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	0	0	2	2	6	6	VELDT_GRASS
3080119	1	0.00	1.50	1.50	ILLINGWORTH RD	South West	22-Nov-05	d secomb	20	2	2	1	1	1	1	1	1	1	1	0	0	6	6	
3080119	2	1.50	3.70	2.20	ILLINGWORTH RD	East	22-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	
3080121	1	0.00	0.60	0.60	HOTKER RD	East	22-Nov-05	d secomb	20	2	2	2	2	2	2	2	2	0	0	0	0	8	8	
3080121	2	0.60	1.10	0.50	HOTKER RD	East	22-Nov-05	d secomb	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	
3080121	3	1.10	1.80	0.70	HOTKER RD	East	22-Nov-05	d secomb	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
3080121	4	1.80	3.30	1.50	HOTKER RD	East	22-Nov-05	d secomb	20	2	2	1	1	0	0	0	0	0	0	2	2	5	5	
3080127	1	0.00	0.30	0.30	NEWTON RD	North	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	
3080127	2	0.30	0.50	0.20	NEWTON RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	2	2	0	1	2	1	6	6	
3080127	3	0.50	0.70	0.20	NEWTON RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	2	2	0	0	1	1	5	5	
3080127	4	0.70	1.70	1.00	NEWTON RD	North	20-Oct-06	cw cp	20	1	1	1	1	1	1	1	1	1	2	2	2	7	8	
3080129	1	0.00	0.50	0.50	BADGER RD	North	20-Oct-06	cw cp	20	0	0	0	0	0	1	0	0	1	1	2	2	3	4	VELDT_GRASS BRIDAL_CREEPER RADISH_AND_TURNIP
3080129	2	0.50	1.30	0.80	BADGER RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	0	0	1	1	2	2	5	5	VELDT_GRASS BRIDAL_CREEPER
3080129	3	1.30	2.10	0.80	BADGER RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	VELDT_GRASS BRIDAL_CREEPER

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
3080129	4	2.10	3.20	1.10	BADGER RD	North	20-Oct-06	cw cp	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2		
3080131	1	0.00	2.10	2.10	THROSSEL RD	West	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	0	1	2	5	6	VELDT_GRASS	
3080131	2	2.10	2.40	0.30	THROSSEL RD	West	07-Nov-05	jill	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8		
3080131	3	2.40	2.80	0.40	THROSSEL RD	West	07-Nov-05	jill	20	2	2	1	0	2	1	2	2	2	2	0	2	9	9	BRIDAL_CREEPER RADISH_AND_TURNIP VELDT_GRASS	
3080133	1	0.00	1.90	1.90	LORRAINE RD	North West	03-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	
3080135	1	0.00	1.20	1.20	BUSHY LANE RD	East	19-Oct-06	lt	20	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP
3080135	2	1.20	2.30	1.10	BUSHY LANE RD	East	19-Oct-06	lt	20	1	1	1	1	1	1	1	1	1	2	1	1	6	7	BRIDAL_CREEPER VELDT_GRASS RADISH_AND_TURNIP	
3080135	3	2.30	2.70	0.40	BUSHY LANE RD	East	19-Oct-06	lt	20	0	1	0	1	0	0	0	1	1	1	2	2	3	6	RADISH_AND_TURNIP	
3080135	4	2.70	5.60	2.90	BUSHY LANE RD	East	19-Oct-06	lt	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS RADISH_AND_TURNIP	
3080135	5	5.60	6.60	1.00	BUSHY LANE RD	East	19-Oct-06	lt	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP	
3080139	1	0.00	0.20	0.20	LEPPARD RD	North	19-Oct-06	cw ra	20	1	2	0	0	0	0	2	2	0	1	0	2	3	7		
3080139	2	0.20	0.60	0.40	LEPPARD RD	North	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	1	2	0	2	5	8	VELDT_GRASS	
3080139	3	0.60	2.20	1.60	LEPPARD RD	North	19-Oct-06	cw ra	20	2	2	1	1	0	0	2	2	1	0	0	2	6	7	VELDT_GRASS	
3080141	1	0.00	0.70	0.70	PACKARD RD	North	19-Oct-06	cw ra	20	2	2	0	0	1	1	2	2	1	1	0	0	6	6	VELDT_GRASS	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080144	1	0.00	0.50	0.50	FILMER RD	North	20-Oct-06	cw cp	20	2	2	2	2	1	1	2	2	1	1	1	1	9	9	
3080144	2	0.50	1.30	0.80	FILMER RD	North	20-Oct-06	cw cp	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	
3080144	3	1.30	1.80	0.50	FILMER RD	North	20-Oct-06	cw cp	20	1	1	1	1	0	0	2	2	2	1	2	2	8	7	
3080144	4	1.80	2.40	0.60	FILMER RD	North	20-Oct-06	cw cp	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	BRIDAL_CREEPER
3080145	1	0.00	2.30	2.30	CLIMIE RD	West	04-Nov-05	jill	20	1	1	0	0	0	0	1	1	2	1	0	2	4	5	VELDT_GRASS
3080145	2	2.30	3.30	1.00	CLIMIE RD	West	04-Nov-05	jill	20	1	1	0	0	0	0	0	0	1	0	0	1	2	2	VELDT_GRASS
3080145	3	3.30	3.80	0.50	CLIMIE RD	West	04-Nov-05	jill	20	2	0	1	0	1	0	2	0	2	0	0	2	8	2	
3080146	1	0.00	2.10	2.10	ADAM RD	East	25-Oct-05	kathleen	20	1	0	1	0	0	0	0	0	1	0	1	1	4	1	RADISH_AND_TURNIP VELDT_GRASS
3080146	2	2.10	4.60	2.50	ADAM RD	East	25-Oct-05	kathleen	20	1	1	1	1	1	1	0	0	2	2	1	1	6	6	RADISH_AND_TURNIP VELDT_GRASS
3080147	1	0.00	1.10	1.10	HOUSE RD	South	25-Oct-05	jill	20	1	1	1	1	0	0	1	1	2	2	2	2	7	7	VELDT_GRASS RADISH_AND_TURNIP
3080147	2	1.10	1.70	0.60	HOUSE RD	South	25-Oct-05	jill	20	1	1	1	1	0	0	1	1	2	2	1	2	6	7	VELDT_GRASS RADISH_AND_TURNIP
3080147	3	1.70	2.10	0.40	HOUSE RD	South	25-Oct-05	jill	20	1	1	0	0	0	0	0	0	0	0	1	2	2	3	VELDT_GRASS RADISH_AND_TURNIP
3080147	4	2.10	2.50	0.40	HOUSE RD	South	25-Oct-05	jill	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	VELDT_GRASS RADISH_AND_TURNIP
3080147	5	2.50	3.34	0.84	HOUSE RD	South	25-Oct-05	jill	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS RADISH_AND_TURNIP

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080150	1	0.00	1.00	1.00	BIBIKING SOUTH RD	North	20-Oct-06	cw cp	20	0	0	0	0	0	0	1	1	1	1	1	2	3	4	
3080150	2	8.10	8.80	0.70	BIBIKING SOUTH RD	North	24-Nov-05	jill	20	1	1	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3080150	3	8.80	11.30	2.50	BIBIKING SOUTH RD	North	24-Nov-05	jill	20	2	2	1	1	1	1	1	1	1	2	2	2	8	9	
3080151	1	0.00	4.02	4.02	HASSELL RD	West	10-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	
3080152	1	0.00	2.25	2.25	SIRL RD	North	03-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	VELDT_GRASS
3080153	1	0.00	3.70	3.70	SCHUTZ RD	North	19-Oct-06	lesley	20	1	1	1	1	1	1	1	1	1	2	2	2	7	8	VELDT_GRASS
3080153	2	3.70	5.00	1.30	SCHUTZ RD	East	19-Oct-06	lesley	20	2	2	2	2	1	1	1	1	1	1	2	2	9	9	VELDT_GRASS
3080153	3	5.00	5.40	0.40	SCHUTZ RD	East	19-Oct-06	lesley	20	1	1	1	1	0	0	1	1	1	1	1	1	5	5	AFRICAN_LOVEGRASS
3080153	4	5.40	6.90	1.50	SCHUTZ RD	East	19-Oct-06	lesley	20	2	2	1	2	1	1	1	1	2	2	1	1	8	9	AFRICAN_LOVEGRASS
3080153	5	6.90	8.40	1.50	SCHUTZ RD	East	19-Oct-06	lesley	20	2	2	2	2	1	1	1	1	1	2	2	2	9	10	BRIDAL_CREEPER VELDT_GRASS
3080153	6	8.40	8.80	0.40	SCHUTZ RD	East	19-Oct-06	lesley	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	BRIDAL_CREEPER VELDT_GRASS
3080153	7	8.80	9.34	0.54	SCHUTZ RD	East	19-Oct-06	lesley	20	1	1	1	1	0	0	1	1	1	0	2	2	6	5	VELDT_GRASS BRIDAL_CREEPER
3080154	1	0.00	1.00	1.00	BIBIKING RD	North	24-Nov-05	jill	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	
3080154	2	1.00	1.50	0.50	BIBIKING RD	North	24-Nov-05	jill	20	1	1	0	0	0	0	0	0	0	0	1	2	2	3	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080154	3	1.50	4.80	3.30	BIBIKING RD	North	24-Nov-05	jill	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080156	1	0.00	0.80	0.80	DEPOT RD	South	05-Nov-05	david secomb	20	1	1	1	1	1	1	0	0	1	1	2	2	6	6	BRIDAL_CREEPER VELDT_GRASS TAGASASTE
3080156	2	0.80	1.85	1.05	DEPOT RD	South	05-Nov-05	david secomb	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	VELDT_GRASS
3080156	3	1.85	2.97	1.12	DEPOT RD	South	05-Nov-05	david secomb	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	VELDT_GRASS AFRICAN_LOVEGRASS
3080157	1	0.00	3.00	3.00	HETTNER RD	West	05-Nov-05	jill	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	VELDT_GRASS
3080159	1	0.00	1.20	1.20	BOUNDARY RD	North	26-Oct-05	jill	20	2	1	1	1	1	1	1	1	2	2	1	1	8	7	CAPE_TULIP VELDT_GRASS
3080160	1	0.00	0.30	0.30	WALLIS RD	North	19-Oct-06	cw ra	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	
3080160	2	0.30	0.50	0.20	WALLIS RD	North	19-Oct-06	cw ra	20	2	2	1	1	0	0	2	2	0	0	1	1	6	6	
3080160	3	0.50	1.10	0.60	WALLIS RD	North	19-Oct-06	cw ra	20	2	1	0	0	0	0	2	2	1	0	1	0	6	3	
3080160	4	1.10	1.80	0.70	WALLIS RD	North	19-Oct-06	cw ra	20	2	2	1	1	0	0	2	2	1	1	1	0	7	6	VELDT_GRASS
3080160	5	1.80	1.93	0.13	WALLIS RD	North	19-Oct-06	cw ra	20	2	2	0	0	0	0	2	2	1	1	2	1	7	6	VELDT_GRASS
3080161	1	0.00	0.90	0.90	POLICE POOL RD	South	19-Oct-06	cw	20	1	1	1	1	0	0	0	0	1	1	2	1	5	4	VELDT_GRASS
3080161	2	0.90	2.60	1.70	POLICE POOL RD	South	19-Oct-06	cw	20	1	1	1	1	0	0	0	0	1	1	2	1	5	4	VELDT_GRASS
3080161	3	2.60	4.50	1.90	POLICE POOL RD	South	19-Oct-06	cw	20	1	1	0	0	0	0	0	0	1	1	1	0	3	2	VELDT_GRASS AFRICAN_LOVEGRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080161	4	4.50	5.60	1.10	POLICE POOL RD	South	19-Oct-06	cw	20	1	1	1	1	0	0	0	0	1	2	1	1	4	5	VELDT_GRASS
3080163	1	0.00	1.40	1.4	FORREST RD	North	07-Nov-05	jill	20	0	1	0	0	0	0	0	0	0	0	2	1	2	2	
3080163	2	1.40	2.90	1.5	FORREST RD	North	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	1	1	1	1	6	6	
3080163	3	2.90	3.70	0.8	FORREST RD	North	07-Nov-05	jill	20	2	2	1	1	1	1	2	1	2	2	1	0	9	7	
3080163	4	3.70	4.40	0.7	FORREST RD	North	07-Nov-05	jill	20	1	1	1	1	1	1	1	1	0	1	1	0	5	5	
3080167	1	0.00	2.60	2.60	BADGEBUP RD SOUTH	South	19-Oct-06	cw ra	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	
3080167	2	2.60	4.50	1.90	BADGEBUP RD SOUTH	South	19-Oct-06	cw ra	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080167	3	4.50	4.80	0.30	BADGEBUP RD SOUTH	South	19-Oct-06	cw ra	20	2	2	0	0	0	0	0	0	0	0	2	0	4	2	VELDT_GRASS
3080167	4	4.80	7.05	2.25	BADGEBUP RD SOUTH	South	19-Oct-06	cw ra	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	VELDT_GRASS
3080168	1	0.00	0.70	0.70	SIMPER RD	North East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS
3080168	2	0.70	1.30	0.60	SIMPER RD	North East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP
3080168	3	1.30	1.70	0.40	SIMPER RD	North East	31-Oct-05	tilly	20	2	2	1	1	0	0	0	0	0	0	2	2	5	5	VELDT_GRASS RADISH_AND_TURNIP
3080168	4	1.70	3.10	1.40	SIMPER RD	North East	31-Oct-05	tilly	20	2	2	1	1	0	0	1	1	1	2	2	2	7	8	VELDT_GRASS RADISH_AND_TURNIP
3080168	5	3.10	4.90	1.80	SIMPER RD	North East	31-Oct-05	tilly	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	VELDT_GRASS RADISH_AND_TURNIP

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080171	1	0.00	0.80	0.80	PRINSEP RD	North	04-Nov-05	jill	20	1	1	1	1	0	0	1	1	1	1	1	1	5	5	VELDT_GRASS
3080171	2	0.80	1.00	0.20	PRINSEP RD	North	04-Nov-05	jill	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	VELDT_GRASS
3080171	3	1.00	2.30	1.30	PRINSEP RD	North	04-Nov-05	jill	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	
3080188	1	0.00	1.65	1.65	EWLYAMARTUP RD	East	05-Nov-05	david secomb	20	1	1	1	1	1	1	1	1	1	1	2	1	7	6	VELDT_GRASS
3080188	2	4.60	5.50	0.90	EWLYAMARTUP RD	East	05-Nov-05	david secomb	20	1	1	2	2	1	1	0	0	1	1	1	2	6	7	VELDT_GRASS
3080188	3	5.50	8.10	2.60	EWLYAMARTUP RD	East	05-Nov-05	david secomb	20	0	1	0	1	0	1	0	0	0	1	1	1	1	5	VELDT_GRASS AFRICAN_LOVEGRASS
3080221	1	0.00	1.04	1.04	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	0	1	0	1	0	1	1	1	0	0	1	2	2	6	VELDT_GRASS RADISH_AND_TURNIP
3080221	2	1.04	2.66	1.62	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	2	2	1	1	1	1	1	1	2	2	0	0	7	7	VELDT_GRASS RADISH_AND_TURNIP BRIDAL_CREEPER
3080221	3	2.66	3.52	0.86	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	2	2	0	1	0	1	0	1	0	2	2	2	4	9	VELDT_GRASS RADISH_AND_TURNIP BRIDAL_CREEPER
3080221	4	3.52	7.56	4.04	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	2	2	0	1	1	1	1	1	1	2	2	2	6	8	VELDT_GRASS RADISH_AND_TURNIP
3080221	5	7.56	8.97	1.41	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	1	1	0	1	1	0	1	1	0	2	2	2	5	7	TAGASASTE VELDT_GRASS RADISH_AND_TURNIP
3080221	6	8.97	10.34	1.37	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	1	1	0	1	0	0	1	1	0	2	2	2	4	7	TAGASASTE VELDT_GRASS RADISH_AND_TURNIP
3080221	7	10.34	10.58	0.24	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	2	2	2	1	2	2	2	2	2	2	0	1	10	10	TAGASASTE VELDT_GRASS RADISH_AND_TURNIP
3080221	8	10.58	12.02	1.44	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	1	1	1	1	0	0	1	1	2	2	1	1	6	6	VELDT_GRASS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
		(km)	(km)							(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
3080221	9	12.02	12.96	0.94	KATANNING-DUMBLEYUNG RD	North	25-Oct-05	kathleen	40	0	2	0	1	1	2	0	2	0	2	1	0	2	9	VELDT_GRASS
3080278	1	0.00	2.50	2.50	SCOTCHMAN RD	East	19-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	VELDT_GRASS RADISH_AND_TURNIP
3080278	2	2.50	3.40	0.90	SCOTCHMAN RD	East	19-Nov-05	d secomb	20	2	2	1	1	0	1	0	0	0	0	2	2	5	6	
3080278	3	3.40	3.70	0.30	SCOTCHMAN RD	East	19-Nov-05	d secomb	20	0	2	0	1	0	1	0	0	0	0	2	2	2	6	
3080278	4	3.70	4.40	0.70	SCOTCHMAN RD	East	19-Nov-05	d secomb	40	2	2	1	1	0	0	0	0	0	0	2	2	5	5	
3080278	5	4.40	5.00	0.60	SCOTCHMAN RD	East	19-Nov-05	d secomb	40	1	2	0	1	0	1	0	0	0	0	2	2	3	6	VELDT_GRASS
3080278	6	5.00	5.70	0.70	SCOTCHMAN RD	East	19-Nov-05	d secomb	40	2	2	1	1	1	1	0	0	0	0	2	2	6	6	VELDT_GRASS
3080278	7	5.70	6.30	0.60	SCOTCHMAN RD	East	19-Nov-05	d secomb	20	2	2	1	1	1	1	0	0	0	0	2	2	6	6	VELDT_GRASS
3080284	1	0.00	0.50	0.50	HOGGS HEAD RD	North	26-Oct-05	jill	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	VELDT_GRASS
3080284	2	0.50	1.00	0.50	HOGGS HEAD RD	North	26-Oct-05	jill	20	2	2	1	1	1	0	1	1	2	1	0	1	7	6	VELDT_GRASS
3080284	3	1.00	4.60	3.60	HOGGS HEAD RD	North	26-Oct-05	jill	20	2	2	1	1	1	0	1	1	2	1	1	1	8	6	VELDT_GRASS

Key to table interpretation:

OD Start/Finish: is the odometer reading for the section start and finish points.

Direction: is the direction travelled by the surveyors when assessing the roadside.

Width: is the width of the road reserve.

The following attributes are ranked from 0 (lowest level) to 2 (highest level) as per the descriptions below.

Native Vegetation: score based on the number of native vegetation layers present (ie) tree, shrub and/or ground cover layers.

Extent of Vegetation: score is based on the proportion of native vegetation in the total roadside vegetation.

#Native Plant Species: score is based on the diversity of plants species in the roadside vegetation.

Value as Biological Corridor: score is based on the number of roadside vegetation attributes present that are important as fauna habitat.

Adjoining Landuse: score is based on the extent of native vegetation in the surrounding landscape (higher scores indicate lower levels of native vegetation in the surrounding landscape).

Weeds: score is based on level of weed infestation (higher scores indicate lower levels of weed infestation).

Appendix

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APPENDIX 3

Road names and lengths: Shire of Katanning

(Source: Main Roads WA 2005)

Road Number	Road Name	Road Length (km)
3080126	A BEECK RD	0.97
3080055	ABERDEEN ST	0.81
3080176	ACACIA AVE	0.04
3080146	ADAM RD	4.51
3080038	ADAM ST	0.37
3080222	ALBATROSS LNE	0.20
3080225	ALBATROSS LNE	0.10
3080003	ALBION ST	0.78
3080123	ALT ST	0.14
3080070	AMBER ST	0.60
3080020	AMHERST ST	0.81
3080136	ANDERSON ST	0.69
3080095	ANDOVER ST	1.54
3080197	ANDREWS CT	0.10
3080056	ANNIE ST	0.97
3080115	ANTONIO RD	1.70
3080204	ANTONIO ST	0.40
3080190	APPLIN ST	0.20
3080028	ARBOUR ST	1.26
3080120	ARLE ST	0.21
3080142	ARNOLD ST	0.46
3080194	AUSTRAL TCE	0.83
3080060	AVON ST	0.97
3080147	AVONDALE RD	3.22
3080235	BABBLER LNE	0.10
3080023	BADGEBUP NORTH RD	10.20
3080155	BAKER SMP RD	1.05
3080052	BAKER ST	0.17
3080174	BANKSIA AVE	0.19
3080104	BARKER ST	0.50
3080234	BARN OWL LNE	0.23
3080170	BATCHELOR RD	1.24
3080220	BAY ST	0.65
3080110	BEACH ST	0.50
3080022	BEAUFORT ST	1.89
3080165	BEECK ST	0.32
3080224	BEE-EATER LNE	0.20
3080240	BELL BIRD LNE	0.12
3080063	BELMONT RD	10.70
3080154	BIBIKING RD	4.80
3080150	BIBIKING SOUTH RD	11.30
3080226	BLACK KITE LNE	0.15
3080228	BLACK SWAN LNE	0.15
3080037	BLANTYRE ST	2.30
3080032	BOKARUP ST	1.39
3080102	BOND ST	0.54
3080078	BOWDEN TCE	0.30
3080229	BOWER BIRD LNE	0.80
3080189	BRAESIDE RD	1.19
3080237	BRISTLEBIRD LNE	0.13
3080057	BRITANNIA ST	0.34
3080054	BROOME ST	0.34

Road Number	Road Name	Road Length (km)
3080106	BROWNIE ST	0.15
3080236	BUDGERIGAR LNE	0.13
3080166	BURBIDGE WY	0.19
3080233	BUSH HEN LNE	0.20
3080227	BUSH LARK LNE	0.09
3080135	BUSHY LANE RD	6.60
3080113	BUTTERWORTH RD	6.60
3080223	BUZZARD LNE	0.22
3080149	CALWELL RD	2.41
3080125	CAREW ST	1.89
3080158	CARINYA GDNS	0.49
3080072	CARLISLE ST	0.22
3080036	CARROLUP RIVER RD	2.41
3080232	CASSOWARY LNE	0.13
3080175	CASSIA CT	0.09
3080172	CASUARINA DR	0.32
3080181	CHARLES ST	0.21
3080017	CHEVIOT HILLS RD	4.18
3080075	CHIPPER ST	0.48
3080048	CLARENCE ST	0.65
3080066	CLAUDE ST	0.26
3080064	CLIFF ST	0.22
3080145	CLIMIE RD	3.20
3080061	COATE ST	0.44
3080097	COBHAM ST	0.21
3080238	COCKATOO LNE	0.25
3080179	COLLINGWOOD ST	0.25
3080083	CONNING RD	5.95
3080040	CONROY ST	1.77
3080018	COOMELBERRUP RD	21.40
3080198	CORNWALL ST	1.19
3080030	COVE ST	0.25
3080035	COYRECUP NORTH RD	4.80
3080039	COYRECUP SOUTH RD	12.20
3080138	CREEK ST	0.62
3080230	CRIMSON LNE	0.08
3080101	CROSBY ST	0.42
3080076	CULLEN ST	0.70
3080203	CURLEW ST	1.40
3080122	CURNOW RD	1.47
3080231	CURRAWONG LNE	0.05
3080009	DAPING ST	1.62
3080244	DARTER LNE	0.18
3080025	DATATINE RD	9.01
3080156	DEPOT RD	2.97
3080090	DIJON ST	1.24
3080241	DOLLARBIRD LNE	0.20
3080001	DORE ST	1.12
3080031	DROVE ST	1.86
3080114	DUKE ST	0.41
3080246	EAGLE LNE	0.26
3080081	ELIZABETH ST	0.37
3080245	EMU LNE	0.40
3080006	FAIRFIELD RD	9.20
3080248	FALCON LNE	0.25
3080243	FANTAIL LNE	0.04
3080210	FENWICK RD	0.71
3080276	FERN-WREN LNE	0.29
3080247	FIGBIRD LNE	0.15

Road Number	Road Name	Road Length (km)
3080144	FILMER RD	2.41
3080047	FLUGEE RD	5.80
3080207	FLUGGE ST	0.20
3080163	FORREST RD	4.02
3080073	FORREST-FEDERAL RD	0.27
3080077	FRANCIS ST	0.28
3080062	FREDERICK ST	0.27
3080117	GAIREN RD	4.59
3080186	GARDINIA ST	0.06
3080096	GIBNEY RD	5.80
3080105	GLENDOWER RD	1.77
3080250	GOLDEN WHISTLER LNE	0.25
3080002	GOLF LINKS RD	0.60
3080251	GRASSBIRD LNE	0.22
3080167	GREEN RD	7.05
3080011	GREENHILLS RD	5.50
3080129	GUIDERA RD	3.22
3080177	HAKA PL	0.14
3080242	HARRIER LNE	0.15
3080068	HARRIS ST	0.54
3080151	HASSELL RD	4.02
3080007	HASSELL ST	0.69
3080277	HENRY ST	0.25
3080103	HENSMAN RD	3.40
3080265	HERON LNE	0.10
3080157	HETTNER RD	3.08
3080185	HILL WY	0.29
3080080	HOLLY ST	0.29
3080249	HONEYEATER LNE	0.07
3080099	HOOD RD	2.50
3080121	HOTKER RD	3.22
3080043	HUTTON RD	18.20
3080252	IBIS LNE	0.06
3080092	ILLAREEN RD	3.70
3080119	ILLINGWORTH RD	4.40
3080258	JACANA LNE	0.29
3080094	JAM HILLS RD	5.00
3080200	JAMES RD	1.00
3080221	KATANNING-DUMBLEYUNG RD	12.96
3080100	KELLY RD	10.20
3080079	KEMBLE TCE	0.29
3080256	KESTREL LNE	0.12
3080067	KIBBLEUP RD	5.32
3080091	KIDDIE RD	2.10
3080128	KIERLE ST	0.28
3080254	KING FISHER LNE	0.28
3080021	KOBEELYA AVE	0.43
3080159	KOJONUP BOUNDARY RD	1.20
3080253	KOOKABURRA LNE	0.06
3080107	KOWALD RD	4.67
3080069	LAKE COYRECUP RD	25.13
3080016	LANGAWEIRA RD	10.75
3080108	LANGLEY ST	0.24
3080139	LEPPARD RD	2.25
3080134	LISLE ST	0.47
3080257	LORIKEET LNE	0.25
3080133	LORRAINE RD	2.41
3080255	LYREBIRD LNE	0.25
3080264	MAGPIE LNE	0.15

Road Number	Road Name	Road Length (km)
3080178	MALLEE CT	0.04
3080259	MALLEEFOWL LNE	0.10
3080195	MARMION ST	0.51
3080183	MARMION ST WEST	0.75
3080084	MARRACOONDA RD	5.47
3080173	MARRI DR	0.50
3080169	MARRON POOL RD	1.85
3080184	MARTIN CR	0.55
3080041	MC KENZIE RD	18.00
3080111	MCAULIFFE RD	3.62
3080199	MCLEOD ST	1.70
3080098	MOORE RD	7.90
3080260	MOORHEN LNE	0.25
3080164	MURDONG POOL	2.41
3080024	MURDONG RD	11.91
3080027	NAGEL RD	3.30
3080127	NEWTON RD	1.77
3080010	NOOKANELLUP RD	2.57
3080193	NORTH RD	2.50
3080085	ONSLOW RD	1.40
3080263	OROILE LNE	0.10
3080262	OSPREY LNE	0.24
3080044	OXLEY RD	0.63
3080141	PACKARD RD	1.13
3080261	PARDALOTE LNE	0.12
3080042	PARK ST	0.81
3080266	PELICAN LNE	0.34
3080046	PEMBLE ST	0.96
3080088	PEPALL RD	5.59
3080211	PIESSE RD	1.70
3080074	PIESSE ST	1.10
3080267	PILOTBIRD LNE	0.14
3080161	POLICE POOL RD	5.67
3080196	POPE ST	0.05
3080171	PRINSEP RD	2.37
3080130	PROSSER ST	1.76
3080013	PUNCHMIRUP RD	4.10
3080188	QUARREL RD	6.00
3080015	QUARTERMAINE RD	11.70
3080201	RAMSON ST	0.37
3080051	RANFORD RD	26.70
3080275	RAVEN LNE	0.03
3080140	RESERVE RD	2.00
3080004	RICHARDSON ST	0.81
3080087	RIVER RD	16.70
3080274	ROBIN LNE	0.03
3080034	ROBINSON RD	12.50
3080089	ROCKWELL RD	7.50
3080148	ROCKWELL-FLUGGE RD	1.10
3080059	ROGERS AVE	0.89
3080273	ROSELLA LNE	0.20
3080143	ROSSELLOTY RD	1.18
3080065	ROUND DR	2.19
3080153	SCHUTZ RD	9.34
3080278	SCOTCHMAN RD	17.91
3080026	SHAW RD	9.80
3080049	SHENTON RD	2.00
3080202	SHIRLEY ST	0.40
3080071	SHORT ST	0.15

Road Number	Road Name	Road Length (km)
3080168	SIMPER RD	4.84
3080152	SIRL RD	2.25
3080124	SMITH RD	3.22
3080086	STANLEY RD	6.44
3080271	STAR FINCH LNE	0.15
3080272	STARLING LNE	0.35
3080053	STOTT RD	4.72
3080192	STRICKLAND ST	0.20
3080219	SUNTER RD	2.70
3080180	SUTHERLAND CT	0.13
3080050	SYNNOTT AVE	0.43
3080082	TABENUP RD	3.70
3080182	TAIT TCE	0.12
3080008	TAYLOR ST	1.19
3080058	TEE RD	9.10
3080137	THOMAS RD	1.77
3080116	THOMPSON ST	0.13
3080268	THORNBILL LNE	0.76
3080131	THROSSEL RD	2.80
3080033	THROSSELL RD	5.98
3080118	TODD ST	0.18
3080206	TREE ST	0.20
3080014	TRIMMER RD	11.87
3080109	UCARRO RD	1.90
3080162	VAN ZUILECOM RD	0.99
3080270	WAGTAIL LNE	0.18
3080160	WALLIS RD	1.93
3080205	WANKE ST	1.40
3080093	WARBURTON RD	7.65
3080005	WARREN RD	41.90
3080019	WASHINGTON RD	4.02
3080208	WEST RD	1.00
3080012	WITHERS RD	3.60
3080045	WOLYAMING RD	12.87
3080212	WRIGHT RD	0.50
3080209	YOUNG RD	0.42
3080269	ZEBRA FINCH LNE	0.37

Appendix

4

APPENDIX 4

Flora species in the Shire of Katanning (Source: W.A 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 SUPPLIED BY THE WESTERN AUSTRALIAN HERBARIUM ON 31 October 2007.

Acacia acuminata Benth.
Acacia brachypoda Maslin **R**
Acacia chamaeleon Maslin
Acacia chrysocephala Maslin
Acacia cochlearis (Labill.) H.L.Wendl.
Acacia crassistipula Benth.
Acacia erinacea Benth.
Acacia grisea S.Moore **P4**
Acacia lasiocarpa var. *bracteolata* Maslin
Acacia lasiocarpa var. *sedifolia* (Meisn.) Maslin
Acacia lineolata Benth. subsp. *lineolata*
Acacia lullfitziorum Maslin
Acacia microbotrya Benth.
Acacia mutabilis var. *angustifolia*
Acacia myrtifolia (Sm.) Willd.
**Acacia paradoxa* DC.
Acacia pulchella R.Br.
**Acacia pycnantha* Benth.
Acacia pycnocephala Maslin
Acacia saligna subsp. *lindleyi* (Meisn.) M.W.McDonald & Maslin
Acacia sphacelata Benth. subsp. *sphacelata*
Acacia stenoptera Benth.
Acacia trinalis R.S.Cowan & Maslin **P1**
Acacia varia var. *crassinervis* Maslin
Acacia varia var. *parviflora* (Benth.) Maslin
Actinotus humilis (F.Muell. & Tate) Domin
Adenanthos cygnorum Diels subsp. *cygnorum*
**Adonis macrocarpa* DC.
Agmenellum sp.
Allocasuarina huegeliana (Miq.) L.A.S.Johnson
Allocasuarina lehmanniana (Miq.) L.A.S.Johnson subsp. *lehmanniana*
Allocasuarina lehmanniana (Miq.) L.A.S.Johnson
**Alternanthera pungens* Kunth
**Amaranthus caudatus* L.
Amyema preissii (Miq.) Tiegh.
Andersonia sp.
Angianthus preissianus (Steetz) Benth.
Asterella drummondii (Hook.f. & Tayl.) R.M.Schust.
Asteridea asteroides (Turcz.) Kroner
Astroloma cataphractum A.J.G.Wilson
Austrodanthonia acerosa (Vickery) H.P.Linder
Austrodanthonia caespitosa (Gaudich.) H.P.Linder
Austrostipa exilis (Vickery) S.W.L.Jacobs & J.Everett
Austrostipa juncifolia (Hughes) S.W.L.Jacobs & J.Everett

**Babiana angustifolia* Sweet
Baeckea camphorosmae Endl.
**Bartsia trixago* L.
Beaufortia incana (Benth.) A.S.George
Billardiera fusiformis Labill.
Billardiera lehmanniana F.Muell.
Billardiera venusta (Putt.) L.Cayzer & Crisp

Blennospora drummondii A.Gray
Blennospora phlegmatocarpa (Diels) P.S.Short **P3**
Boronia fastigiata Bartl.
Boronia ramosa subsp. *anethifolia* (Bartl.) Paul G.Wilson
Boronia subsessilis
Borya sphaerocephala R.Br.
Bossiaea divaricata Turcz. **P4**
Bossiaea eriocarpa Benth.
Bossiaea halophila J.H.Ross
Brachyscome sp.
**Bromus diandrus* Roth
Bryum argenteum Hedw.
Bulbinella nutans subsp. *nutans*

Caladenia douthchia O.H.Sarg.
Caladenia falcata (Nicholls) M.A.Clem. & Hopper
Caladenia hiemalis Hopper & A.P.Br.
Caladenia hirta Lindl. subsp. *hirta*
Caladenia hirta subsp. *rosea* Hopper & A.P.Br.
Caladenia integra E.Coleman **P4**
Caladenia multiclavia Rchb.f.
Caladenia pendens Hopper & A.P.Br. subsp. *pendens*
Caladenia roei Benth.
Caladenia x exoleta Hopper & A.P.Br.
Caladenia xantha Hopper & A.P.Br.
Calytrix leschenaultia (Schauer) Benth.
Campylopus australis Catches. & J.-P.Frahm
**Cardaria draba* (L.) Desv.
Cassytha glabella R.Br.
Cassytha melantha R.Br.
Casuarina obesa Miq.
**Chamaecytisus palmensis* (H.Christ) F.A.Bisby & K.W.Nicholls
Chamaescilla corymbosa (R.Br.) Benth. var. *corymbosa*
Chamaescilla corymbosa (R.Br.) Benth.
Chamaescilla versicolor (Lindl.) Ostenf.
Cheiranthra preissiana Putt.
**Chenopodium album* L.
Chenopodium pumilio R.Br.
Choretrum glomeratum R.Br. var. *glomeratum*
Chrysocephalum apiculatum (Labill.) Steetz
Cionothrix jacksoniae
Colletotrichum gloeosporioides
Commersonia gaudichaudii
Conospermum multispicatum E.M.Benn.
Conostylis pusilla Endl.
Conostylis seorsiflora F.Muell. subsp. *seorsiflora*
Cotula sp.
**Cotula turbinata* L.
Crassula colorata (Nees) Ostenf.
Cryptandra nutans Steud.
Cryptandra pungens Steud.
Cyanicula gemmata (Lindl.) Hopper & A.P.Br.
Cystophora sp.

Dampiera haematotricha subsp. *dura* (Benth.) Rajput & Carolin
Dampiera haematotricha de Vriese subsp. *haematotricha*
Dampiera lavandulacea Lindl.
Dampiera linearis R.Br.
Dampiera sacculata Benth.
Darwinia halophila N.G.Marchant & Keighery
Daviesia cardiophylla F.Muell.
Daviesia decipiens (E.Pritz.) Crisp

Daviesia gracilis Crisp
Daviesia hakeoides subsp. *subnuda* (Benth.) Crisp
Daviesia incrassata Sm. subsp. *incrassata*
Daviesia longifolia Benth.
Dichopogon preissii (Endl.) Brittan
**Digitaria ciliaris* (Retz.) Koeler
Dillwynia laxiflora Benth.
Dillwynia sp. A Perth Flora (R. Coveny 8036)
Dilophospora alopecuri
Disphyma crassifolium (L.) L. Bolus
Diuris corymbosa Lindl.
Dodonaea bursariifolia F. Muell.
Drosera glanduligera Lehm.
Drosera intricata Planch.
Drosera menziesii DC. subsp. *menziesii*
Drosera purpurascens Schlott.
Dryandra acanthopoda A.S. George **P2**
Dryandra armata R.Br. var. *armata*
Dryandra armata var. *ignicida* A.S. George
Dryandra conferta Benth. var. *conferta*
Dryandra ferruginea x *preissii* subsp. *ferruginea*
Dryandra fililoba A.S. George
Dryandra fraseri R.Br. var. *fraseri*
Dryandra nivea (Labill.) R.Br. subsp. *nivea*
Dryandra nobilis Lindl. subsp. *nobilis*
Dryandra porrecta A.S. George **P4**
Dryandra preissii Meisn. **P4**
Dryandra proteoides Lindl.
Dryandra rufistylis A.S. George **P2**
Dryandra sessilis (Knight) Domin var. *sessilis*
Dryandra stuposa Lindl.

Eccremidium pulchellum (Hook.f. & Wilson) Mull. Hal.
Elythranthera brunonis (Endl.) A.S. George
Eremophila lehmanniana (Lehm.) Chinnock
Erysiphe graminis
Eucalyptus argyphaea L.A.S. Johnson & K.D. Hill
Eucalyptus calyerup McQuoid & Hopper **P1**
Eucalyptus captiosa Brooker & Hopper
Eucalyptus extensa L.A.S. Johnson & K.D. Hill
Eucalyptus falcata Turcz.
Eucalyptus hebetifolia Brooker & Hopper
Eucalyptus longicornis (F. Muell.) Maiden
Eucalyptus loxophleba Benth. subsp. *loxophleba*
Eucalyptus loxophleba x *wandoo* **P4**
Eucalyptus marginata Sm. subsp. *marginata*
Eucalyptus occidentalis Endl.
Eucalyptus orthostemon D. Nicolle & Brooker
Eucalyptus phaenophylla subsp. *interjacens* Brooker & Hopper
Eucalyptus pluricaulis subsp. *porphyrea* Brooker & Hopper
Eucalyptus sp. *Tarin Rock* (D. Nicolle & M. French DN 3739)
Eucalyptus spathulata Hook. subsp. *spathulata*
Eucalyptus spathulata Hook.
Eucalyptus thamnoides subsp. *megista* Brooker & Hopper
Eucalyptus uncinata Turcz.
Eucalyptus vegrandis L.A.S. Johnson & K.D. Hill subsp. *vegrandis*
Eucalyptus wandoo Blakely subsp. *wandoo*
Eucalyptus x *astringens*
**Euphorbia maculata* L.
Eutaxia parvifolia Benth.

Fissidens megalotis Schimp. ex Mull.Hal.
Fossombronia intestinalis
Freesia sp.
**Fumaria muralis* W.D.J.Koch

Gastrolobium calycinum Benth.
Gastrolobium praemorsum G.Chandler & Crisp
Gastrolobium spinosum var. *spinosum*
Gastrolobium spinosum Benth.
Gastrolobium tricuspidatum Meisn.
Gastrolobium trilobum Benth.
Gemmabryum dichotomum (Hedw.) J.R.Spence & H.P.Ramsay
Geranium solanderi Carolin
Glycyrrhiza acanthocarpa (Lindl.) J.M.Black
Gompholobium preissii Meisn.
Goodenia viscida R.Br.
Grevillea hookeriana Meisn. subsp. *hookeriana*
Grevillea uncinulata Diels

Hakea brownie Meisn.
Hakea hastata Haegi
Hakea lissocarpha R.Br.
Hakea marginata R.Br.
Hakea obliqua subsp. *parviflora* R.M.Barker
Hakea oldfieldii Benth. **P3**
Hakea prostrata R.Br.
Hakea trifurcata (Sm.) R.Br.
Hakea varia R.Br.
Halosarcia lepidosperma Paul G.Wilson
Helichrysum luteoalbum (L.) Rchb.
Helichrysum sp.
Hemigenia incana (Lindl.) Benth.
Hibbertia commutata Steud.
Hibbertia inclusa
Hibbertia rupicola (S.Moore) C.A.Gardner
**Hibiscus trionum* var. *trionum*
**Hordeum glaucum* Steud.
Hyalosperma demissum (A.Gray) Paul G.Wilson
Hypocalymma cordifolium Schauer subsp. *cordifolium*
Hypoxis glabella R.Br.

**Ixia maculata* L.

Jacksonia sternbergiana Huegel
**Juncus acutus* L. subsp. *acutus*
**Juncus capitatus* Weigel
Juncus kraussii subsp. *australiensis* (Buchenau) Snogerup
Juncus pallidus R.Br.
Juncus radula Buchenau

Kennedia microphylla Meisn.
**Kickxiaelatine* subsp. *crinita* (Mabille) Greuter
Kunzea preissiana Schauer

**Lampranthus glaucus* (L.) N.E.Br.
Lamprothamnium papulosum (Wallr.) J.Groves
Lechenaultia formosa subsp. *Wheatbelt* (R.J. Cranfield 4718)
**Lepidium africanum* (Burm.f.) DC.
**Lepidium draba* L.
Lepidium rotundum (Desv.) DC.
Lepidosperma leptostachyum Benth.
Lepidosperma pubisquameum Steud.

Lepidosperma resinosum (Lehm.) Benth.
Lepidosperma sp. *A2 Island Flat* (G.J. Keighery 7000)
Leptospermum erubescens Schauer
Lepyrodia hermaphrodita R.Br.
Leucopogon concinnus Benth.
Logania flaviflora F.Muell.
Logania tortuosa D.A.Herb.
Lomandra effusa (Lindl.) Ewart
Lomandra rupestris (Endl.) Ewart
**Lotus subbiflorus* Lag.
Lysinema ciliatum R.Br.

Marianthus bicolour (Putt.) F.Muell.
Meeboldina coangustata (Nees) B.G.Briggs & L.A.S.Johnson
Melaleuca acuminata F.Muell. subsp. *acuminata*
Melaleuca acuminata F.Muell.
Melaleuca adenostyla K.J.Cowley
Melaleuca brophyi Craven
Melaleuca cuticularis Labill.
Melaleuca fulgens R.Br. subsp. *fulgens*
Melaleuca halmaturorum Miq.
Melaleuca hamulosa Turcz.
Melaleuca lateriflora Benth. subsp. *lateriflora*
Melaleuca pauperiflora subsp. *fastigiata* Barlow
Melaleuca phoidophylla Craven
Melaleuca preissiana Schauer
Melaleuca pritzelii (Domin) Barlow **P2**
Melaleuca pungens Schauer
Melaleuca raphiophylla Schauer
Melaleuca scalena Craven & Lepschi
Melaleuca torquata Barlow
Melaleuca uncinata R.Br.
Melaleuca viminea Lindl. subsp. *viminea*
Melaleuca viminea subsp. *viminea* (hirsute hypanthium biotype)
Millotia tenuifolia Cass. var. *tenuifolia*

Nicotiana rotundifolia Lindl.
**Nothoscordum gracile* (Aiton) Stearn

**Oenothera stricta* Link subsp. *stricta*
**Oxalis purpurea* L.

**Panicum capillare* L.
**Papaver somniferum* L.
Paracaleana triens Hopper & A.P.Br.
Pelargonium havlasae Domin
Persoonia quinquenervis Hook.
Petrophile brevifolia Lindl.
Petrophile ericifolia R.Br. subsp. *ericifolia*
Petrophile heterophylla Lindl.
Petrophile imbricata Foreman
Petrophile media R.Br.
Petrophile serruriae R.Br.
Phebalium canaliculatum (F.Muell. & Tate) J.H.Willis
Phebalium tuberosum (F.Muell.) Benth.
Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem.
Pimelea brachyphylla Benth.
Plantago sp.
Podolepis sp.
Pogonolepis sp.
**Polypogon monspeliensis* (L.) Desf.
Prasophyllum gracile Lindl.

Pterostylis picta M.A.Clem.
Ptilotus declinatus Nees
**Puccinellia ciliata* Bor
Puccinellia sp. Warren Road (M.N. Lyons 2710)
Puccinellia stricta (Hook.f.) C.H.Blom
Puccinia recondita
Pultenaea empetrifolia Meisn.

**Raphanus raphanistrum* L.
Rhodanthe citrina (Benth.) Paul G.Wilson
Rhodanthe manglesii Lindl.
**Robinia pseudoacacia* L.
Rosulabryum billarderi (Schwagr.) J.R.Spence
Ruppia megacarpa R.Mason

**Sanguisorba minor* subsp. *muricata* (Rouy & E.G.Camus) Briq.
Santalum acuminatum (R.Br.) A.DC.
Santalum murrayanum (T.Mitch.) C.A.Gardner
Sarcocornia quinqueflora (Ung.-Sternb.) A.J.Scott
Scaberia sp.
Scaevola pulvinaris (E.Pritz.) K.Krause
Schoenus armeria Boeck.
Schoenus sp.
Sclerophthora macrospora
Senecio glossanthus (Sond.) Belcher
**Setaria italica* (L.) P.Beauv.
Siebera oblonga
Siloxerus multiflorus (Nees) P.S.Short
**Solanum elaeagnifolium* Cav.
**Solanum rostratum* Dunal
**Solanum triflorum* Nutt.
**Sparaxis bulbifera* (L.) Ker Gawl.
Sparaxis tricolor (Schneev.) Ker Gawl.
**Spergula arvensis* L.
**Stachys arvensis* (L.) L.
Stachystemon virgatus (Klotzsch) Halford & R.J.F.Hend.
Stylidium sp.
Synaphea spinulosa (Burm.f.) Merr. subsp. *spinulosa*
Syntrichia antarctica (Hampe) R.H.Zander

Tetralia capillaris (F.Muell.) J.M.Black
Themeda triandra Forssk.
Thomasia macrocalyx Steud.
Thysanotus acerosifolius Brittan **P2**
Thysanotus patersonii
Tilletia bromi
Tortula atrovirens (Sm.) Lindb.
Trachymene pilosa Sm.
Tribonanthes purpurea T.Macfarlane & Hopper **R**
**Trifolium dubium* Sibth.
Triodia longipalea Lazarides
Triquetrella papillata (Hook.f. & Wilson) Broth.
Urocystis bolivari
**Ursinia anthemoides* (L.) Poir.
**Ursinia speciosa* DC.
Ustilago bullata

Velleia trinervis Labill.
Verticordia acerosa var. *preissii* (Schauer) A.S.George
Verticordia brevifolia A.S.George subsp. *brevifolia* **P3**
Verticordia brevifolia
Verticordia chrysanthella A.S.George

Verticordia coronata A.S.George **P3**
Verticordia densiflora var. *cespitosa* (Turcz.) A.S.George
Verticordia densiflora Lindl. var. *densiflora*
Verticordia grandiflora Endl.
Verticordia habrantha Schauer
Verticordia huegelii var. *stylosa* (Turcz.) A.S.George
Verticordia huegelii var. *tridens* A.S.George **P3**
Verticordia insignis subsp. *compta* (Endl.) A.S.George
Verticordia ovalifolia Meisn.
Verticordia pennigera Endl.
Verticordia plumosa var. *brachyphylla* (Diels) A.S.George
Verticordia roei Endl. subsp. *roei*
Verticordia serrata (Lindl.) Schauer var. *serrata*
Vittadinia sp.

Wilsonia humilis R.Br.

Xanthoparmelia antleriformis (Elix) Elix & J. Johnst.
Xanthorrhoea brevistyla D.A.Herb. **P4**
Xanthorrhoea platyphylla
Xanthosia atkinsoniana F.Muell.

Appendix

5

APPENDIX 5

Fauna species in the Shire of Katanning (Source: W.A Museum, 2003)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates:

-33.49, 117.34 and -33.77, 117.94

Note: not a comprehensive list.

* represents an introduced species.

BIRD SPECIES

Acanthizidae	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill
Accipitridae	<i>Accipiter cirrocephalus cirrocephalus</i> <i>Aquila audax</i> <i>Elanus caeruleus axillaris</i> <i>Hamirostra isura</i>	Collared Sparrowhawk Wedge-tailed Eagle Australian Black-shouldered Kite Square-tailed Kite
Aegothelidae	<i>Aegotheles cristatus</i>	Australian Owlet Nightjar
Ardeidae	<i>Ardea novaehollandiae</i>	White-faced Heron
Artamidae	<i>Artamus personatus</i>	Masked Wood-Swallow
Campephagidae	<i>Coracina maxima</i>	Ground Cuckoo Shrike
Casuariidae	<i>Dromaius novaehollandiae</i>	Emu
Charadriidae	<i>Charadrius rubricollis</i> <i>Charadrius ruficapillus</i>	Hooded Plover Red-capped Plover
Cinclosomatidae	<i>Cinclosoma castanotus</i>	Chestnut Quail-thrush
Climacteridae	<i>Climacteris rufa</i>	Rufous Treecreeper
Columbidae	<i>Phaps chalcoptera</i> <i>Phaps elegans</i>	Common Bronzewing Brush Bronzewing
Cracticidae	<i>Cracticus tibicen dorsalis</i> <i>Cracticus torquatus</i> <i>Strepera versicolor</i>	Magpie Grey Butcherbird Grey Currawong
Cuculidae	<i>Cacomantis flabelliformia flabelliformis</i>	
Dicruridae	<i>Grallina cyanoleuca</i>	Mudlark / Peewee
Falconidae	<i>Falco berigora berigora</i> <i>Falco longipennis longipennis</i> <i>Falco peregrinus</i> <i>Falco peregrinus macropus</i>	Brown Falcon Little Falcon Peregrine Falcon
Halcyonidae	<i>Dacelo novaeguineae</i> *	Laughing Kookaburra
Megapodiidae	<i>Leipoa ocellata</i>	Mallee Fowl

Meliphagidae	<i>Anthochaera carunculata</i> <i>Lichenostomus ornatus</i> <i>Lichenostomus virescens</i> <i>Melithreptus brevirostris leucogenys</i> <i>Melithreptus chloropsis</i> <i>Phylidonyris novahollandiae</i>	Red Wattlebird Yellow-plumed Honeyeater Singing Honeyeater Western White-naped Honeyeater Yellow-winged Honeyeater
Motacillidae	<i>Anthus australis australis</i>	
Neosittidae	<i>Daphoenositta chrysoptera</i> <i>Daphoenositta chrysoptera pileata</i>	Sittella
Pachycephalidae	<i>Colluricincla harmonica</i> <i>Falcunculus frontatus</i> <i>Falcunculus frontatus leucogaster</i>	Grey-Shrike-Thrush Shriketit
Pardalotidae	<i>Pardalotus striatus</i> <i>Pardalotus striatus westraliensis</i>	Striated Pardalote
Passeridae	<i>Stagonopleura oculata</i>	Red-eared Firetail
Petroicidae	<i>Eopsaltria australis griseogularis</i> <i>Microeca fascinans assimilis</i> <i>Petroica cucullata</i>	Western Yellow Robin Hooded Robin
Podicipedidae	<i>Podiceps cristatus australis</i>	
Pomatostomidae	<i>Pomatostomus superciliosus</i>	White-browed Babbler
Procellariidae	<i>Pterodroma macroptera macoptera</i>	
Psittacidae	<i>Calyptorhynchus banksii</i> <i>Calyptorhynchus baudinii</i> <i>Calyptorhynchus latirostris</i> <i>Neophema elegans</i> <i>Platycercus icterotis</i> <i>Platycercus icterotis icterotis</i> <i>Platycercus spurius</i> <i>Platycercus zonarius</i> <i>Platycercus zonarius semitorquatus</i> <i>Polytelis anthopeplus anthopeplus</i>	Red-tailed Black-Cockatoo Baudin's Cockatoo Carnaby's Cockatoo Elegant Parrot Western Rosella Red-capped Parrot Australian Ringneck Parrot Twenty-eight Parrot Regent Parrot
Rallidae	<i>Gallinula ventralis</i>	Black-tailed Native Hen
Strigidae	<i>Ninox connivens</i> <i>Ninox novaeseelandiae boobook</i>	Barking Owl Boobook Owl
Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis
Turnicidae	<i>Turnix varia varia</i>	Painted Bustard-Quail
Tytonidae	<i>Tyto alba</i> <i>Tyto alba delicatula</i> <i>Tyto novaehollandiae</i>	Barn Owl Masked Owl
Zosteropidae	<i>Zosterops lateralis gouldi</i>	

MAMMAL SPECIES

Burramyidae	<i>Cercartetus concinnus</i>	Western Pygmy-possum
Dasyuridae	<i>Phascogale calura</i> <i>Sminthopsis crassicaudata</i>	Red-tailed Phascogale Fat tailed Dunnart
Leporidae	<i>Oryctolagus cuniculus</i> *	Rabbit
Macropodidae	<i>Macropus fuliginosus</i> <i>Onychogalea lunata</i>	Western Grey Kangaroo Crescent Nailtail Wallaby
Molossidae	<i>Mormopterus planiceps</i> <i>Tadarida australis</i>	Southern Freetail-bat White-striped Freetail-bat
Muridae	<i>Mus musculus</i> * <i>Rattus rattus</i> *	House mouse Black Rat
Myrmecobiidae	<i>Myrmecobius fasciatus</i>	Numbat
Phalangeridae	<i>Trichosurus vulpecula vulpecula</i>	Common Brushtail Possum
Potoroidae	<i>Bettongia penicillata ogilbyi</i>	Brush-tailed Bettong / Woylie
Suidae	<i>Sus scrofa</i> *	Pig
Tarsipedidae	<i>Tarsipes rostratus</i>	Honey Possum
Vespertilionidae	<i>Chalinolobus gouldii</i> <i>Chalinolobus morio</i> <i>Nyctophilus geoffroyi</i> <i>Nyctophilus timoriensis timoriensis</i> <i>Vespadelus regulus</i>	Gould's wattled Bat Chocolate Wattled Bat Lesser Long-eared Bat Greater Long-eared Bat Southern Forest Bat

REPTILE SPECIES

Cheluidae	<i>Chelodina oblonga</i>	Long-necked Turtle
Elapidae	<i>Echiopsis curta</i> <i>Notechis scutatus</i> <i>Parasuta gouldii</i> <i>Parasuta nigriceps</i> <i>Pseudonaja affinis affinis</i> <i>Simoselaps bertholdi</i>	Tiger Snake Gould's Snake Black-backed snake Dugite Jan's banded snake
Gekkonidae	<i>Christinus marmoratus</i> <i>Crenadactylus ocellatus ocellatus</i> <i>Diplodactylus granariensis granariensis</i> <i>Oedura reticulata</i>	Marbled Gecko Clawless Gecko Wheatbelt Stone Gecko Reticulated Velvet Gecko
Pygopodidae	<i>Aprasia repens</i> <i>Delma australis</i> <i>Pygopus lepidopodus</i>	Sandplain Worm Lizard Marbled-faced Delma Common Scaly-foot

Scincidae	<i>Cryptoblepharus plagiocephalus</i> <i>Ctenotus impar</i> <i>Egernia kingii</i> <i>Hemiergis peronii peronii</i> <i>Lerista distinguenda</i> <i>Menetia greyii</i> <i>Morethia obscura</i> <i>Tiliqua occipitalis</i> <i>Tiliqua rugosa rugosa</i>	Fence or Wall Skink Odd-striped Skink King's Skink Four-toed Earless Skink Common Dwarf Skink Woodland Flecked Skink Western Bluetongue Southwestern Bobtail
Typhlopidae	<i>Ramphotyphlops australis</i> <i>Ramphotyphlops bituberculatus</i> <i>Ramphotyphlops pinguis</i>	
Varanidae	<i>Varanus gouldii</i>	Gould's Sand Monitor

FISH SPECIES

Atherinidae	<i>Atherinosoma wallacei</i>
Poeciliidae	<i>Gambusia affinis</i> *

AMPHIBIA SPECIES

Hylidae	<i>Litoria moorei</i>	Motorbike Frog
Myobatrachidae	<i>Crinia pseudinsignifera</i> <i>Heleioporus albopunctatus</i>	Bleating Froglet Western Spotted Frog

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 Survey of Roadside Conservation Values in the Shire of Katanning

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



ROADSIDE CONSERVATION COMMITTEE

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; and
 - 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 if 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 DEC);
- 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

Part 16 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, DEC) establish a *Register of Roads Important for Conservation* also. This register should be consulted prior to any works being initiated in the area.